DOE/CF-0204
Volume 3

Department of Energy
FY 2025 Congressional Justification

Cybersecurity, Energy Security, and Emergency Response
Petroleum Reserves
Grid Deployment Office
Federal Energy Management Program
Manufacturing & Energy Supply Chains
State and Community Programs
Office of Clean Energy Demonstrations
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March 2024 Office of Chief Financial Officer Volume 3

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Table of Contents

DEPARTMENT OF ENERGY
Appropriation Summary
FY 2025
(Dollars in Thousands)

	FY 2023 Enacted [1],[2],[3]	FY 2024 Annualized CR	FY 2025 President's Budget [4]	FY 2025 President's Budget vs. FY 2023 Enacted $	FY 2025 President's Budget vs. FY 2023 Enacted %
Department of Energy Budget by Appropriation					
Energy Efficiency and Renewable Energy	3,460,000	3,460,000	3,118,000	-342,000	-9.9%
Electricity	350,000	350,000	293,000	-57,000	-16.3%
Cybersecurity, Energy Security and Emergency Response (270)	200,000	200,000	200,000	0	0.0%
Strategic Petroleum Reserve	207,175	207,175	241,169	+33,994	+16.4%
Naval Petroleum and Oil Shale Reserves	13,004	13,004	13,010	+6	+0.0%
SPR Petroleum Account	100	100	100	0	0.0%
Northeast Home Heating Oil Reserve	7,000	7,000	7,150	+150	+2.1%
Office of Petroleum Reserves	**227,279**	**227,279**	**261,429**	**+34,150**	**+15.0%**
Nuclear Energy (270)	1,623,000	1,623,000	1,440,660	-182,340	-11.2%
Fossil Energy and Carbon Management	890,000	890,000	900,000	+10,000	+1.1%
Uranium Enrichment Decontamination and Decommissioning (UED&D)	879,052	879,052	854,182	-24,870	-2.8%
Energy Information Administration	135,000	135,000	141,653	+6,653	+4.9%
Non-Defense Environmental Cleanup	358,583	358,583	314,636	-43,947	-12.3%
Science	8,100,000	8,100,000	8,583,000	+483,000	+6.0%
Office of Technology Transitions	22,098	22,098	27,098	+5,000	+22.6%
Office of Clean Energy Demonstrations	89,000	89,000	180,000	+91,000	+102.2%
Federal Energy Management Program	0	0	64,000	+64,000	N/A
Grid Deployment Office	0	0	101,870	+101,870	N/A
Office of Manufacturing & Energy Supply Chains	0	0	113,350	+113,350	N/A
Office of State and Community Programs	0	0	574,000	+574,000	N/A
Advanced Research Projects Agency - Energy	470,000	470,000	450,000	-20,000	-4.3%
Nuclear Waste Disposal Fund	10,205	10,205	12,040	+1,835	+18.0%
Departmental Administration	283,000	283,000	334,671	+51,671	+18.3%
Indian Energy Policy and Programs	75,000	75,000	95,000	+20,000	+26.7%
Inspector General	86,000	86,000	149,000	+63,000	+73.3%
Title 17 Innovative Technology Loan Guarantee Program	-136,018	-71,362	-184,558	-48,540	+35.7%
Advanced Technology Vehicles Manufacturing Loan Program	9,800	9,800	27,508	+17,708	+180.7%
Tribal Energy Loan Guarantee Program	4,000	4,000	6,300	+2,300	+57.5%
Total, Credit Programs	**-122,218**	**-57,562**	**-150,750**	**-28,532**	**+23.3%**
Energy Projects	221,969	221,969	0	-221,969	-100.0%
Critical and Emerging Technologies	0	0	5,000	+5,000	N/A
Total, Energy Programs	**17,357,968**	**17,422,624**	**18,061,839**	**+703,871**	**+4.1%**
Weapons Activities	17,116,119	17,116,119	19,848,644	+2,732,525	+16.0%
Defense Nuclear Nonproliferation	2,490,000	2,490,000	2,465,108	-24,892	-1.0%
Naval Reactors	2,081,445	2,081,445	2,118,773	+37,328	+1.8%
Federal Salaries and Expenses	475,000	475,000	564,475	+89,475	+18.8%
Total, National Nuclear Security Administration	**22,162,564**	**22,162,564**	**24,997,000**	**+2,834,436**	**+12.8%**
Defense Environmental Cleanup	7,025,000	7,025,000	7,059,695	+34,695	+0.5%
Other Defense Activities	1,035,000	1,035,000	1,140,023	+105,023	+10.1%
Defense Uranium Enrichment D&D	586,035	586,035	384,957	-201,078	-34.3%
Total, Environmental and Other Defense Activities	**8,646,035**	**8,646,035**	**8,584,675**	**-61,360**	**-0.7%**
Nuclear Energy (050)	150,000	150,000	150,000	0	0.0%
Total, Atomic Energy Defense Activities	**30,958,599**	**30,958,599**	**33,731,675**	**+2,773,076**	**+9.0%**
Southeastern Power Administration	0	0	0	0	N/A
Southwestern Power Administration	10,608	10,608	11,440	+832	+7.8%
Western Area Power Administration	98,732	98,732	100,855	+2,123	+2.2%
Falcon and Amistad Operating and Maintenance Fund	228	228	228	0	0.0%
Colorado River Basins Power Marketing Fund	0	0	0	0	N/A
Total, Power Marketing Administrations	**109,568**	**109,568**	**112,523**	**+2,955**	**+2.7%**
Federal Energy Regulatory Commission	0	0	0	0	N/A
Total, Energy and Water Development and Related Agencies	**48,426,135**	**48,490,791**	**51,906,037**	**+3,479,902**	**+7.2%**
Sale of the Gas Reserves	0	0	-95,000	-95,000	N/A
Excess Fees and Recoveries, FERC	-9,000	-9,000	-9,000	0	0.0%
Title XVII Loan Guar. Prog Section 1703 Negative Credit Subsidy Receipt	-14,000	-14,000	-2,051	+11,949	-85.4%
UED&D Fund Offset	-586,035	-586,035	-384,957	+201,078	-34.3%
Discretionary Funding by Appropriation	**47,817,100**	**47,881,756**	**51,415,029**	**+3,597,929**	**+7.5%**
DOE Budget Function	**47,817,100**	**47,881,756**	**51,415,029**	**+3,597,929**	**+7.5%**
NNSA Defense (050) Total	22,162,564	22,162,564	24,997,000	+2,834,436	+12.8%
Non-NNSA Defense (050) Total	8,796,035	8,796,035	8,734,675	-61,360	-0.7%
Defense (050)	*30,958,599*	*30,958,599*	*33,731,675*	+2,773,076	+9.0%
Science (250)	8,100,000	8,100,000	8,583,000	+483,000	+6.0%
Energy (270)	8,758,501	8,823,157	9,100,354	+341,853	+3.9%
Non-Defense (Non-050)	*16,858,501*	*16,923,157*	*17,683,354*	+824,853	+4.9%

[1] Funding does not reflect the mandated transfer of $99.75 million in FY 2023 from Naval Reactors to the Office of Nuclear Energy and the inclusion of the mandated transfer in the calculation of the rate of operations for FY 2024 for operation of the Advanced Test Reactor.

[2] Funding does not reflect the transfer of $20 million from the Office of Nuclear Energy to the Office of Science for Nuclear Facilities Oak Ridge National Laboratory Operations and Maintenance.

[3] FY 2023 Enacted levels for base funding includes $300 million for the Office of Nuclear Energy that was enacted in Division M, Additional Ukraine Supplemental Appropriations, of the Consolidated Appropriations Act, 2023 (P.L. 117-328).

[4] FY 2025 levels include the reallocation of $173 million in funding from Defense Environmental Cleanup to Weapons Activities to support the transition of oversight of the Savannah River Site to NNSA.

Cybersecurity, Energy Security, and Emergency Response

Cybersecurity, Energy Security, and Emergency Response

Cybersecurity, Energy Security, and Emergency Response
($K)

FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted
$200,000	$200,000	$200,000	$0

Proposed Appropriation Language

For Department of Energy expenses including the purchase, construction, and acquisition of plant and capital equipment, and other expenses necessary for energy sector cybersecurity, energy security, and emergency response 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, $200,000,000, to remain available until expended: Provided, that of such amount, $32,000,000 shall be available until September 30, 2026, for program direction.

Mission

The U.S. Department of Energy's (DOE's) Office of Cybersecurity, Energy Security, and Emergency Response (CESER) leads the Department's efforts to strengthen the security and resilience of U.S. energy infrastructure against all threats and hazards, mitigate impacts from cybersecurity, physical, supply chain, and climate-based events, and assist with response and restoration activities. CESER assumes the critical roles for DOE's responsibilities as lead agency for Emergency Support Function #12 (Energy), or ESF #12, under the National Response Framework, the Sector Risk Management Agency (SRMA) for the energy sector per the 2002 Homeland Security Act (as amended), and the Sector Specific Agency for the energy sector per the 2015 Fixing America's Surface Transportation Act. In those roles, DOE leads national efforts to enhance the preparedness, resiliency, and recovery of the U.S. energy infrastructure from all threats and hazards.

Overview

CESER plays a critical role in conducting advanced risk analysis; providing technical assistance to Federal and State, Local, Territorial, and Tribal (SLTT) on energy security, risk management, and resilience policies and plans; conducting exercises, trainings, and workforce development activities; researching, developing, and demonstrating (RD&D) tools and technologies; and supporting energy sector (electricity, oil, and natural gas) emergency preparedness and response efforts. CESER accomplishes its mission through strong partnerships with energy sector owners and operators, States and local communities, intra-agency partners, interagency partners, manufacturers, technology companies, academia, and international partners. CESER's FY 2025 Request will focus on the following priorities and challenges:

- **Strengthen U.S. energy sector security and resilience through advanced risk analysis** by leveraging the analytical capabilities of DOE's National Laboratories and partnerships with industry and SLTT governments. As the energy sector's SRMA, CESER is tasked with understanding and addressing the sector's growing climate-based, cyber, and physical risks. CESER will strengthen these capabilities, assist industry and SLTT entities to better address risks, and help other DOE offices as they advance the design and deployment of next generation energy systems. This work will also support national security efforts to strengthen Defense Critical Energy Infrastructure in light of growing cybersecurity threats outlined by the Office of the Director of National Intelligence (ODNI) in the annual Worldwide Threat Assessment that highlight capabilities by the People's Republic of China, Russia, and cyber criminals targeting U.S. energy systems.

- **Integrate cybersecurity and resilience into the energy sector industrial base** through partnerships with manufacturers, technology companies, standards organizations, and academia. The Energy Cyber Sense program will look at supply chain standards and policies to build capabilities, resources, and guidance to enable the energy industrial base to strengthen hardware and software security to inform the design of next generation systems. This ultimately supports a long-term vision of developing secure and trusted supply chains domestically.

- **Reduce risks to the electricity, oil, and natural gas systems through threat-informed RD&D** of next generation tools and technologies providing U.S. energy companies cutting-edge protection, monitoring, detection, response,

containment, forensics, and recovery capabilities. U.S. energy systems are evolving rapidly to address the impacts of climate-based risks, to meet customer expectations for reliability and resiliency, and to ensure safety and efficiency. CESER will invest in the design and deployment of tools and technologies that keep pace with those systems, work with States and communities on hardening measures, and support grid owners and operators to mitigate physical security threats. These investments will address cybersecurity threats, climate-based risks (such as wildfires), physical threats, and high-impact, low frequency events such as geomagnetic disturbances and electromagnetic pulse.

- **Build security and resiliency capacity across industry and SLTT entities through exercises, training, technical assistance, and workforce development initiatives.** To build security and resilience at all levels, it is critical that CESER partners with the energy sector community in States and local communities as well as with industry. CESER will expand sponsoring industry, State and regional exercises, develop and expand cybersecurity training for owners and operators to address emerging cybersecurity threats, and strengthen the resilience of energy systems feeding critical defense facilities. CESER will invest in cybersecurity workforce development to ensure the energy sector has a strong, well-trained workforce to meet the cybersecurity challenges of today and those in the future.

- **Strengthen emergency preparedness and response capabilities by enhancing CESER's ability to address all hazards impacting or potentially impacting the energy sector**, by reducing impacts at the regional and State levels, in coordination with industry partners. CESER will expand its regional engagement to better prepare for and be able to quickly respond to emergencies. This work will be done in close partnership with SLTT partners during steady state activities such as State Energy Security Planning, joint training and exercises, and other activities to develop and enable strong relationships necessary during active emergency responses. Further, CESER will continue to develop the Energy Threat Analysis Center (ETAC) pilot in continued partnership with energy sector owners and operators; National Laboratories such as Oak Ridge National Laboratory, Idaho National Laboratory, Pacific Northwest National Laboratory, Lawrence Livermore National Laboratory, Sandia National Laboratory, National Renewable Energy Laboratory, and others; the intelligence community; and the Cybersecurity and Infrastructure Security Agency's Joint Cyber Defense Collaborative. The ETAC pilot will strengthen collective cyber defense in the U.S. energy sector, particularly in light of growing cyber threats targeting electricity, oil, and natural gas systems from the People's Republic of China, Russia, and ransomware criminals.

FY 2023 Key Accomplishments

CESER had a number of accomplishments in FY 2023, which are having a demonstrable impact on the security and resilience of the sector:

- Cyber Defense: ETAC Pilot formally partnered with energy sector owners and operators, and on-boarded multiple DOE national labs to enable a collective defense posture. The ETAC Pilot issued multiple cyber advisories to over 3,000 electricity companies and thousands of oil and natural gas owners and operators across the U.S.to provide threat awareness and mitigation strategies to address the threats to energy systems.
- Enhancing Emergency Preparedness and Coordination: Organized energy emergency training, Energy Security Bootcamp, and Energy Sector Coordinating Council meetings fostering intergovernmental and private sector coordination and readiness for energy disruption.
- Holistic Risk Assessment and Analysis: Completed specialized studies on combined physical and cyber risks, issuing analysis reports on sector vulnerabilities and threats. Led national energy cybersecurity policy efforts through the development and release of the National Cybersecurity Strategy and its Implementation Plan. National Cybersecurity Strategy calls for two fundamental shifts in how the United States allocates roles, responsibilities, and resources in cyberspace: Ensuring that the biggest, most capable, and best-positioned entities – in the public and private sectors – assume a greater share of the burden for mitigating cyber risk; and Increasing incentives to favor long-term investments into cybersecurity. The work took the novel step of publishing the National Cybersecurity Strategy Implementation Plan (NCSIP) to ensure transparency and a continued path for coordination. This plan details more than 65 high-impact Federal initiatives, from protecting American jobs by combatting cybercrimes to building a skilled cyber workforce equipped to excel in our increasingly digital economy.

- Empowering Learning and Networking: Strengthened the workforce development program through enhanced on-demand learning and engagement activities like CyberForce job fairs and competitions and conducting over a fifteen CyberStrike deliveries training approximately 1000 energy sector and community partners.
- Effective Collaboration and Actions: Successfully facilitated multi-initiative collaborations building on strong risk management practices with industry and the interagency to mitigate energy sector risks such as distribution transformer supply chain shortages, wildfire mitigation strategies, cyber-threat mitigation actions in response to events including Volt Typhoon. Led the Ukraine public-private partnership on cybersecurity and energy resilience. To ensure the security of energy critical infrastructure to key partners, DOE shipped high voltage electrical infrastructure components to Ukraine since December 2022. Working with industry, U.S. utilities, and in consultation with DOE's National Laboratories, the collaboration identified, procured, and shipped over 20 tons of electrical equipment on U.S. Air Force cargo planes to help Ukraine's electric grid and associated essential services.

- Cutting-Edge Cybersecurity Contributions: Led pioneering initiatives like Cyber-Informed Engineering (CIE) and Supervisory Parameter Adjustment for Distribution Energy Storage (SPADES), as novel approaches to mitigating cyber threats to control systems. SPADES has achieved 6 publications and 1 patent.
- Emerging Cyber Threats: Addressed cyber threats related to Volt Typhoon, *Living off the Land* IT and OT and activities, and others in partnership with CISA, NSA, DoD, FBI, and other agencies. This produced risk mitigation actions that industry could directly implement to identify and manage stealthy and targeted malicious activity focused on post-compromise credential access and network system discovery aimed at critical infrastructure organizations in the United States.
- Research Collaboration and Funding Success: Partnered with universities for R&D projects, securing multiple selections in key Funding Opportunity Announcements, driving advancement in scalable cyber-physical platforms.
- Innovative Power Grid Solutions: Developed Tracking Real-time Anomalies in Power Systems, or TRAPS, with New York University for real-time anomaly detection and localization in power grids, enhancing situational awareness and grid stability.
- Deployment and Infrastructure Achievements: Successfully funded the National Rural Electric Cooperative to develop and deploy Essence 2.0, a sensor and monitoring tool that detects anomalous issues that could indicate a security breach, to cooperatives, reaching the target goal of 55 members.
- Rapid Response and Disaster Support: ESF #12 team actively responded to 19FEMA disasters in 2023, including by providing post hurricane power generation assistance in Puerto Rico. The 2023 hurricane season was active with response to Typhoon Mawar in Guam, and ongoing restorations in Hawaii due to wildfires.
- Response Capability: Expanded products and tools including the use of drones to gather photos and videos during damage assessments during the 2023 hurricane season enabling enhanced real-time situational awareness reporting, and more informed decision making related to infrastructure damage.
- Enhanced Training and Personnel Development: In 2023, ESF #12 trained 100 responders within various response functions, including Energy Specialist, Energy Unit Lead, and Catastrophic Incident Response Team.

Summary Funding Table
Cybersecurity, Energy Security, and Emergency Response
($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted	
				$	%
Policy, Preparedness, and Risk Analysis	26,857	26,857	28,500	+1,643	+6.1%
Risk Management Tools & Technologies	125,000	125,000	106,500	-18,500	-14.8%
Response and Restoration	23,000	23,000	33,000	+10,000	+43.5%
Program Direction	25,143	25,143	32,000	+6,857	+27.3%
Total, Cybersecurity, Energy Security, and Emergency Response	**200,000**	**200,000**	**200,000**	**0**	**0.0%**

SBIR/STTR:

- FY 2023 Enacted: SBIR/STTR: $2,482
- FY 2024 Request: SBIR/STTR: $2,482
- FY 2025 Request: SBIR/STTR: $2,571

Future Year Energy Program (FYEP)

($K)

	FY 2025 Request	FY 2026	FY 2027	FY 2028	FY 2029
Cybersecurity, Energy Security, and Emergency Response	**200,000**	**205,000**	**209,000**	**214,000**	**219,000**

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 2026 - FY 2029. The outyear funding levels use the growth rates in outyear account totals published in the FY 2025 President's Budget for both the 050 and non-050 accounts. Actual future budget request levels will be determined as part of the annual budget process.

CESER priorities in the outyears include the following:

- Improve national capability for advanced analysis and detection of emerging risks to the energy sector and identify best practice and policy mitigation efforts.
- Improve energy delivery systems, including next-generation systems, to survive cyber and physical incidents while sustaining critical functions.
- Increase supply chain cybersecurity for the energy sector.
- Ensure safe and efficient response, restoration, and recovery of U.S. energy systems from all hazards through advanced preparations and stronger operational collaboration with the industry on cybersecurity.
- Lead capacity building for energy sector cybersecurity, resilience, and response planning across Federal agencies, the private sector, and state, local, tribal, and territorial (SLTT) governments.

Infrastructure Investment and Jobs Act (IIJA) Investments

($K)

CESER was appropriated funds through the Infrastructure Investment and Jobs Act (IIJA) (P.L. 117-58). Not all IIJA activities will be managed by the organization to which funds were appropriated. Activities are itemized below.

Appropriated Funding Organization	FY 2022 IIJA Funding	FY 2023 IIJA Funding	FY 2024 IIJA Funding	FY 2025 IIJA Funding	Managing Organization
CESER					
Rural and Municipal Utility Adv Cybersecurity Ass Sec. 40124	$50,000	$50,000	$50,000	$50,000	CESER
Cybersecurity for the Energy Sector RD&D Sec. 40125b	$50,000	$50,000	$50,000	$50,000	CESER
Energy Sector Op Support for Cyberresilience Sec. 40125c	$50,000	$0	$0	$0	CESER
Total, CESER	$150,000	$100,000	$100,000	$100,000	

- **Rural and Municipal Utility Advance Cybersecurity Assessment Sec. 40124:** The goal of this investment is to enhance the cybersecurity posture of rural, municipal, and small investor-owned electric utilities through investments in operational capabilities, services, technology deployments, and threat intelligence information-sharing. The FY 2024 planned activities will provide funding and technical assistance to eligible entities to: harden their cybersecurity systems and processes; improve cybersecurity incident preparedness and incident response capabilities; improve the knowledge, skills, and abilities of utility staff through cybersecurity training and technology deployments, with a specific focus on utilities serving military installations; and increase the participation of eligible utilities in threat information sharing programs. These activities will accelerate the ability of eligible entities to protect against, detect, respond to, and/or recover from a cybersecurity threat.
- **Cybersecurity for the Energy Sector RD&D Sec. 40125b:** The goal of this investment is to enhance energy sector cybersecurity through research development and demonstration of emerging technologies that are scalable and through identifying and reducing cybersecurity workforce gaps. The FY 2024 planned activities will continue to support RD&D projects securing energy delivery systems. Additionally, this program will support workforce development activities for energy sector cybersecurity.
- **Energy Sector Operational Support for Cyberresilience Sec 40125c:** The goal of this investment is to enhance the Department's emergency response capabilities and testing in coordination with the other agencies, National Labs and private industry and provide technical assistance to municipal and cooperative utilities to improve cybersecurity maturity levels. Additionally, this investment is for increased intelligence community sharing and enhanced/expanded tools for monitoring the status of the energy sector. The FY 2025 planned activities are primarily centered on further developing the ETAC pilot. The ETAC pilot will bring subject matter experts from the federal government and energy sector together to analyze and address threats and risks to the energy system, provide timely and actionable warnings to the energy sector and develop whole-of-sector recommendations for mitigations and defensive measures, and support DOE's emergency response functions as Sector Risk Management Agency and lead for Emergency Support Function #12 (Energy).
- **40125d:** CESER's Policy, Preparedness, and Risk Analysis will manage the funds originally appropriated to the Electricity appropriations account.

Preparedness, Policy, and Risk Analysis (PPRA)

Overview

The Office of Cybersecurity, Energy Security, and Emergency Response (CESER), as the Sector Risk Management Agency (SRMA) for energy per the 2002 Homeland Security Act (as amended), assesses a diverse range of evolving risks in the U.S. energy sector, including hurricanes/severe weather, wildfires, climate adaptation, earthquakes, cyberattacks, electromagnetic interference, third-party and supply chain risks, risks arising out of cybersecurity workforce shortages, and emerging risks to renewable energy generation and distributed energy resources (DERs).

Within CESER, the Preparedness, Policy, and Risk Analysis (PPRA) division is focused on cultivating strong partnerships across all levels of government and private industry, with insights and support from academia and laboratory partnerships to identify, assess, and manage risk. PPRA also works to build sector capacity to support security and resilience of critical energy infrastructure and the communities that rely on it through sharing information, building preparedness, and promoting learning and adaption through strategic partnerships. PPRA's overarching goal is risk reduction in the energy sector with efforts that aim to buy down this risk through the activities described in this Request.

PPRA is the point of entry for State, local, Tribal, and territorial (SLTT) governments and energy sector private partners when collaborating with DOE and the Federal Government on energy critical infrastructure protection including cybersecurity, energy security, risk mitigation, resilience, emergency preparedness, and recovery efforts.

The Department has emphasized support for energy sector entities such as Executive Order 13636, Section 9 companies[a], Defense Critical Energy Infrastructure (DCEI) companies, and investor owned, municipal, and cooperative utilities in addition to SLTT governments in this request. PPRA's extensive partnerships across energy stakeholders, Federal agencies, academia, National Labs, information sharing and analysis centers (ISACs) collectively helps to enhance preparedness and resilience amid evolving threats, technological advancements, and energy system trends.

Highlights of the FY 2025 Budget Request

The FY 2025 Budget Request sustains the growth of the energy sector security and resilience in collaboration with government and industry partners. By fostering public-private partnerships and cultivating trusted relationships, this program will enhance the Department's efforts to support SLTT and industry in addressing all threats and challenges to the U.S. energy sector. This includes information sharing, risk assessments, capacity building, planning, resilience, and targeted training and preparedness exercises.

Planning, Preparedness, and Resilience ($19.5 million)

- **Energy Security Policy and Risk Management ($10 million):** PPRA will continue to lead the Department's activities on advancing sector-wide energy security policy and risk management collaboratively with industry, SLTT entities, and partners at other Federal agencies. Additionally, CESER represents the Department at National Security Council (NSC) meetings on cybersecurity and critical infrastructure resilience to ensure that Federal-policies are risk- and sector-informed. Through the Risk Management program, PPRA will:

    - Enhance mechanisms for risk identification and mitigation development, extending capabilities to identify systemically vital energy sector entities, perform intelligence-informed risk analysis, and coordinate with other DOE offices, National Labs, Federal agencies, and relevant critical infrastructure sectors. As the SRMA lead, CESER will further develop its capacity to support the energy sector's cohesive and coordinated resource set, facilitate sector entity risk mitigation actions through knowledge exchange, and provide for more collaborative engagement opportunities to inform risk analysis. This body of work will better inform national-level policies, state-level policies, training and technical assistance, research and development (R&D) priorities, and inform response actions.

[a] The Department of Homeland Security (DHS), in coordination with relevant SRMAs, annually identifies and maintains a list of critical infrastructure entities that meet the criteria specified in Executive Order (EO) 13636, *Improving Critical Infrastructure Cybersecurity*, Section 9(a) ("Section 9 entities") utilizing a risk-based approach. Section 9 entities are defined as "critical infrastructure where a cybersecurity incident could reasonably result in catastrophic regional or national effects on public health or safety, economic security, or national security."

- Establish new coordination and relationship-building opportunities to identify and eliminate barriers to energy security information sharing across governments and industry, including for renewable and DERs. This includes developing immediate risk and resilience analyses and actions to mitigate and, in some cases even avoid, the impacts of energy supply disruptions. These products will address key knowledge gaps to improve stakeholder capacity to develop and implement policies, regulations, and training programs that support incorporating critical energy security, cybersecurity, and resilience into infrastructure systems.

- **Post-Disaster Recovery and Resilience ($2 million):** In times of major disasters, the restoration of energy systems hinges on the effective planning and coordination of local, Tribal, territorial, regional, and national response efforts. The program will provide technical assistance to Federal, State, and local response entities, enhancing preparedness for all-hazards, including hurricanes, wildfires, fuel emergencies, cybersecurity incidents, and impacts from the growing threat of climate change. Recovery from major disasters is a long-term process that requires coordination across all levels of government, NGOs, and the private sector. During recovery there is an opportunity to rebuild stronger and mitigate future devastation. CESER will support communities during the recovery phase following major disasters by also connecting energy critical infrastructure stakeholders to technical resources with FEMA and the interagency, and by leading coordinating efforts for the Department. The assistance will facilitate empowering communities to enhance their resilience, safeguard critical energy infrastructure, and mitigate or prevent future incidents.

- **SLTT Capacity Building and Energy Security Preparedness ($5 million)**: State governors, legislators, energy offices, public utility commissions, and emergency management agencies play a critical role in ensuring a State has a reliable, secure, and resilient energy supply. As threats such as cyber-attacks continue to pose greater risks to energy infrastructure, states must adapt their plans and policies, prepare for incident response, and prioritize projects that mitigate risk. To aid states in this effort PPRA creates and supports the development of capacity building resources including educational publications, training and development programs, and "how to" guides for both states and industry focused on state and local level policy and resilience needs. SLTT technical assistance ranges from in-depth trainings to publishing and updating state energy sector risk profiles. It also includes facilitating the Energy Emergency Assurance Coordinator Program (which shares timely information with states before and during energy emergencies) and creating the Energy Security and Resilience Learning Series that helps build energy sector foundational knowledge. As a few specific examples, CESER's SLTT Program supports states in:

    - **Advancing cybersecurity baselines for the electric distribution level and DERs.** As cybersecurity threats increasingly target energy infrastructure, state regulations are looking to build electric cyber resilience within their jurisdictions. Building upon work in FY2023 that defined cyber baselines in coordination with state, industry and cyber experts, and work in FY 2024 which develops guidance for public utility commissions and legislators on implementing baselines, in FY2025 PPRA will assist states on the adoption baseline regulations.
    - **Delivering focused, highly complex and technical energy security trainings targeted for the unique needs of the SLTT stakeholders. This includes** CESER working with trade associations to provide the Energy Emergency Training (hosted by the National Governors' Association and the National Association of Regulatory Utility Commissioners) and an Energy Security Bootcamp (conducted by the National Association of State Energy Officials) which convenes state leaders to participate in technical energy emergency planning and energy security trainings. These trainings are held in alternating years and provide a platform for public utility commissions, state energy officials, homeland security advisors, and governor's advisors to improve coordination and align resources and expertise around hazard mitigation, threat intelligence sharing, and emergency response.

- **Defense Critical Energy Infrastructure (DCEI) ($2.5 million)**: The DCEI program's objective is to strengthen energy infrastructure systems for national security purposes. The DCEI program will identify, evaluate, prioritize, and assist in developing executable strategies to strengthen the energy infrastructure systems that supply critical infrastructure needed to ensure continuity of defense activities following severe natural and manmade disasters. Specifically, these investments will enable an increased confidence that necessary energy resources will be available to designated Critical Defense Facilities. CESER is also prioritizing efforts in collaboration with the Department of Defense's Homeland Defense Policy Guidance. CESER is committed to executing DOE's DCEI strategic plan by applying proven effective

approaches to safeguard additional critical defense facilities, thereby elevating the nation's preparedness and security against power supply disruptions.

Exercises, Training, and Workforce Development ($9 million)

In support of CESER's mission to be prepared for, respond to, and recover from, threats and hazards causing energy disruptions, this program is designed to elevate the collective sector preparedness through platforms such as targeted cybersecurity training, exercises, and cybersecurity workforce development programs.

- **Exercise Programs ($4.2 million):** CESER's Energy Sector Exercise program ensures a focus on collaboration with CESER's Emergency Support Function #12, Federal, SLTT entities, and the oil, natural gas, and electricity subsectors. CESER's exercises focus on all-hazard response to include physical security, cybersecurity, logistics and supply chain integrity, defense critical electric infrastructure, and climate adaptation and resilience. CESER achieves many of its preparedness goals and objectives through its annual Clear Path Exercise Series, which serves as a crucial platform for testing the sector's response and restoration capabilities in the face of catastrophic incidents, fostering inter-sector collaboration, and applying lessons learned to enhance preparedness. CESER also recognizes the importance of a cyber-physical testbed environment to validate cybersecurity training and readiness. It achieves this readiness through the Liberty Eclipse Full-Scale Exercise, which services as a valuable hands-on platform for industry collaboration and knowledge sharing to combat emerging cybersecurity threats on a cyber-physical range. An integral part of the preparedness cycle is CESER's commitment to continuous improvement, utilizing after-action reviews to refine emergency response plans and procedures, ensuring readiness and risk reduction.

- **Training and Workforce Development Programs ($4.8 million):** The energy sector is facing a growing shortage of cybersecurity professionals, prompting CESER to develop a comprehensive cybersecurity workforce framework aimed at expanding the talent pool by providing opportunities for non-traditional and underrepresented groups, hosting cybersecurity competitions, promoting apprenticeships, and upskilling efforts. CESER's CyberForce Competition, which brings together industry and government partners, is actively engaging students, to include those from Minority Serving Institutions and underserved communities, to prepare the next generation of cybersecurity experts. In addition, CESER is prioritizing cybersecurity training for the energy sector, federal, and SLTT partners through hands-on programs like the CyberStrike Training and Operational Technology Defender Fellowship programs. These initiatives include enhancing the curriculums to address real-world threats, such as nation-state attacks and those targeting DERs.

Preparedness, Policy and Risk Analysis (PPRA) ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 vs FY 2023	
				$	%
Preparedness, Policy and Risk Analysis[a]					
Planning, Preparedness, and Resilience	17,857	17,857	19,500	+1,643	+9.2%
Training and Exercises	9,000	9,000	9,000	0	0.0%
Total, Information Sharing, Partnerships and Exercises	**26,857**	**26,857**	**28,500**	**+1,643**	**+6.1%**

[a] Legacy Information Sharing, Partnerships and Exercises (ISPE) became Preparedness, Policy, and Risk Analysis in FY 2024

Activities and Explanation of Changes ($)

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 vs FY 2023
Preparedness, Policy, and Risk Analysis (PPRA) $26,857,000	**$28,500,000**	**+$1,643,000**
Planning, Preparedness, and Resilience $17,857,000	*$19,500,000*	*+1,643,000*
• Identify systemically important entities and perform intelligence-informed risk analysis, prepare and provide action-oriented, intelligence-informed threat briefings and eliminate barriers to government-industry information sharing and operational coordination, inform State and industry, including DCEI, investment decisions and improve mitigation and emergency through dynamic risk analyses, and provide technical assistance in support of State energy security planning. • Scale DOE's DCEI risk efforts by applying successful methods incubated and validated in FY 2022 to more critical defense facilities from DOE's designated list, increasing national defense and security readiness against power supply interruptions. Expand, aggregate, and deliver intelligence-informed and actionable data and analysis to SLTT energy and emergency officials and industry via dynamic risk analyses.	• Lead cross-sector energy security policy activities, enhance risk identification and mitigation mechanisms, publish risk analysis strategies, and promote information sharing. • Expand risk analysis capacity, provide technical assistance in energy security and resilience planning. • Deliver dynamic data, analysis products, and technical assistance to support communities' long-term recovery through better-informed technical, policy and investment analysis in the wake of major disasters. • Bolster SLTT entities capacity to manage risk, mitigate threats, and respond to emergencies by providing technical support, tailored resources, and training.	• Expanding risk analysis capability to characterize risk from all hazards (cyber, physical, natural, EMP/GMD) for all energy systems and look at systemic risks to the energy sector to inform policy, capacity building, and RD&D investments. • Enhance capability to facilitate long-term recovery efforts by utilizing dedicated staff to coordinate effort in support of impacted communities. • Conducting additional assessments of energy infrastructure supporting Critical Defense Facilities as part of the Defense Critical Energy Infrastructure program of effort. •

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 vs FY 2023
• Incorporate diversity, inclusion and energy justice in methods, approaches and tools that will enable SLTT governments to enhance and exercise energy security plans and regulatory models, incorporating cybersecurity, hardening, and other resilience measures and incentives.		
Exercises, Cybersecurity Training and Workforce Development $9,000,000	$9,000,000	$0
• Training and Exercises: Conduct internal and external exercises with the interagency, SLTT governments, and industry on cyber and natural hazards, provide cybersecurity training for operational technology and industrial control systems, and expand the scope of the CyberForce Competition.	• Conduct internal and external exercises with the federal interagency, SLTT governments, and industry on both cyber and natural hazards. • Expand cyber exercises and training by enhancing and leveraging existing testbed environments which can provide realistic simulation capabilities, allowing for advanced training and efficiencies. • Scale cybersecurity training for operational technology and industrial control systems by increasing CyberStrike deliveries and enhance the renewable variation. • Enhance the CyberForce Competition to include multiple competitive events throughout the year leading to a multi-day capstone competition event, while also emphasizing the internship and job fair opportunity. • Establish a Cyber Workforce Development framework with the intent to decrease the workforce gap in energy cybersecurity jobs.	• No change.

Risk Management Tools and Technologies (RMT)

Overview

The energy sector faces persistent challenges due to the dynamic threat landscape, climate crisis, technological advancements, supply chain cybersecurity risks, and the use of legacy devices in aging infrastructure. Ensuring the resilience of the sector is imperative as new energy sources, architectures, and systems are introduced.

The Office of Cybersecurity, Energy Security, and Emergency Response's (CESER's)Risk Management, Tools, and Technologies (RMT) division addresses these challenges through innovation, testing, and novel frameworks and engineering approaches to create resilient and hardened systems. RMT focuses on research, development, and demonstration (RD&D) to address cybersecurity, physical, electromagnetic, geomagnetic, and climate-based risks in the energy sector. Through collaborations with academia, industry, DOE National Laboratories, and other federal agencies, RMT successfully deploys innovative approaches and technologies to enhance the security and resilience of energy infrastructure.

RMT's RD&D efforts result in tools that monitor and protect critical energy assets, enabling automated threat assessments and response. They also identify vulnerabilities, detect threats, and develop mitigations. Moreover, RMT assists partners in transitioning technologies to practice, fostering the adoption of recommended processes and practices.

In parallel, RMT leads the integration of 'cybersecurity by design' across DOE's RD&D efforts, ensuring that energy delivery systems of the future are inherently more secure. CESER facilities this integration and coordinates R&D for securing both legacy and emerging energy delivery systems. Improved coordination will prioritize tools and technologies applicable to various energy systems and focus on key areas such as encryption, forensics, and monitoring.

Highlights of the FY 2025 Budget Request

Working closely with the energy sector, academia, and National Laboratories, the FY 2025 Budget Request of $106.5M for RMT supports a more economically competitive, secure, and resilient U.S. energy infrastructure focusing on the following activities:

- **Advance Tools to Manage Cyber Risks ($34 million)**
    - **<u>RD&D of Cybersecurity Tools and Technologies</u> ($29 million)**
      Research, develop, demonstrate and transition to practice next generation cybersecurity tools and technologies for energy companies, emphasizing protection, monitoring, detection, response, containment, forensics, and recovery capabilities. These tools will leverage operational data and the physics of energy delivery to inform owners and operators of anomalous cybersecurity activities on their industrial controls systems and networks. These efforts will primarily be executed through competitive funding opportunities and research calls for energy companies, academia, National Laboratories, and/or manufacturers. This work focuses on tools that enable individual utilities to manage cybersecurity risks to next generation energy systems, such as microgrids, automated operational technologies (OT) infrastructure, virtual power plants, and cloud-connected systems, positioning the industry to stay ahead of the threat. CESER will leverage a threat-informed cyber RD&D gap analysis to inform efforts to ensure that the work underway continues to best address cyber threats by being intelligence and threat-informed.
    - **<u>RD&D of Cybersecurity Situational Awareness & Information Sharing</u> ($5 million)**
      Advancing cybersecurity threat situational awareness and information sharing through cyber tools and technologies with the U.S. energy sector is a critical effort for the Department. The funding enables threat information sharing tools and technologies for high priority critical energy systems and advances those tools for threat detection (i.e., deployment of Cyber Risk Information Sharing Program [CRISP] for high priority energy infrastructure) and enables the Department to continue building new and novel cyber threat situational awareness and information sharing tools. CESER collaborates with National Laboratories to create innovative tools for collaborative defense, detecting anomalies in various datasets, and disseminating on near/real-time threat intelligence to DOE and industry stakeholders. CESER also assesses potential applications of these technologies by

electricity, oil, and natural gas owners and operators, including governmental stakeholders to contribute to and enhance the collective defense posture mentioned in the National Cyber Strategy.

- **University-Based RD&D and Energy Cybersecurity R&D Centers ($3 million)**
  University cybersecurity RD&D Centers will enable collaboration among regional utilities, National Laboratories, and regulatory bodies to perform RD&D that combines multi-disciplinary expertise including but not limited to power system engineering and the computer science of cybersecurity. This includes technology and innovation that reduce the risk of power disruption resulting from a cybersecurity incident impacting energy delivery systems. Academic RD&D involves unbiased, technology focused activities that, when combined with industry priorities and guidance, results in real-world, impactful solutions. This will not only provide discovery and innovation but will also contribute to energy cybersecurity learning and teaching across different communities in the country.

- **Advance Tools to Manage Risks from Natural Hazards, Physical Threats, and EMP/GMD ($22 million)**

  - **RD&D of Risk Management Tools and Technologies for Natural Hazards ($5 million)**
    RMT will conduct research and development that is targeted toward weather related risks such as extreme winter weather, seismic events, and hurricanes. RMT will leverage emerging technologies to develop tools that help identify, characterize, detect and mitigate risks to energy infrastructure. These tools will enable long term planning, allowing the industry to more effectively prepare for and respond to these incidents.

  - **RD&D of Tools and Technologies for energy infrastructure resilience to wildfires ($5 million)**
    RMT will partner with industry, private sector RD&D partners, the National Laboratories, and other DOE offices to research, develop, and demonstrate technology solutions that enable the prevention, detection, and dynamic mitigation of growing wildfire risks. RMT will focus on developing and validating technologies that utilize real-life information to more accurately determine probable equipment and infrastructure failures. These investments will result in advancements in technologies and approaches such as advance sensors, grid data analytics, satellite imagery, drones, and application of artificial intelligence.

  - **RD&D of Tools and Technologies for addressing physical threats to energy systems ($5 million)**
    RMT will conduct a new competitive laboratory call to develop and tailor tools and technologies that address physical attacks on energy infrastructure, such as the substation shootings on the Metcalf Substation or in Moore County, the use of unmanned aerial systems (UAS) or drones, and positioning, navigation, and timing risks.

  - **Electromagnetic Pulse and Geomagnetic Disturbances ($7 million)**
    DOE will accelerate efforts to mitigate electromagnetic pulse (EMP) and geomagnetic disturbances (GMD) risks. These will include activities such as performing critical asset vulnerability assessments; conducting modeling studies to understand these hazards, developing innovative cost-effective mitigation options, and make minor lab operational costs and improvements.

- **Supply Chain Cybersecurity Risk Management ($30 million)**

  - **Cyber Testing for Resilient Industrial Control Systems (CyTRICS) ($20 million)**
    CESER's Energy Cyber Sense program is focused on addressing supply chain cybersecurity threats to energy systems. The broader program will review national-level policies, develop tools and technologies, enable supply chain transparency, promote standards and best practices, and enhance technology and system designs. The program aligns with congressional directives and supports the Energy Sector Industrial Base (ESIB) in bolstering critical infrastructure resilience.

    CyTRICS, as part of the broader Energy Cyber Sense program, specializes in testing. It focuses in on identifying and prioritizing critical equipment, tracking provenance, offering mitigation solutions, and disclosing vulnerabilities. CyTRICS collaborates with energy sector manufactures and asset owners, leveraging classified threat intelligence for expert testing. CESER leverages best-in-class test facilities and analytic capabilities at six DOE National Laboratories (INL, PNNL, SNL, NREL, ORNL, and LLNL) and fosters strategic partnerships across the sector.

In FY 2025, the program will expand CyTRICS testing, prioritizing risk-based systems and components. Partnerships with operational technology manufactures will be developed, integrating the testing pipeline into the Energy Cyber Sense program.

- **Cybersecurity of Distributed Energy Resources and Electric Vehicle Charging Infrastructure ($10 million)**
  CESER will work with the National Labs to conduct cybersecurity research and development related supply chain risk management of distributed energy resources (DERs). As DERs become pervasive energy sector stakeholders must increase investment in the cybersecurity of those components (e.g., solar, storage, controllable loads, etc. based on risk and technology landscape). In some communities across the U.S., DERs will begin to supply 100% of generation by 2030; consequently, it is a priority to research and address cybersecurity risks and the impacts to broader resilience to the grid. This work will be closely coordinated with technology specific research being performed in the Office of Energy Efficiency and Renewable Energy and storage research performed in the Office of Electricity. In FY 2025, this work will include demonstration pilots of cybersecurity measures being pursued in close collaboration with the Office of Energy Efficiency and Renewable Energy; research to strengthen the cybersecurity of communication protocols in the DER space; and development of tools and capabilities that ensure risks from DERs in the cloud environments are mitigated. Activities that may continue include the Clean Energy Cyber Accelerator (pilot) and the Renewable Energy and Storage Cybersecurity Research (RESCue) project on the cybersecurity of hybrid power plants that are inclusive of wind, solar, and energy storage. RMT is focused on ensuring cybersecurity is an integral part of the Nation's clean energy transition, to include the shift to electric vehicle (EVs). RMT will deliver solutions that mitigate cybersecurity risks and advance EV charging infrastructure resilience and performance. CESER's EV cybersecurity portfolio of work is done in close collaboration with the Joint Office of Energy and Transportation and the Vehicles Technologies Office. RMT will work with public and private partners to support development and promotion of cybersecurity standards across the EV and EVSE ecosystem and identify opportunities for harmonization; work towards the cybersecurity attributes needed for the emerging EV and EVSE ecosystem; and conduct targeted cybersecurity R&D for the EV and EVSE ecosystem.

- **Cyber Risk Assessments, Frameworks, and R&D Coordination ($17.5 million)**

  - **Cyber-Informed and Consequence Driven Engineering ($6 million)**
    The National Cyber-Informed Engineering (CIE) Strategy establishes foundational principles for integrating cybersecurity and engineering practices. RMT collaborates with utility, vendor, and university stakeholders to apply this strategy in the energy sector. RMT will support energy research programs in incorporating security by design principles into their R&D processes to ensure cyber defenses are integral to future technology design. Additionally, RMT will develop tools for better CIE application, validate infrastructure upgrades, analyze design patterns, to enhance engineering safeguards in the energy sector, and promote awareness and acceptance of the methodologies and among multiple stakeholders. Furthermore, RMT will extend CIE implementation into the core engineering curriculum of prominent U.S. research universities and collaborate with asset owners and operators to incorporate CIE principles into their engineering and infrastructure improvement initiatives.

    CESER uses the CIE framework and body of knowledge in Consequence-Driven Cyber-Informed Engineering (CCE), to apply the CIE's core principles to a specific organization, facility, or mission. CCE identifies their most critical functions, methods and means an adversary would likely use to manipulate or compromise them and determines the most effective means of removing or mitigating those risks. The operational phase of CCE will be executed to further ensure Critical Function Assurance (CFA) of high-risk infrastructure crucial for the energy sector and national security, encompassing elements whose compromise could disrupt essential fuel and electricity supplies. CCE assessments will systematically evaluate an organization's core functions, identifying areas for enhancement across personnel, processes, and technologies, thereby significantly mitigating the potential consequences of any compromise.

  - **Cybersecurity for Operational Technology Environment (CyOTE) ($3 million)**
    RMT will continue to build upon the Cybersecurity for Operational Technology Environment (CyOTE) effort, to enhance early detection of anomalies and threats within operational technology (OT) environments, specifically

developing tools and capabilities that can be provide energy asset owners and operators with timely alerts and actionable information. CyOTE will continue to incorporate new features, enhance functionality, and improve training for stakeholders. The CyOTE initiative will primarily focus on an enrichment platform tool that will process large amounts of data using Artificial Intelligence/machine Learning (AI/ML) to determine actionable information for energy asset owners and operators and to inform additional R&D.

- **Risk Management Guidance and Frameworks ($3.5 million)**
  RMT will develop guidance, tools and capabilities that can be used by energy industry to integrate cybersecurity maturity evaluations with quantitative and qualitative risk data. These frameworks and tools will enable risk-informed cybersecurity investment decisions allowing for optimal utilization of limited resources. RMT will also continue to develop and maintain the Cybersecurity Capability Maturity Model (C2M2) tool features and resources including user community forum, facilitated evaluations, and updates needed to align with Cybersecurity Framework (CSF) V2.0. RMT will also continue research of usage and impacts of NIST CSF, C2M2, and C2M2 derivatives.

- **Grid Modernization Laboratory Consortium (GMLC) and Lead Cyber RD&D Coordination Across DOE Offices ($5 million)**
  The Grid Modernization Initiative (GMI) represents a collaborative, cross departmental DOE endeavor aimed at orchestrating the development of technology, modeling, cybersecurity, and physical security strategies to facilitate grid modernization research and development via joint funding opportunities across various offices. CESER, as a Tier 1 voting member of the Grid Modernization Laboratory Consortium (GMLC), is dedicated to driving cybersecurity initiatives throughout the DOE's GMLC endeavors.

  In its role as the Sector Risk Management Agency (SRMA) for the energy sector, CESER is fostering coordination with partners from CISA, industry, academia, and other external stakeholders to ensure that cybersecurity RD&D effectively address the future needs of the energy sector.

Risk Management Tools & Technologies
Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 vs FY 2023	
				$	%
Risk Management Tools & Technologies					
Advance Tools to Manage Cyber Risks	39,500	38,000	34,000	-5,500	-13.9%
University-Based RD&D and Energy Cybersecurity R&D Centers	4,000	4,000	3,000	-1,000	-25.0%
Advance Tools to Manage Risks from Natural Hazards & Non-Cyber Threats	30,000	30,000	22,000	-8,000	-26.7%
Supply Chain Cybersecurity Risk Management	30,000	30,000	30,000	0	0.0%
Cyber Risk Assessments, Frameworks, and R&D Coordination	21,500	23,000	17,500	-4,000	-18.6%
Total, Risk Management Tools & Technologies	**125,000**	**125,000**	**106,500**	**-18,500**	**-14.8%**

Activities and Explanation of Changes ($)

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 vs FY 2023
Risk Management Tools and Technologies $125,000,000	**$106,500,000**	**-$18,500,000**
Advance Tools to Manage Cyber Risks $39,500,000	*$34,000,000*	*-$-5,500,000*
• Work with National Labs, industry, and academia to research, develop, demonstrate, deploy and transition to practice next generation cybersecurity risk management technology and tools for broad adoption in energy industry.	• Research and Development of next generation cybersecurity tools for energy companies and enhancing sector-wide information sharing and situational awareness of cybersecurity threats.	• This decrease will reduce the number of cybersecurity RD&D projects.
University-Based RD&D and Energy Cybersecurity R&D Centers $4,000,000	*$3,000,000*	*-$1,000,000*
• Collaboration with academia not only bolsters the overall security and resilience of the energy industry through technological innovations but also helps develop a cybersecurity workforce that is well versed in both engineering and cybersecurity disciplines.	• Promote collaboration research across multiple disciplines. Aims to develop innovative solutions that reduce power disruption risks resulting from cybersecurity incidents while integrating DOE initiatives into academic programs to enhance energy cybersecurity education and knowledge dissemination.	• The decrease will fund one less R&D center.
Advance Tools to Manage Risks from Natural Hazards & Non-Cyber Threats $30,000,000	*$22,000,000*	*-$8,000,000*
• This work included outlays to develop and maintain the EAGLE-I and other situational awareness platform and tools. The funding in the past was for developing and updating capabilities for situational awareness and enhanced collaboration between deployed responders, personnel at DOE Headquarters, as well as industry, State, and interagency partners.	• Extends focus beyond cybersecurity to address various non-cybersecurity risks and hazards to the energy sector, including those related to climate change, extreme weather, and seismic events, by leveraging emerging technologies to develop tools.	• The EAGLE-I and situational awareness tools work moved from RMT to R&R in FY 2024. • Accelerating EMP risk management projects, such as additional modeling, testing, and R&D, as well as performing minor lab operational improvements

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 vs FY 2023
Supply Chain Cybersecurity Risk Management $30,000,000	*$30,000,000*	*$0*
• This work is focused on supply chain testing and enumeration of critical energy delivery software and hardware. The work includes demonstration of security practices for emerging technologies such as Distributed Energy Resources in the energy sector.	• Continues focus on supply chain testing and enumeration of critical energy delivery software and hardware. The work includes demonstration of security practices for emerging technologies such as Distributed Energy Resources in the energy sector.	• No change.
Cyber Risk Assessments, Frameworks, and R&D Coordination $21,500,000	*$17,500,000*	*-$4,000,000*
• This work is focused on the cybersecurity standards, frameworks, and methodologies. CESER develops guidance and supporting tools and resources for energy sector owners and operators to apply in their environments to strengthen their cybersecurity posture.	• Collectively aims to integrate cybersecurity into energy sector engineering practices, ensures critical infrastructure resilience, develop risk-informed cybersecurity solutions, and coordinate grid modernization efforts.	• CCE program decreased as it completes its research and development phase. • CIE effort decreased as the development of the strategy has been completed and is now in implementation phase. • C2M2 effort decreased as the program completes its development of the C2M2 Version 2.1 product.

Response and Restoration

Overview

The U.S. Department of Energy (DOE) is the coordinating agency for Emergency Support Function (ESF) #12, under the National Response Framework, and the Sector Risk Management Agency (SRMA) for the energy sector, oversees these roles through the Office of Cybersecurity, Energy Security, and Emergency Response (CESER). CESER's Response and Restoration division leads all-hazard efforts related to ESF #12, Presidential Policy Directive (PPD)-21, PPD-41 Cyber Incident Response, and broader SRMA responsibilities, including situational awareness and analysis and response coordination across government levels and industry partners. This division also manages the Department's emergency authorities for the energy sector.

During coordinated federal response, CESER's Energy Response Organization activates to manage ESF #12 and SRMA response activities, including deployment of responders and sector engagement. DOE plays a key role in the Infrastructure Systems Recovery Support Function under the National Disaster Recovery Framework. ESF #12 provides critical technical expertise to various government levels and industry stakeholders, offering information on energy system damage and outages impacts. CESER trains and coordinates a cadre of volunteer responders from across DOE to deploy virtually or physically to a disaster site upon the request of FEMA. DOE's ESF #12 volunteers perform several critical functions including conducting damage assessments, restoration planning, and technical assistance. CESER may also self-activate for energy emergencies using the Department's own authorities.

The Response and Restoration division coordinates DOE's response to cybersecurity incidents affecting the energy sector, supporting interagency partners and industry stakeholders in line with national directives. DOE represents the energy sector as the SRMA and collaborates with the Department of Homeland Security's government-wide approach. DOE can support Department of Homeland Security (DHS), Federal Bureau of Investigation (FBI), and industry through CESER subject matter experts and DOE National Laboratories. Finally, the Response and Restoration division leads the Energy Threat Analysis Center (ETAC) that is a public-private partnership to address cyber threats to the U.S. energy sector.

To fulfill DOE's responsibilities, CESER's Response and Restoration division continuously develops capabilities for coordinating response operations, enhancing situational awareness, providing technical assistance, and analyzing threats and incidents affecting the energy sector, including cybersecurity threats.

In FY 2025, CESER aims to bolster its emergency response capabilities to support natural hazard, cybersecurity threats, and physical incidents in the energy sector. Escalating extreme weather events (such as year-around wildfires, intense hurricanes, and floods), physical security concerns, and cybersecurity threats by adversarial nation-states (including the People's Republic of China, Russia, Iran, and North Korea) and criminal actors (for example ransomware attackers) all drive the need for increased capacity and new approaches to situational awareness, analysis, technical assistance, response, and restoration in support of one of the most complex and expansive critical infrastructure sectors in the United States.

Highlights of the FY 2025 Budget Request

CESER will enhance its robust all-hazards emergency response capabilities with cybersecurity-specific staffing, training, tools, threat analysis, and incident response protocols; build upon its regional response approach to include targeted recruitment, staffing, and operational collaboration with strategic U.S. regions including Puerto Rico, the U.S. Virgin Islands, Guam, and the Commonwealth of the Northern Marianas. In FY 2024, CESER internally transitioned the EAGLE-I program from the Risk Management Tools and Technologies (RMT) division to the Response and Restoration (R&R) division. This ensures alignment with mission requirements and build out of additional capabilities needed to maintain continuous situational awareness of the Nation's energy system and to support response operations. Finally, the budget operationalizes the Energy Threat Analysis Center (ETAC) to address the growing cyber threats from China, other nation-states, and cyber criminals.

- **<u>All-Hazards Incident Response, Regional Support, and Situational Awareness</u> ($21 million)**
  - **All-Hazards ESF #12 Training ($2.75 million)**

CESER maintains an emergency all-hazards response baseline, training approximately 120 volunteer responders, from across the DOE enterprise, organized into Regional Response Teams, aligned to the 10 FEMA regions, bolstering response capabilities, and fostering regional collaboration. In FY 2025, CESER will continue to focus on regionally based training and exercises to build capabilities and teams better equipped to support state and regional emergency response, joint exercises with SLTT and industry, and strengthened energy sector partnerships.

- **Response Operations and Emergency Authorities ($4.75 million)**
  It is critical that CESER is ready to support the over 3,000 electricity and thousands of oil and natural gas companies across the U.S. through a robust ESF#12 operational team. This funding will continue to support DOE's role under the National Response Framework as ESF#12 to lead response operations for the energy sector. Also, CESER will strengthen its emergency response operations team so that they are regionally focused and therefore can better prepare for and respond to natural hazards that often look different from coast to coast (e.g., West coast response is more focused on wildfires, Southeast is hurricanes, and Northeast is extreme winter weather). These regional responders will better prepare and plan for emergencies in partnership with State Energy and Emergency Offices, FEMA regional offices, and industry; they will conduct exercises and training for region-specific threats and hazards; and they will support emergency preparedness training tailored to the region. Further, CESER will enhance the FEMA mission assignment process through the development and deployment of tools to support more efficient and effective processes for logistics, finance, and administration activities. Finally, CESER will continue to manage delegated DOE emergency authorities, to include waivers to the Federal Power Act, Defense Production Act, Jones Act, and concurrence on energy related waivers managed by other Departments and Agencies, such as the EPA, DOT, and DHS.

- **Situational Awareness ($3.5 million)**
  CESER will enhance situational awareness, analysis, and technical capabilities program with 24/7 energy sector monitoring. This expanded capability will provide continuous monitoring and disruption anticipation, modeling potential impacts and rapid analysis to mitigate threats impacting U.S. energy systems, facilitating timely preparedness, response, and recovery efforts across all hazards.

- **EAGLE-I ($10 million)**
  CESER will continue to develop and maintain the EAGLE-I situational awareness platform, expand near real-time situational awareness, and introduce enhanced capabilities, such as remote sensing and modeling, to support energy sector preparedness, response, and recovery efforts. Additionally, EAGLE-I will serve as a collaboration platform between deployed responders, DOE Headquarters personnel, industry partners, and state and interagency stakeholders.

- **<u>Cyber Incident Response and Cyber Situational Awareness</u> ($12 million)**

  - **Energy Threat Analysis Center ($5 million)**
    The Department will operationalize the Energy Threat Analysis Center (ETAC) to address cyber threats to the U.S. energy sector, building off the success of the pilot. DOE will operationalize it pending input by OMB, Congress, and other critical partners in FY24 to ensure that the ETAC can be an enduring capability to support energy security and national security. The ETAC will leverage analytic tools and insights from energy infrastructure owners, operators and DOE's National Laboratories, and the intelligence community to exchange data, identify risks and threats to critical energy infrastructure, and develop mitigation strategies and technical advisories that help energy systems operators protect their systems from adversaries. CESER will continue to coordinate ETAC activities with DOE's Office of Intelligence and Counterintelligence and Cybersecurity and Infrastructure Security Agency Joint Cyber Defense Collaborative within the Department of Homeland Security. In conjunction with critical partners, CESER will also periodically assess the ETAC's analytical and information-sharing capabilities to ensure the Center's effectiveness and preparedness in the face of an ever-advancing threat landscape.

- **Cyber Response Training ($2 million)**
  The FY 2025 Budget will enhance ESF#12 responder training to continue to build a deeper knowledge of energy management systems (including for distributed energy resources and grid SCADA controls to support a cybersecurity response.

- **Cyber Incident Response ($5 million)**
  CESER will provide energy sector cybersecurity expertise supporting federal response during significant energy sector cybersecurity incidents as per the National Cyber Incident Response Plan (NCIRP). To fulfill DOE's duties, CESER will expand its cybersecurity portfolio to support cyber forensics in an operational technology environment, analyze malware, and conduct cyber hunts for cyber adversaries.

Response and Restoration
Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 vs FY 2023	
				$	%
Response and Restoration					
All-Hazards Incident Response, Regional Support, and Situational Awareness	11,000	11,000	21,000	+10,000	+90.9%
Cyber Incident Response and Cyber Situational Awareness	12,000	12,000	12,000	+0	+0.0%
Total, Response and Restoration	**23,000**	**23,000**	**33,000**	**+10,000**	**+43.5%**

Activities and Explanation of Changes ($)

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 vs FY 2023
Response and Restoration $23,000,000	**$33,000,000**	**+$10,000,000**
All-Hazards Incident Response, Regional Support, and Situational Awareness $11,000,000	*$21,000,000*	*+$10,000,000*
• Maintain current capabilities and expand the regional knowledge, skills, and abilities of the ESF #12 cadre of trained volunteer emergency responders, focusing efforts on hurricanes, wildfires, earthquakes, and cybersecurity -attacks. • Focus on expanding training and capabilities to support remote and rural location responses, educating responders on regionally specific energy infrastructure in order to improve emergency response to ever changing energy and cross sector interdependencies; provide support and technical assistance to the SLTT State Energy Assurance planning. Expand access to available subject matter expertise across the DOE enterprise, to include the National Labs. • Execute CESER Regional Expansion Pilot program for full-time federal regional staff presence to include federal staff and regional facilities or share location in three FEMA regions. • Continued focus on and commitment to CESER's Regionalization model by expanding the Office's responder recruitment including Catastrophic Incident Response Team (CIRT) and cybersecurity responders. Expand steady-state operational capabilities to support regional and state day-to-day operations and preparedness efforts. • Develop the operational concepts for a dedicated CESER Watch Office to provide daily energy sector	• Continue to develop and enhance the EAGLE-I platform, including collaboration capabilities. • Integrate additional products and tools such as predictive power outage models and restoration estimates, imagery analysis, post-incident damage detection, and flood detection into the platform to further support emergency preparedness, response, and recovery efforts. • Expand the ESF #12 cadre of trained emergency responders, focusing on hurricanes and wildfires, earthquakes and cybersecurity attacks. • Enhance training for remote and rural responses and improving situational awareness of threats and incidents impacting U.S. energy systems including oil, natural gas, and renewable energy infrastructure. • Increasing emergency responder capabilities and steady state regional working relationships to improve response effectiveness in an all-hazards environment through enhanced multi modal training, situational awareness products and tools, and continuity of the Federal missions and mission essential functions.	• Due to the operational capability and technical maturity of EAGLE-I as the U.S. Government's situational awareness platform for the energy sector, CESER internally transitioned the EAGLE-I program from the Risk Management and Tools (RMT) division to the Response and Restoration (R&R) division in FY 2024.

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 vs FY 2023
monitoring, reporting, and support to emergency response operations. • Adopt and integrate CESER's emergency authorities (DPA, Jones Act, FPA 202c) into standard operational processes and procedures; train DOE offices, contractors and external stakeholders; and provide accurate, comprehensive, and usable public information for those wishing to use these authorities.		

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 vs FY 2023
Cyber Incident Response and Cyber Situational Awareness $12,000,000	*$12,000,000*	*+$0*
• Funding will build on DOE's ESF#12 catastrophic response capabilities to add cybersecurity and cybersecurity incident response capacity that better supports energy sector entities impacted by a cybersecurity event. The enhanced capability will also improve and expand DOE's support to the Federal Government's coordinated cybersecurity incident response as mandated by PPD-41 and the National Cyber Incident Response Plan. • Implement the findings and recommendations in the 2021 CESER Cybersecurity Needs and Capabilities Study, through contract support, looking at the national lab capabilities to support cybersecurity incident response, and conducting follow on feasibility studies for physical watch offices and secure space to support cybersecurity operations. • Develop Energy Sector Cybersecurity Response capabilities that can support CISA and FBI cybersecurity incident response teams to provide energy sector subject matter expertise about energy systems. • Identify and equip dedicated CESER classified space to support cybersecurity response operations.	• Operationalize ETAC activities in partnership with the Federal Interagency, Intelligence Community, and industry to advance cyber industry-government threat situational awareness, mitigation, and response. • Expand membership, to include third party entities such as key vendors and supply chain components.	• No change

Program Direction

Overview

Program Direction provides for costs associated with federal workforce staffing to include salaries, benefits, travel, training, and other related expenses. Program Direction funds also provide for costs associated with contractor services managed under the direction of the federal workforce.

Salaries and Benefits support federal employees who provide executive management, programmatic oversight, and analysis for the effective implementation of the CESER program. This includes staff at Headquarters and the National Energy Technology Laboratory (NETL) to support the overall CESER mission. While CESER funds NETL staff within its budget, the NETL Federal employees are included within the full-time equivalent (FTE) total within the Fossil Energy Research and Development account. An increased need in the area of cybersecurity preparedness and incident response continues to warrant participation in the DOE's Cyber Retention Program allowing cybersecurity incentives of up to 25% of an eligible employee's salary allowing CESER to be competitive with other agencies offering commensurate incentives.

CESER's staffing efforts continue to focus on building core capabilities and partnerships with industry as the energy sector SRMA, including training, technical assistance, workforce development, support of State, Local, Territorial, and Tribal (SLTT) entities, conducting risk analysis of cybersecurity, physical, and natural hazard risks, emergency response activities, coordinating long-term recovery efforts across the department and the interagency, and strengthening human resources, procurement and budget staff to support programmatic activities.

Travel includes transportation, per diem, and incidental expenses allowing CESER to effectively deliver on its mission. Major drivers of travel include the need to oversee the development and deployment of risk management tools, programs, and projects in the field; attendance at industry, interagency and regional state government energy sector engagements as well as emergency response coordination meetings.

Support Services include contractor support to perform administrative and analytical tasks in support of CESER's mission. In addition, support services includes assistance with communications and outreach to enhance external communications and engagement with the energy sector and other CESER stakeholders. and support from Internship programs utilized through Oak Ridge Institute for Science and Education and DOE's Minority Educational Institution Student Partnership Program assignments.

Other Related Expenses include DOE's Working Capital Fund support, Energy Information Technology Services, minor construction, equipment purchases, upgrades, and replacements, office furniture, commercial credit card purchases, general and advanced training, security clearances, and other miscellaneous expenditures.

Highlights of the FY 2025 Budget Request

This budget request accounts for increased on-board FTE to execute CESER's national security and energy security mission that is focused on significant and increasing cyber, physical, and weather-based threats that face the U.S. energy system. The FY 2025 request will ensure that Department has a stronger federal team to tackle these threats in partnership with electricity, oil, and natural gas owners and operators, SLTT community, interagency partners, intra-agency partners, and others to ensure a secure and resilient energy sector for Americans. Further, the funding ensures that CESER can provide cybersecurity retention incentives, enable the use of both classified and unclassified spaces and technologies for staff to execute the mission, and continue to competitive in Federal government hiring and retention of a highly skilled workforce.

Program Direction
Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 vs FY 2023 ($)	FY 2025 vs FY 2023 (%)
Program Direction					
Washington Headquarters					
Salaries and Benefits	15,215	15,138	20,242	+5,027	+33.0%
Travel	295	300	450	+155	+52.5%
Support Services	4,211	3,716	3,921	-290	-6.9%
Other Related Expenses	1,763	2,189	3,436	+1,673	+94.9%
Total, Washington Headquarters	21,484	21,343	28,049	+6,565	+30.6%
National Energy Technology Laboratory					
Salaries and Benefits	1,754	2,000	2,100	+346	+19.7%
Travel	116	115	100	-16	-13.8%
Support Services	333	450	490	+157	+47.2%
Other Related Expenses	1,456	1,235	1,261	-195	-13.4%
Total, National Energy Technology Laboratory	3,659	3,800	3,951	+292	+8.0%
Total Program Direction					
Salaries and Benefits	16,969	17,138	22,342	+5,373	+31.7%
Travel	411	415	550	+139	+33.8%
Support Services	4,544	4,166	4,411	-133	-2.9%
Other Related Expenses	3,219	3,424	4,697	+1,478	+45.9%
Total, Program Direction	25,143	25,143	32,000	+6,857	+27.3%
Federal FTEs[1]	**62**	62	82	+20	+32.3%
Additional FE FTEs at NETL supporting CESER[2]	11	11	11	0	0.0%
Total CESER-funded FTEs	**73**	**73**	**93**	**+20**	**+27.4%**

[1] HQ Federal FTE normalized in all years to correct inaccurate FTE values

[2] CESER funds FTEs at FE's National Energy Technology Laboratory who support CESER activities. These 11 FTEs are in FE's FTE totals and are not included in the CESER FTE totals shown on the "Federal FTEs" line.

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 vs FY 2023 ($)	FY 2025 vs FY 2023 (%)
Support Services and Other Related Expenses					
Support Services					
Technical Support	3,906	3,368	3,634	-272	-7.0%
Management Support	638	798	777	+139	+21.8%
Total, Support Services	4,544	4,166	4,411	-133	-2.9%
Other Related Expenses					
Other Services	1,580	1,435	1,602	+22	+1.4%
EITS Desktop Services	639	762	911	+272	+42.6%
WCF	1,000	1,227	2,184	+1,184	+118.4%
Total, Other Related Expenses	3,219	3,424	4,697	+1,478	+45.9%

Program Direction

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 vs FY 2023
Program Direction $25,143,000	**$32,000,000**	**+$6,857,000**
Salaries and Benefits $16,969,000	*$22,342,000*	*+$5,373,000*
• For 62 FTEs at HQ and 11 FTEs at NETL that provide executive management, programmatic oversight, and analysis for the effective implementation of the CESER program.	• For 82 FTEs at HQ and 11 FTEs at NETL that provide executive management, programmatic oversight, and analysis for the effective implementation of the CESER program.	• Increased for additional 20 on-board FTEs, for the following roles, including regionally-focused emergency responders, ETAC, research and development program managers; industry and state engagement on policies, exercises, training, and workforce development; and implementing recruitment, hiring, and retention incentives. Additional FTEs will also support the coordination of energy sector cybersecurity effort across the Department, including ensuring the consideration of cybersecurity in research, development, demonstration, and deployment projects per the authorities granted in IIJA section 40126. This increase in staff is necessary to support the right-sizing of CESER program office support.
Travel $411,000	*$550,000*	*+$139,000*
• Travel includes transportation, subsistence, and incidental expenses that allow CESER to effectively facilitate its mission.	• Includes transportation, subsistence, and incidental expenses for both international and U.S. travel that allow CESER to effectively facilitate its mission.	• Increased due to increased FTE count, cost inflation, and in-person travel needs.
Support Services $4,544,000	*$4,411,000*	*-$133,000*
• Support Services includes contractor support directed by the federal staff to provide analysis to management.	• Support budget, acquisition, human resources, communications, business systems, and administrative support needs.	• Decreased due to restructure of admin support for efficiency and cost effectivity.

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 vs FY 2023
Other Related Expenses $3,219,000	*$4,697,000*	*+$1,478,000*
• Includes equipment upgrades and replacements, office furniture, minor construction, commercial credit card purchases using simplified acquisition procedures when possible, and miscellaneous expenditures.	• Includes additional required equipment upgrades and replacements for new and existing staff, office furniture, construction, commercial credit card purchases using simplified acquisition procedures when possible, general and advanced training, and miscellaneous expenditures.	• Increased WCF, EITS, and general training costs associated with Federal workforce growth. • Increased specialized training, such as Certified Information Systems Security Professional or SANS training, to recruit and retain cybersecurity specialist.

Cybersecurity, Energy Security, and Emergency Response

Research and Development ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 vs FY 2023	
				($)	(%)
Basic	15,000	15,000	11,000	-4,000	-26.7%
Applied	59,000	59,000	67,000	+8,000	+13.6%
Development	29,000	29,000	30,000	+1,000	+3.5%
Total, R&D	103,000	103,000	108,000	+5,000	+4.9%

Small Business Innovative Research/Small Business Technology Transfer (SBIR/STTR) ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 vs FY 2023	
				($)	(%)
Risk Management Tools	2,482	2,482	2,571	+89	+3.6%

DEPARTMENT OF ENERGY
Funding by Site
TAS_2250 - Cybersecurity, Energy Security and Emergency Response (CESER) - FY 2025
(Dollars in Thousands)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget
Argonne National Laboratory			
Risk Management Technology and Tools (270)	3,900	3,900	3,323
Response and Restoration (270)	800	800	1,148
Policy, Preparedness, and Risk Analysis (270)	4,195	4,195	4,452
Total Argonne National Laboratory	**8,895**	**8,895**	**8,922**
Idaho National Laboratory			
Risk Management Technology and Tools (270)	28,165	28,165	23,997
Response and Restoration (270)	2,400	2,400	3,443
Policy, Preparedness, and Risk Analysis (270)	5,248	5,248	5,569
Total Idaho National Laboratory	**35,813**	**35,813**	**33,009**
Lawrence Berkeley National Laboratory			
Risk Management Technology and Tools (270)	3,000	3,000	2,556
Policy, Preparedness, and Risk Analysis (270)	158	158	168
Total Lawrence Berkeley National Laboratory	**3,158**	**3,158**	**2,724**
Lawrence Livermore National Laboratory			
Risk Management Technology and Tools (270)	3,200	3,200	2,726
Response and Restoration (270)	4,500	4,500	6,457
Policy, Preparedness, and Risk Analysis (270)	4,415	4,415	4,685
Total Lawrence Livermore National Laboratory	**12,115**	**12,115**	**13,868**
Los Alamos National Laboratory			
Risk Management Technology and Tools (270)	175	175	149
Total Los Alamos National Laboratory	**175**	**175**	**149**
National Energy Technology Lab			
Risk Management Technology and Tools (270)	49,000	49,000	41,748
Policy, Preparedness, and Risk Analysis (270)	4,082	4,082	4,332
Program Direction - CESER (270)	3,659	3,800	3,951
Total National Energy Technology Lab	**56,741**	**56,882**	**50,031**
National Renewable Energy Laboratory			
Risk Management Technology and Tools (270)	8,740	8,740	7,446
Response and Restoration (270)	350	350	502
Policy, Preparedness, and Risk Analysis (270)	717	717	761
Total National Renewable Energy Laboratory	**9,807**	**9,807**	**8,710**
Oak Ridge Institute for Science & Education			
Risk Management Technology and Tools (270)	20	20	17
Policy, Preparedness, and Risk Analysis (270)	94	94	100
Program Direction - CESER (270)	235	245	255
Total Oak Ridge Institute for Science & Education	**349**	**359**	**372**
Oak Ridge National Laboratory			
Risk Management Technology and Tools (270)	12,000	12,000	10,224
Response and Restoration (270)	1,000	1,000	1,435
Total Oak Ridge National Laboratory	**13,000**	**13,000**	**11,659**
Pacific Northwest National Laboratory			
Risk Management Technology and Tools (270)	8,800	8,800	7,498
Response and Restoration (270)	1,000	1,000	1,435
Policy, Preparedness, and Risk Analysis (270)	4,125	4,125	4,378
Total Pacific Northwest National Laboratory	**13,925**	**13,925**	**13,310**
Richland Operations Office			
Response and Restoration (270)	8,800	8,800	12,626
Policy, Preparedness, and Risk Analysis (270)	408	408	433
Total Richland Operations Office	**9,208**	**9,208**	**13,059**
Sandia National Laboratories			
Risk Management Technology and Tools (270)	7,600	7,600	6,475
Total Sandia National Laboratories	**7,600**	**7,600**	**6,475**

DEPARTMENT OF ENERGY
Funding by Site
TAS_2250 - Cybersecurity, Energy Security and Emergency Response (CESER) - FY 2025
(Dollars in Thousands)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget
Argonne National Laboratory			
Washington Headquarters			
Risk Management Technology and Tools (270)	400	400	341
Response and Restoration (270)	4,150	4,150	5,954
Policy, Preparedness, and Risk Analysis (270)	3,414	3,415	3,622
Program Direction - CESER (270)	21,249	21,098	27,794
Total Washington Headquarters	**29,213**	**29,063**	**37,711**
Total Funding by Site for TAS_2250 - Cybersecurity, Energy Security and Emergency Response (CESER)	**200,000**	**200,000**	**200,000**

Petroleum Reserve

Petroleum Reserve

Strategic Petroleum Reserve
($K)

FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted
$207,175	$207,175	$241,169	+$33,994

Proposed Appropriation Language

For Department of Energy expenses necessary for Strategic Petroleum Reserve facility development and operations and program management activities pursuant to the Energy Policy and Conservation Act (42 U.S.C. 6201 et seq.), $241,169,000, to remain available until expended: Provided, That notwithstanding sections 161 and 167 of the Energy Policy and Conservation Act (42 U.S.C. 6241, 6247), the Secretary of Energy shall draw down and sell one million barrels of refined petroleum product from the Strategic Petroleum Reserve during fiscal year 2025: Provided further, That all proceeds from such sale shall be deposited into the general fund of the Treasury during fiscal year 2025: Provided further, That upon the completion of such sale, the Secretary shall carry out the closure of the Northeast Gasoline Supply Reserve. Note.--A full-year 2024 appropriation for this account was not enacted at the time the Budget was prepared; therefore, the Budget assumes this account is operating under the Continuing Appropriations Act, 2024 and Other Extensions Act (Division A of Public Law 118-15, as amended). The amounts included for 2024 reflect the annualized level provided by the continuing resolution.

Mission

The Strategic Petroleum Reserve (SPR) protects the U.S. economy from disruptions in critical petroleum supplies and meets United States (U.S.) obligations under the International Energy Program (Energy Policy and Conservation Act, P.L. 94-163, as amended, Section 151). The SPR benefits the U.S. by providing an insurance policy against potential interruptions in U.S. petroleum supplies, whether originating from domestic or international supply disruptions, natural disasters, sabotage, or acts of terrorism. The SPR also provides limited capability to lease excess storage space to outside entities.

Overview

FY 2025 funding includes the utilization of one rig and workover rig crew to perform 6 cavern wellbore workovers within the Cavern Integrity Program, compared to 11 cavern well workovers that were performed in FY 2023. Unanticipated cavern issues may require reprioritization of projects to fund emergency repairs with consideration to activities associated with normal operations and the Life Extension II (LE2) Project. There are 15 planned Major Maintenance construction projects in FY 2025 compared to zero in FY 2023. With an increase to the Security Program, the SPR retains capable and adequate effectiveness in providing a deterrence and response posture to adversarial threats. A minor decrease to the Maintenance Program reflects a reduction for preventive and corrective maintenance to equipment and infrastructure for Drawdown Readiness. The Request also disestablishes and sells the product contained in the Northeast Gasoline Supply Reserve (NGSR).

The SPR Program will pursue the following major activities in FY 2025:

- Additional funding for Major Maintenance construction projects at the West Hackberry site.
- Equipment and facility maintenance to sustain drawdown capability.
- Security Program and maintenance of security related infrastructure items.
- Storage cavern wellbore diagnostic and remediation activities to include Mechanical Integrity Testing required for cavern wells, and repair actions when wells fail to meet standards during the 5-year state-required testing cycle.

FY 2023 Key Accomplishments

- Maintained crude oil inventory of 351 MMB (as of September 30, 2023) across all SPR sites to remain drawdown ready at Presidential or Secretarial direction.
- Completed congressionally directed multi-year crude oil sales of 26 million barrels of crude oil according to Bipartisan Budget Act of 2015 (10 million barrels) and Fixing America's Surface Transportation Act of 2015 (16 million barrels of crude oil). The focus of FY 2023 has been to support the historic sales, exchanges, and emergency drawdowns at the sites by beginning to replenish the SPR with purchases of crude oil and the cancellation of 140 million barrels of Congressionally mandated sales in FY 2024 through FY 2027 in exchange of $10.4 billion received through emergency

sales in CY 2022. All four storage sites safely moved (either drawdown and fill) to/from various terminals, refineries, and distribution pipelines. To successfully make these deliveries, many actions were considered:
    - Numerous preparations at all the sites had to be done to make these movements. This work included rotation of large crude oil and raw water blinds on the heat exchangers and header systems, and acceleration of maintenance and repair tasks.
    - The sites coordinated with LE2 schedules and subcontractors that were already onsite to prioritize LE2 work so that the project could continue without impairing the oil movements.
    - Equipment/systems that required corrective maintenance throughout the movements had to be closely coordinated with all parties to not to impede sales.
- Completed 10 diagnostic cavern well workovers.
- Major Maintenance activities performed in FY 2023 were:
    - Performed work on 33 projects in FY23 with combined annual operating budget of $40 million.
    - Awarded 5 major maintenance projects.
    - Completed 3 major maintenance projects.
    - Coordinated 31 Architect-Engineer (AE) designs.
    - Provided oversight for 14 AE design reviews.
    - Completed 6 AE designs.
    - Both Bryan Mound and Bayou Choctaw spent a portion of the year shut down for each site's LE2 activities. Preparations included planning/executing extensive piping evacuations and system flushing of brine and crude oil piping; implementing system lockouts/tagouts; rolling isolation blinds; de-piping and blinding all wellheads; de-pressuring caverns; blinding off heat exchangers; and completing brine inventory management. These efforts proved to be very successful in facilitating the turnover of site operating systems to LE2 in a safe and methodical manner.
    - At West Hackberry, Hurricane Laura repairs continued, including the demolition of the Spare Parts Warehouse. The site also completed emergency repairs including electrical bus - current and potential transformers at the Marshland Substation; replacement of the raw water injection pump suction line; repair of Heat Exchanger 301; and relieving tension on over the road major electrical cables in tray systems.

Future Years Energy Program (FYEP)

($K)

	FY 2025 Request	FY 2026	FY 2027	FY 2028	FY 2029
Strategic Petroleum Reserve	241,169	247,000	252,000	258,000	264,000

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 2026 - FY 2029. The outyear funding levels use the growth rates in outyear account totals published in the FY 2025 President's Budget for both the 050 and non-050 accounts. Actual future budget request levels will be determined as part of the annual budget process.

Strategic Petroleum Reserve priorities in the outyears include the following:

- The SPR needs to continue robust infrastructure maintenance activities to achieve release and fill missions to meet requirements to protect the U.S. economy from disruptions in critical petroleum supplies.
- Continue cavern well integrity compliance with State Regulators.
- Maintain static funding level for the Major Maintenance Program construction projects.
- Execution of Intensified Piping Integrity Program.

Summary Funding Table
Strategic Petroleum Reserve
($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted	
				$	%
Facilities Development	163,444	161,303	208,717	+45,273	+27.7%
Management	28,651	30,792	32,452	+3,801	+13.3%
Northeast Gasoline Reserve	15,080	15,080	0	-15,080	-100.0%
Total, Strategic Petroleum Reserve	**207,175**	**207,175**	**241,169**	**+33,994**	+16.4%

Strategic Petroleum Reserve

Overview

The Strategic Petroleum Reserve (SPR) protects the U.S. economy from disruptions in critical petroleum supplies and meets U.S. obligations under the International Energy Program (Energy Policy and Conservation Act, P.L. 94-163, as amended, Section 151). The SPR benefits the U.S. by providing an insurance policy against potential interruptions in U.S. petroleum supplies whether originating from domestic and international supply disruptions, natural disasters, sabotage, or acts of terrorism.

The SPR has 351 million barrels of crude oil inventory (as of September 30, 2023) stored in underground cavern storage, providing the U.S. with multiple geostrategic benefits, and bolstering the world's collective energy security system. A release of petroleum from the SPR can mitigate the potential economic damage of an actual disruption in international or domestic petroleum supplies and the accompanying price increases. The SPR avails the U.S. with international emergency assistance through its participation in the International Energy Agency (IEA) energy supply security initiatives. IEA members are required to maintain 90 days' worth of net petroleum import protection in government-owned and/or commercial stocks and have a commitment to participate with other stockholding nations in a coordinated release of stocks in the event of a major supply disruption. While the U.S. is currently as of October 2019, a net exporter of crude oil and all petroleum products as defined by the IEA, the inventory of 351 million barrels of crude oil would provide about 146 days of net crude oil import protection (based on net crude oil imports of 2.44 million barrels per day as reported in the U.S. Energy Information Administration's Petroleum Supply Monthly for the 12-month average covering FY 2023). The SPR has a maximum drawdown capability of over 4 million barrels per day, which could be made available in the event of an IEA collective action. The United States percentage share of an IEA collective action release is 42.3% as of August 2023.

To accomplish its mission and address the challenges outlined above, the SPR program is organized into two subprograms: 1) Facilities Development and Operations and 2) Management. The Facilities Development and Operations subprogram funds all requirements associated with developing and maintaining facilities for the storage of petroleum, operations activities associated with placing petroleum into storage, and operational readiness initiatives associated with drawing down and distributing the inventory within 13 days' notice in the event of an emergency. The Management subprogram funds personnel and administrative expenses related to maintaining the Project Management Office (New Orleans, LA) and the Program Office (Washington, DC), as well as contract services required to support management and technical analysis of program initiatives and issues.

SPR's underground storage caverns require maintenance to assure their storage capability and integrity. Ongoing oil sale activities increase equipment usage and run times and require consistent preventive, predictive and corrective maintenance to prevent or address equipment failures.

SPR's underground storage caverns require maintenance to assure their storage capability and integrity. Ongoing oil sale activities increase equipment usage and run times and require consistent preventive, predictive and corrective maintenance to prevent or address equipment failures.

Cavern Integrity

The Casing Inspection and Cavern Remediation Program was developed in 2010 to remediate the anomalies in cavern wellbore casings. This is necessary to maintain the required level of operational and drawdown/fill capability. Cavern remediation and diagnostic workovers anticipate and remediate cavern wellbore failures that cause caverns to be removed from service, and in preventing potential environmental releases.

Maintenance and Major Maintenance

Maintenance of SPR equipment and facilities supports drawdown/fill readiness in a safe and environmentally compliant manner. Increased infrastructure use due to legislatively directed, multi-year crude oil sales require additional Maintenance and Major Maintenance activities to sustain operational readiness. It includes the maintenance of infrastructure items that support Physical Security.

Strategic Petroleum Reserve
Facilities Development and Operations

Description

The Facilities Development and Operations subprogram funds activities to maintain the SPR's operational readiness capability for successful drawdowns/fills and operate the sites in a safe, secure, and environmentally acceptable manner. Despite a significant reduction in U.S. reliance on imported petroleum, with significant global reserves in regions of the world subject to political unrest, the U.S. economy remains vulnerable to price increases/decreases related to petroleum supply/demand disruptions. The SPR's stockpile of petroleum products and spare capacity diminishes these vulnerabilities to the effects of supply disruptions.

The SPR's underground storage caverns require maintenance to assure their storage capability and integrity. Surface and sub-surface infrastructure and systems that must be maintained to meet operational readiness requirements have been identified and are funded in this subprogram.

Facilities Development and Operations
Funding

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Facilities Development and Operations **$163,444,000**	**$208,717,000**	**+$45,273,000**
Casing Inspections and Remediations **$27,840,000**	**$37,452,000**	**+$9,612,000**
• Funding level supports 1 cavern workover rig and leased crew to execute 4 cavern wellbore diagnostic workovers.	• Funding level supports 1 cavern workover rig and leased crew to execute 9 cavern wellbore diagnostic workovers.	• The increase is for the Cavern Integrity Program to perform cavern wellbore diagnostic activities utilizing one leased rig and crew for cavern integrity operations to insure drawdown capability.
Major Maintenance $3,838,000	**$22,407, 000**	**+$18,569,000**
• Continue approach to repair, replace, or upgrade equipment including Security, Environmental, Safety & Health (ESH), Drawdown and Non-Drawdown critical systems.	• Continue approach to repair, replace, or upgrade equipment including Security, ESH, Drawdown and Non-Drawdown critical systems.	• Increased funding level represents 15 new planned construction projects. There were no new planned construction projects in FY 2023.
Maintenance $28,061,000	**$27,437,000**	**-$624,000**
• Provides preventive/corrective/predictive maintenance of the SPR equipment and facilities to support drawdown readiness in a safe and environmentally compliant manner.	• Provides preventive/corrective/predictive maintenance of the SPR equipment and facilities to support drawdown readiness in a safe and environmentally compliant manner.	• The decrease represents materials and services for maintenance of pumps, motors, valves, and actuators of drawdown/fill critical equipment while maintaining an acceptable level of risk of equipment failures which could affect drawdown/fill operations.
Security $23,073,000	**$25,204,000**	**+$2,131,000**
• Protect and defend personnel, property and resources against assault, sabotage, vandalism, theft, trespass, and compromise of sensitive as well as classified information.	• Protect and defend personnel, property and resources against assault, sabotage, vandalism, theft, trespass, and compromise of sensitive as well as classified information.	• The increase is for the escalation in subcontract labor and equipment such as K-9 replacement, security equipment, Multiple Integrated Laer Equipment Gear, Body Armor and Thermal Imagery for the Security Program that provides for a safe and secure workplace to meet DOE and Federal requirements for the protection of resources and information and ensuring drawdown readiness.

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Data Systems & Support $80,632,000	**$96,217,000**	**+$15,585,000**
• Data Systems to support the mission of drawdown readiness, processing, sale, and receipt of goods (oil), communications, reporting, providing protection from malware and computer viruses, and all other activity associated with the use of data and information systems. Compliance requirements for Fire Protection, DOT 5-year Navigable Waterway Inspection, RMIAP (Cyber Security), Multi-Factor Authentication and Piping Assurance Program.	• Data Systems to support the mission of drawdown readiness, processing, sale, and receipt of goods (oil), communications, reporting, providing protection from malware and computer viruses, and all other activity associated with the use of data and information systems. Compliance requirements for Fire Protection, DOT 5-year Navigable Waterway Inspection, RMIAP (Cyber Security), Multi-Factor Authentication and Piping Assurance Program.	• Funding level reflects an increase for support for replacement of life-cycle site operations equipment, data system server hardware and software upgrades, RMAIP in accordance with DOE Cyber Security Program 205.1C, technical services support activities to include Engineering, Quality Assurance, Property Management, Procurement, Safety & Health, and Financial Management.

Northeast Gasoline Supply Reserve
Funding

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Northeast Gasoline Reserve $15,080	**$0**	**-$15,080**
• The NGSR consists of 1 million barrels of gasoline blendstock stored in leased commercial storage terminals located in Maine, Massachusetts, and New Jersey.	• No budget request for the NGSR.	• Funding decrease is due to the disestablishment and sale of the reserve in FY 2025.

Strategic Petroleum Reserve
Capital Summary[1] ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Capital Operating Expenses Summary (including MIE)					
Capital Equipment > $500K (including MIE)	0	0	16,503	+16,503	+100.0%
Plant Projects (GPP >$10M)	0	0	0	0	0.0%
Total, Capital Operating Expenses	**0**	**0**	**16,503**	**+16,503**	**+100.0%**
Capital Equipment > $500K (including MIE)					
Total Non-MIE Capital Equipment (>$500K)	0	0	16,503	+16,503	+100.0%
Total, Capital Equipment (including MIE)	**0**	**0**	**16,503**	**+16,503**	**+100.0%**
Plant Projects (GPP - Total Estimated Cost >$10M)					
Total, Plant Projects (GPP – Total Estimated Cost)	**0**	**0**	**0**	**0**	**0.0%**
Total, Capital Summary	**0**	**0**	**16,503**	**+16,503**	**+100.0%**

[1] This list of projects is illustrative and can be adjusted based on operational requirements, priorities, and/or funding.

Strategic Petroleum Reserve
Management

Overview

Management provides funding for the salaries and related requirements of the Headquarters federal workforce responsible for providing programmatic policy, planning and oversight, to include strategic project planning, budget formulation and financial management, operations, engineering, safety, security, and technical analysis of programmatic activity of the SPR. The additional Federal workforce of the SPR Project Management Office directs program execution and establishes technical performance standards as well as scope, cost, and schedule milestones for the Management and Operations contractor.

Management Funding
($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted	
				$	%
Management Summary					
Washington Headquarters					
Salaries and Benefits	5,844	6,090	6,440	+596	+10.2%
Travel	120	130	145	+25	+20.8%
Support Services	1,619	2,000	2,300	+681	+42.1%
Other Related Expenses	1,917	1,949	2,115	+198	+10.3%
Total, Washington Headquarters	**9,500**	**10,169**	**11,000**	**+1,500**	**+15.8%**
SPR – Project Management Office					
Salaries and Benefits	15,940	16,993	17,738	+1,798	+11.3%
Travel	575	600	600	+25	+4.3%
Support Services	715	725	725	+10	+1.4%
Other Related Expenses	1,921	2,305	2,389	+468	+24.4%
Total, SPR – Project Management Office	**19,151**	**20,623**	**21,452**	**+2,301**	**+12.0%**
Total Management					
Salaries and Benefits	21,784	23,083	24,178	+2,394	+11.0%
Travel	695	730	745	+50	+7.2%
Support Services	2,334	2,725	3,025	+691	+29.6%
Other Related Expenses	3,838	4,254	4,504	+666	+17.4%
Total, Management	**28,651**	**30,792**	**32,452**	**+3,801**	+13.3%
Federal FTEs	**126**	**126**	**126**	**0**	

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted	
				$	%
Technical Support					
Environmental, Safety, Security & Health	570	600	600	+30	+5.3%
Technical Services	0	0	0	0	0.0%
Total, Technical Support	**570**	**600**	**600**	**+30**	**5.3%**
Management Support					
Training and OPM Recruitment	150	150	150	0	+0.0%
Technical Support	1,614	1,975	2,275	+661	+41.0%
Total Management Support	1,764	2,125	2,425	+661	+37.5%
Total, Support Services	**2,334**	**2,725**	**3,025**	**+691**	**+29.6%**
Other Related Expenses					
Rent to Others	719	720	720	+1	+0.1%
Communications, Utilities & Misc.	119	150	155	+36	+30.3%
Other Services	2,350	2,659	2,894	+544	+23.1%
Operation and Maintenance of Equipment	50	75	85	+35	+70.0%
Supplies and Materials	600	650	650	+50	+8.3%
Total, Other Related Expenses	**3,838**	**4,254**	**4,504**	**+666**	**+17.4%**

Management
Funding

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Management $28,651,000	**$32,452,000**	**+$3,801,000**
Salaries and Benefits $21,784,000	**$24,178,000**	**+$2,394,000**
• The funding supports salaries and benefits for 126 FTEs and associated costs required to provide overall direction and execution of the SPR. The SPR mission is carried out by a workforce composed largely of M&O contractors, although there are a variety of functions that are inherently governmental (i.e., program management, contract administration, budget formulation, and interagency/international coordination) that require a dedicated Federal workforce.	• The funding supports salaries and benefits for 126 FTEs and associated costs required to provide overall direction and execution of the SPR. The SPR mission is carried out by a workforce composed largely of M&O contractors, although there are a variety of functions that are inherently governmental (i.e., program management, contract administration, budget formulation, and interagency/international coordination) that require a dedicated Federal workforce.	• Increase reflects escalation in costs.
Travel $695,000	**$745,000**	**+$50,000**
• Provides travel to assure capability to achieve Level 1 Performance criteria for drawdown and distribution of the Reserve.	• Provides travel to assure capability to achieve Level 1 Performance criteria for drawdown and distribution of the Reserve.	• Minor increase supports travel required to ensure the reserve is drawdown ready.
Support Services $2,334,000	**$3,025,000**	**+$691,000**
• Activities support project-planning efforts to maintain technical, mission essential support capabilities.	• Activities support project-planning efforts to maintain technical, mission essential support capabilities.	• Increase reflects project-planning efforts for technical analysis which support programmatic planning and capability requirements.
Other Related Expenses $3,838,000	**$4,504,000**	**+$666,000**
• Provides teleconferencing capabilities between sites; field site building leases; analytical support services and materials; Information Technology (IT) hardware and software materials and services support.	• Provides teleconferencing capabilities between sites; field site building leases; analytical support services and materials; Information Technology (IT) hardware and software materials and services support.	• Increase reflects increases for the cost of IT hardware and software materials and services.

Strategic Petroleum Reserve
Facilities Maintenance and Repair

The SPR Program's Facilities Maintenance and Repair activities are tied to its programmatic missions, goals, and objectives. The Facilities Maintenance and Repair activities funded by this budget and displayed below are intended to halt asset condition degradation.

Costs for Direct-Funded Maintenance and Repair (including Deferred Maintenance Reduction) ($K)

	FY 2023 Actual Cost	FY 2023 Planned Cost	FY 2024 Planned Cost	FY 2025 Planned Cost
Strategic Petroleum Reserve	39,219	30,899	88,407	49,881
Total, Direct-Funded Maintenance and Repair	**39,219**	**30,899**	**88,407**	**49,881**

Report on FY 2023 Expenditures for Maintenance and Repair

This report responds to legislative language set forth in Conference Report (H.R. 108-10) accompanying the Consolidated Appropriations Resolution, 2003 (Public Law 108-7) (pages 886-887), which requests the Department of Energy provide an annual year-end report on maintenance expenditures to the Committees on Appropriations. This report compares the actual maintenance expenditures in FY 2023 to the amount planned for FY 2023, including congressionally directed changes.

Total Costs for Maintenance and Repair ($K)

	FY 2023 Actual Cost	FY 2023Planned Cost
Strategic Petroleum Reserve	39,219	30,899
Total, Direct-Funded Maintenance and Repair	**39,219**	**30,899**

Strategic Petroleum Reserve
Safeguards and Security ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted	
				$	%
Protective Forces	21,407	20,865	23,352	+1,945	+9.1%
Physical Security Systems	1,123	1,130	1,566	+85	+7.6%
Information Security	241	240	262	+21	+8.7%
Cyber Security	4,491	4,177	2,976	-1,515	-33.7%
Personnel Security	902	923	947	+45	+5.0%
Material Control and Accountability	0	0	0	0	0
Research and Development	0	0	0	0	0
Program Management	1,658	1,658	1,752	+94	+5.7%
Security Investigations	0	0	0	0	0
Transportation Security	0	0	0	0	0
Construction	0	0	0	+358	+100.0%
Total, Safeguards and Security	**29,822**	**28,993**	**30,855**	**+1,033**	**+3.5%**

18-E-001, Strategic Petroleum Reserve (SPR) Modernization
Various locations

Project Data Sheet is for Design and Construction

1. Summary, Significant Changes, and Schedule and Cost History

Summary

Initially, the SPR Modernization Program was comprised of two projects: the Life Extension Phase II (LE2) project, and the Marine Terminal Distribution Capability Enhancements (MTE) project; however, the MTE project was cancelled on May 21, 2018, due to lack of current mission need. The LE2 project will modernize aging SPR infrastructure through systems upgrades and associated equipment replacement to ensure continued ability to meet mission requirements for the next 25 years. LE2 activities were planned to occur at all four SPR storage sites: Bryan Mound (BM), Big Hill (BH), West Hackberry (WH), and Bayou Choctaw (BC); however, due to unprecedented external impacts to the program, discrete scopes have been removed. Impacts from the pandemic (supply chain disruptions, inflation, and workforce challenges) and delays related to emergency sales in 2022 have caused the LE2 activities (procurement of long lead material and construction) at West Hackberry to be suspended. The emergency oil sale delayed the start of the site outage window by 12 plus months and increased the hotel load associated with engineering and construction support. In addition, the delay from the emergency oil sales caused additional cost to be incurred by the general contractor at the BM site.

CD-1, Approve Alternative Selection and Cost Range, marks the completion of the project definition phase and conceptual design which is an iterative process to define, analyze, and refine project concepts and alternatives along with providing a cost range for the preliminary estimate. CD-1 for LE2 was approved on December 22, 2016, with a total project cost range of $750 million to $1.4 billion, but does not reflect the supplemental funding that will be necessary to complete the scope that was deferred at BM, BH, and BC, and to re-start and complete WH. Long Lead Procurement packages (CD-3A-3D) were developed and approved to prepare each site for construction and purchase a total of 65 government furnished property packages which had long lead delivery times.

CD-2/CD-3, *Approve Performance Baseline/Approve Start of Construction/Execution*, was approved on June 17, 2021, for 3 of the 4 LE2 sites: BM, BH, and BC. This milestone marked completion of the preliminary designs and approval of the Performance Baselines, including the total project cost (TPC), scope, schedule, and minimal Key Performance Parameters (KPPs) that must be achieved by CD-4, *Approve Start of Operations or Project Completion*.

The scope identified in CD-2/3 is the scope authorized to be executed with the Energy Security and Infrastructure Modernization fund which was authorized for necessary expenses to carry out the LE2 project.

The Energy Security and Infrastructure Modernization (ESIM) Fund was established as the funding source for the SPR Modernization Program. The ESIM fund contains offsetting collections from the sale of SPR crude up to the authorized annual revenue ceiling. These sales are limited to the period of fiscal years 2017 through 2020. However, the final sale in FY 2020 did not occur because of a lack of demand related to the COVID-19 virus. Section 14002 of the CARES Act (P.L. 116-136) provided the Department flexibility to conduct the final sale in FY 2020, FY 2021, or FY 2022. The final sale was ultimately conducted in FY 2021.

Significant Changes

LE2 Project:

This Construction Project Data Sheet (CPDS) is an update from the Fiscal Year 2024 Congressional Request and does not include a new start for the budget year.

The upper limit for the initial Total Project Cost for the LE2 project was $1,421,024,391, but the current estimate is $1.92 billion based on a recent September 2023 independent assessment by DOE's Office of Project Management due to cost increases caused by the pandemic and related supply chain issues, and delays related to the emergency sales in 2022. As a result of these developments, the request for CD-2/3 approval for the West Hackberry subproject has been suspended and Physical Protection/Security upgrades have been deferred at the Bryan Mound and Bayou Choctaw subprojects. In

addition, the Degasification module fabrication and Degas Plant installation subprojects have been deferred from Bayou Choctaw indefinitely to be installed at the Bryan Mound when funding is available. The three General Contracts have been awarded and mobilized at all three baselined sites and construction is in progress with site outages at Bryan Mound and Bayou Choctaw originally forecasted through March 1, 2024, but now forecasted through June 2024. At Big Hill, construction work areas not requiring an outage have been identified and are in progress as well as upgrades to the physical security systems.

In May 2023, the Department of Energy Office of Project Management (PM-30) completed an External Independent Review (EIR) to approve a Baseline Change Proposal to reallocate the WH subproject funding ($216 M) to the three baselined sites. The BCP included a new performance baseline, scope deferrals, and a new CD-4 Project Completion date of January 2027. The EIR resulted in six major findings and fourteen findings. One Major Finding was downgraded to a Finding. All major findings have been closed and BCP-01 was approved on December 1, 2023.

Due to succession, the Federal Project Director for the LE2 program has retired and the current Federal Project Director is certified at Level I with the application of Level II/III pending.

MTE Project:
The Marine Terminal Distribution Capability Enhancements subproject scope did not receive Congressional funding authority in fiscal year 2018. On May 21, 2018, the Under Secretary of Department of Energy signed a memorandum to the Assistant Secretary for Fossil Energy, approving the cancellation of the Strategic Petroleum Reserve Marine Terminal Distribution Capability Enhancement project.

Life Extension Phase II:

Critical Milestone History

	CD-0	Conceptual Design Complete	CD-1	CD-2	Final Design Complete	CD-3	CD-4
FY 2018*	10/30/2015	09/01/2016	12/22/2016	3QFY2019	3QFY2019	3QFY2019	4QFY2024
FY 2019*	10/30/2015	09/01/2016	12/22/2016	3QFY2019	3QFY2019	3QFY2019	4QFY2024
FY 2020*	10/30/2015	09/01/2016	12/22/2016	4QFY2020	4QFY2020	4QFY2020	4QFY2024
FY 2021*	10/30/2015	09/01/2016	12/22/2016	2QFY2021	2QFY2021	2QFY2021	4QFY2024**
FY 2022*	10/30/2015	09/01/2016	12/22/2016	3QFY2021	2QFY2021	3QFY2021	4QFY2024**
FY 2023***	10/30/2015	09/01/2016	12/22/2016	3QFY2021	2QFY2021	3QFY2021	4QFY2024**
FY 2024	10/30/2015	09/01/2016	12/22/2016	3QFY2021	2QFY2021	3QFY2021	TBD
FY 2025****	10/30/2015	09/01/2016	12/22/2016	3QFY2021	2QFY2021	3QFY2021	TBD

CD-0 – Approved Mission Need for a construction project with a conceptual scope and cost range
Conceptual Design Complete – Actual date the conceptual design was completed (if applicable)
CD-1 – Approve Alternative Selection and Cost Range
CD-2 – Approve Performance Baseline
Final Design Complete – Estimated/Actual date the project design will be/was complete(d)
CD-3 – Approve Start of Construction
Deactivation & Decommissioning Complete –Completion of D&D work
CD-4 – Approve Start of Operations or Project Completion
PB – Indicates the Performance Baseline

***Project does not have CD-2 approval and has not been baselined.**
****CD-4 for three sites is currently estimated FY 2024; West Hackberry estimated CD-4 is to be determined according to availability of additional funding.**
***** Project had CD-2 and CD-3 approval for Bryan Mound, Bayou Choctaw, and Big Hill. West Hackberry anticipated CD-2 and CD-3 approvals in 1st Quarter FY 2022.**
****** Project has CD-2 and CD-3 approval for Bryan Mound, Bayou Choctaw, and Big Hill. West Hackberry anticipated CD-2 and CD-3 approvals are TBD. New CD-4 dates for baselined sites: Bryan Mound 1tst Qtr. FY 2026, Bayou Choctaw 2nd Qtr. FY 2025, and Big Hill 2nd Qtr. FY 2027**

Critical Milestone History continued

Critical Milestone Big Hill							
	CD-0	Conceptual Design Complete	CD-1	CD-2	Final Design Complete	CD-3	CD-4
FY 2018	10/30/2015	09/01/2016	12/22/2016	3QFY2019	3QYF2019	3QFY2019	4QFY2024
FY 2019	10/30/2015	09/01/2016	12/22/2016	3QYF2019	3QYF2019	3QYF2019	4QFY2024
FY 2020	10/30/2015	09/01/2016	12/22/2016	4QFY2020	4QFY2020	4QFY2020	4QFY2024
FY 2021	10/30/2015	09/01/2016	12/22/2016	2QFY2021	2QFY2021	2QFY2021	4QFY2024
FY 2022	10/30/2015	09/01/2016	12/22/2016	3QFY2021	2QFY2021	3QFY2021	4QFY2024
FY 2023	10/30/2015	09/01/2016	12/22/2016	3QFY2021	2QFY2021	3QFY2021	4QFY2024
FY 2024	10/30/2015	09/01/2016	12/22/2016	3QFY2021	2QFY2021	3QFY2021	TBD
FY 2025	10/30/2015	09/01/2016	12/22/2016	3QFY2021	2QFY2021	3QFY2021	2QFY2027

Critical Milestone Bryan Mound							
	CD-0	Conceptual Design Complete	CD-1	CD-2	Final Design Complete	CD-3	CD-4
FY 2018	10/30/2015	09/01/2016	12/22/2016	3QFY2019	3QFY2019	3QFY2019	4QFY2024
FY 2019	10/30/2015	09/01/2016	12/22/2016	3QFY2019	3QFY2019	3QFY2019	4QFY2024
FY 2020	10/30/2015	09/01/2016	12/22/2016	4QFY2020	4QFY2020	4QFY2020	4QFY2024
FY 2021	10/30/2015	09/01/2016	12/22/2016	2QFY2021	2QFY2021	2QFY2021	4QFY2024
FY 2022	10/30/2015	09/01/2016	12/22/2016	3QFY2021	2QFY2021	3QFY2021	4QFY2024
FY 2023	10/30/2015	09/01/2016	12/22/2016	3QFY2021	2QFY2021	3QFY2021	4QFY2024
FY 2024	10/30/2015	09/01/2016	12/22/2016	3QFY2021	2QFY2021	3QFY2021	TBD
FY 2025	10/30/2015	09/01/2016	12/22/2016	3QFY2021	2QFY2021	3QFY2021	1QFY2026

Critical Milestone Bayou Choctaw							
	CD-0	Conceptual Design Complete	CD-1	CD-2	Final Design Complete	CD-3	CD-4
FY 2018	10/30/2015	09/01/2016	12/22/2016	3QFY2019	3QFY2019	3QFY2019	4QFY2024
FY 2019	10/30/2015	09/01/2016	12/22/2016	3QFY2019	3QFY2019	3QFY2019	4QFY2024
FY 2020	10/30/2015	09/01/2016	12/22/2016	4QFY2020	4QFY2020	4QFY2020	4QFY2024
FY 2021	10/30/2015	09/01/2016	12/22/2016	2QFY2021	2QFY2021	2QFY2021	4QFY2024
FY 2022	10/30/2015	09/01/2016	12/22/2016	3QFY2021	2QFY2021	3QFY2021	4QFY2024
FY 2023	10/30/2015	09/01/2016	12/22/2016	3QFY2021	2QFY2021	3QFY2021	4QFY2024
FY 2024	10/30/2015	09/01/2016	12/22/2016	3QFY2021	2QFY2021	3QFY2021	TBD
FY 2025	10/30/2015	09/01/2016	12/22/2016	3QFY2021	2QFY2021	3QFY2021	3QFY2025

Critical Milestone History continued

Critical Milestone West Hackberry							
	CD-0	Conceptual Design Complete	CD-1	CD-2	Final Design Complete	CD-3	CD-4
FY 2018	10/30/2015	09/01/2016	12/22/2016	TBD	3QFY2019	TBD	TBD
FY 2019	10/30/2015	09/01/2016	12/22/2016	TBD	3QFY2019	TBD	TBD
FY 2020	10/30/2015	09/01/2016	12/22/2016	TBD	4QFY2020	TBD	TBD
FY 2021	10/30/2015	09/01/2016	12/22/2016	TBD	2QFY2021	TBD	TBD
FY 2022	10/30/2015	09/01/2016	12/22/2016	TBD	2QFY2021	TBD	TBD
FY 2023	10/30/2015	09/01/2016	12/22/2016	TBD	2QFY2021	TBD	TBD
FY 2024	10/30/2015	09/01/2016	12/22/2016	TBD	2QFY2021	TBD	TBD
FY 2025	10/30/15	09/01/16	12/22/16	TBD	2QFY2021	TBD	TBD

	Performance Baseline Validation	CD-3A	CD-3B	CD-3C	CD-3D	CD-3E
FY 2017		07/14/17				
FY 2018						
FY 2019			11/20/18	10/25/2019		
FY 2020					01/15/2021	
FY 2021	6/17/2021*					
FY 2022						TBD

CD-3A – Approve Long-Lead Procurements, Original Scope
CD-3B – Approve Long-Lead Procurements, Revised Scope
CD-3C – Approve Long-Lead Procurements, Revised Scope
CD-3D – Approve Long-Lead Procurements, Revised Scope
CD-3E – Approve Long-Lead Procurements, Revised Scope

***** Baseline validation for Bryan Mound, Bayou Choctaw, and Big Hill only

Project Cost History

	TEC, Design ($000)	TEC, Construction ($000)	TEC, Total ($000)	OPC Except D&D ($000)	OPC, D&D ($000)	OPC, Total ($000)	TPC ($000)
FY 2018	$100,628	$1,299,372	$1,400,000	$6,711	$0	$6,711	$1,406,711
FY 2019	$199,749*	$800,251	$1,000,000**	$5,250	$0	$5,250	$1,005,250
FY 2020	$276,383	$1,163,617***	$1,440,000***	$5,250	$0	$5,250	$1,445,250***
FY 2021	$392,886	$1,047,114	$1,440,000	$5,250	$0	$5,250	$1,445,250
FY 2022	$392,886	$1,022,888	$1,415,774	$5,250	$0	$5,250	$1,421,024
FY 2023	$354,657	$1,061,117	$1,415,774	$5,250	$0	$5,250	$1,421,024
FY 2024	$354,657	$1,561,117	$1,915,774	$5,250	$0	$5,250	$1,921,024****
FY 2025	$266,244	$1,149,530	$1,415,774	$5,250	$0	$5,250	$1,421,024

The costs are only estimates as of July 2022 and consistent with the high end of the cost ranges. No construction funds, except for approved long lead procurement, will be used until the project performance baseline for each sub-project has been validated and CD-3 has been approved. CD-3 was approved in June 2021 for the Bayou Choctaw, Big Hill, and Bryan Mound sites. The date of CD-2/3 approval for West Hackberry is dependent on receiving additional funding.

***The increase in design cost is due to 1) competing the design contract instead of using a reach-back contract to the M&O contractor partner; 2) adding fee to competed contract; 3) adding escalation to schedule delay caused by competing design contract; and 4) adding engineering cost associated with additional scope (deleted scope was represented completely in construction cost).**
****In the 2019 CPDS submittal the Administration proposed $1B funding limitation. The maximum range project cost of $1.4B was approved at CD-1.**
*****The Project Scope was expanded to include drilling 17 new wells at two sites. The costs for FY 2020 entry have been revised to reflect the increase in scope. This scope has been removed to stay within the $1.42 B funding limit.**
******Additional funding of $500M was requested in supplemental funding within FY 2024 to address mandatory drawdown and macroeconomic impacts to the project.**

2. Project Scope and Justification

Scope

The Strategic Petroleum Reserve-Life Extension 2 (SPR-LE2) project involves work at all four SPR storage sites: Bryan Mound, Big Hill, West Hackberry, and Bayou Choctaw. The SPR-LE2 project will be managed as four sub-projects based on site location for baseline development, field execution, and project completion. Completion of the SPR-LE2 project will extend SPR key equipment and infrastructure capabilities for an additional 15-25 years and assure the required drawdown of 4.4 million barrels per day of hydraulic capability is maintained. Actual drawdown rate is highly dependent on cavern/site fill level. The scope at each of the four SPR storage facilities includes modernization of aging SPR infrastructure through systems upgrades and associated equipment replacement including repairing or replacing crude oil transfer systems, raw water systems, brine disposal systems, power distribution and lighting systems, and physical security systems. It also includes building and initially installing a new portable degasification plant at the Bayou Choctaw site.

Justification

In August 2016, the Department of Energy published a Long-Term Strategic Review (LTSR) of SPR capabilities and infrastructure. The LTSR compared current operational capability to Level 1 Technical and Performance Criteria and identified gaps within the storage site infrastructure and distribution system necessary to provide the design delivery rate of 4.4 million barrels per day if capacity is completely filled, now and for the next 25 years. The results indicated that a significant investment in infrastructure and process equipment is critical to ensure the SPR can maintain readiness, meet mission requirements, and operate in an environmentally responsible manner. The SPR-LE2 Project addresses these

requirements. Current surface assets and systems are at or near their original design life of 25 years and early analysis suggests the required Life Extension Program (LEP) could take up to six years to complete. Revitalization of many, but not all, of those assets and systems last occurred from 1995 to 2000 under the first LEP. As these assets continue to age, modernization will be required – either through additional maintenance and/or repair, or outright replacement.

The project is being conducted in accordance with the project management requirements in DOE O 413.3B, Program and Project Management for the Acquisition of Capital Assets.

Key Performance Parameters (KPPs)

The Threshold KPPs represent the minimum acceptable performance that the project must achieve. Achievement of the Threshold KPPs will be a prerequisite for approval of CD-4, Project Completion. The Objective KPPs represent the desired project performance. The preliminary KPPs for West Hackberry will be finalized when the project was baselined at CD-2.

KPP per subproject			
	Bryan Mound	Big Hill	Bayou Choctaw
KPP-1	Raw water withdrawal rate: 1545 MBD	Raw water withdrawal rate: 1133 MBD	Raw water withdrawal rate: 530 MBD
KPP-2	Sustained Drawdown Rate: 1500 MBD	Sustained Drawdown Rate: 1100 MBD	Sustained Drawdown Rate: 515 MBD
KPP-3	Site fill rate: 225 MBD	Site fill rate: 225 MBD	Site fill rate: 110 MBD

MMBD is Million Barrels per day.
MBD is Thousand Barrels per day.

3. Project Cost and Schedule

Financial Schedule (LE2 Project Summary)

($K)

	Appropriations	Obligations	Costs
Total Estimated Cost (TEC)			
Design			
FY 2015	N/A	$0	$0
FY 2016	N/A	$0	$0
FY 2017	N/A	$137,215	$4,159
FY 2018	N/A	$116,377	$59,036
FY 2019	N/A	$68,480	$74,893
FY 2020	N/A	$7,760	$68,487
FY 2021	N/A	$28,315	$44,039
FY 2022	N/A	($75,561)	$10,367
FY 2023	N/A	$0	$4,769
FY 2024	N/A	($16,342)	$494
FY 2025	N/A	$0	$0
Total, Design **a**	N/A	$266,244	$266,244
Construction			
FY 2015	N/A	$0	$0
FY 2016	N/A	$0	$0
FY 2017	N/A	$27,400	$0
FY 2018 **b**	N/A	$338,284	$483
FY 2019	N/A	$262,459	$729
FY 2020	N/A	$0	$26,076
FY 2021	N/A	$429,483	$62,973
FY 2022	N/A	$75,561	$154,398
FY 2023	N/A	$0	$231,372
FY 2024	N/A	$16,343	$365,905
FY 2025	N/A	$0	$242,312
FY 2026	N/A	$0	$65,282
Total, Construction	N/A	$1,149,530	$1,149,530

Financial Schedule continued

($K)

	Appropriations	Obligations	Costs
TEC			
FY 2015	N/A	$0	$0
FY 2016	N/A	$0	$0
FY 2017	N/A	$164,615	$4,159
FY 2018	N/A	$454,661	$59,519
FY 2019	N/A	$330,939	$75,622
FY 2020	N/A	$7,760	$94,563
FY 2021	N/A	$457,798	$107,012
FY 2022	N/A	$0	$164,765
FY 2023	N/A	$0	$236,141
FY 2024	N/A	$0	$366,399
FY 2025	N/A	$0	$242,312
FY 2026	N/A	$0	$65,282
Total, TEC	N/A	$1,415,774	$1,415,774
Other Project Cost (OPC)			
FY 2015 **c,d**	$88	$88	$88
FY 2016 **c,d**	$4,190	$4,190	$4,190
FY 2017 **d**	$972	$972	$699
FY 2018 **d**	$0	$0	$273
FY 2019	$0	$0	$0
FY 2020	$0	$0	$0
FY 2021	$0	$0	$0
FY 2022	$0	$0	$0
FY 2023	$0	$0	$0
FY 2024	$0	$0	$0
FY 2025	$0	$0	$0
FY 2026	$0	$0	$0
Total, OPC	$5,250	$5,250	$5,250

($K)

	Appropriations	Obligations	Costs
Total Project Cost (TPC)			
FY 2015	$88	$88	$88
FY 2016	$4,190	$4,190	$4,190
FY 2017 e	$340,972	$165,587	$4,858
FY 2018 **f**	$350,000	$454,661	$59,792
FY 2019 g**, j**	$300,000	$330,939	$75,622
FY 2020 **h**	$0	$7,760	$94,563
FY 2021 **i**	$425,774	$457,798	$107,012
FY 2022	$0	$0	$164,765
FY 2023	$0	$0	$236,141
FY 2024	$0	$0	$366,399
FY 2025	$0	$0	$242,312
FY 2026	$0	$0	$65,282
Total, TPC **d, k**	$1,421,024	$1,421,023	$1,421,024

a: DOE and DOE support labor; M&O project support
b: Bayou Choctaw CD-3A Degas Plant
c: Includes costs for Office of Project Management
d: Funding requirements are included in the Facilities Appropriation 089X0218.
e: FY 2017 Omnibus authorized oil sales target of $340,000,000 (Appropriation). Actual proceeds were $323,195,827.
f: FY 2018 Omnibus authorized oil sales target of $350,000,000 (Appropriation). Actual proceeds were $347,828,624
g: FY 2019 Omnibus authorized oil sales target of $300,000,000 (Appropriation). Actual proceeds were $299,999,961
h: FY 2020 Omnibus authorized oil sales target of $450,000,000 (Appropriation). Sales postponed and authorized completion no later than FY 2022 as part of the CARES Act (P.L. 116-136).
i. FY 2021 Omnibus authorized oil sales target of $450,000,000 (Appropriation). Actual proceeds were $499,999,980
j: Includes costs for Office of Project Management EIR which will be funded from the DOE Contingency within LE 2 funds
k: The Total Project Cost (TPC) of $1,421,024 was approved at CD-1, and final scope will be established at CD-2. The TPC for obligations and costs is the total of funds from Facilities Appropriation and funding received through the sale of SPR crude oil.

Note: Project is being funded through the sale of SPR crude oil and not through the normal congressional appropriations process, with the possible exception of $500 million requested in supplemental funding.

Financial Schedule – Bryan Mound

	Obligations	Costs
Total Estimated Cost (TEC)		
Design		
FY 2015	$0	$0
FY 2016	$0	$0
FY 2017	$14,956	$874
FY 2018	$22,289	$11,676
FY 2019	$10,480	$11,699
FY 2020	$1,940	$12,747
FY 2021	$19,996	$9,125
FY 2022	($23,540)	$0
FY 2023	$0	$0
FY 2024	$0	$0
FY 2025	$0	$0
Total, Design	$46,121	$46,121
Construction		
FY 2015	$0	$0
FY 2016	$0	$0
FY 2017	$3,400	$0
FY 2018	$48,884	$353
FY 2019	$50,000	$0
FY 2020	$0	$2,289
FY 2021	$141,386	$14,679
FY 2022	$23,540	$66,040
FY 2023	$0	$59,310
FY 2024	$32,880	$106,605
FY 2025	$0	$50,814
FY 2026	$0	$0
Total, Construction	$300,090	$300,090

Financial Schedule – Bryan Mound, continued

(dollars in thousands)

	Obligations	Costs
TEC		
FY 2015	$0	$0
FY 2016	$0	$0
FY 2017	$18,356	$874
FY 2018	$71,173	$12,029
FY 2019	$60,480	$11,699
FY 2020	$1,940	$15,036
FY 2021	$161,382	$23,804
FY 2022	$0	$66,040
FY 2023	$0	$59,310
FY 2024	$32,880	$106,605
FY 2025	$0	$50,814
FY 2026	$0	$0
Total, TEC	$346,211	$346,211
Other Project Cost (OPC)		
FY 2015	$22	$22
FY 2016	$1,048	$1,048
FY 2017	$243	$175
FY 2018	$0	$68
FY 2019	$0	$0
FY 2020	$0	$0
FY 2021	$0	$0
FY 2022	$0	$0
FY 2023	$0	$0
FY 2024	$0	$0
FY 2025	$0	$0
Total, OPC	$1,313	$1,313

Financial Schedule – Bryan Mound, continued

(dollars in thousands)

	Obligations	Costs
Total Project Cost (TPC)		
FY 2015	$22	$22
FY 2016	$1,048	$1,048
FY 2017	$18,599	$1,049
FY 2018	$71,173	$12,097
FY 2019	$60,480	$11,699
FY 2020	$1,940	$15,036
FY 2021	$161,382	$23,804
FY 2022	$0	$66,040
FY 2023	$0	$59,310
FY 2024	$32,880	$106,605
FY 2025	$0	$50,814
FY 2026	$0	$0
Total, TPC	$347,524	$347,524

Financial Schedule – West Hackberry

	Obligations	Costs
Total Estimated Cost (TEC)		
Design		
FY 2015	$0	$0
FY 2016	$0	$0
FY 2017	$24,801	$1,072
FY 2018	$27,043	$14,861
FY 2019	$23,000	$21,382
FY 2020	$1,940	$16,889
FY 2021	$22,014	$12,622
FY 2022	$0	$10,367
FY 2023	$0	$4,769
FY 2024	($16,342)	$494
FY 2025	$0	$0
Total, Design	$82,456	$82,456
Construction		
FY 2015	$0	$0
FY 2016	$0	$0
FY 2017	$3,000	$0
FY 2018	$111,269	$130
FY 2019	$99,819	$710
FY 2020	$0	$1,426
FY 2021	($19,746)	$12,394
FY 2022	$0	$0
FY 2023	$0	$0
FY 2024	($179,682)	$0
FY 2025	$0	$0
FY 2026	$0	$0
Total, Construction	$14,660	$14,660

Financial Schedule – West Hackberry, continued

(dollars in thousands)

	Obligations	Costs
TEC		
FY 2015	$0	$0
FY 2016	$0	$0
FY 2017	$27,801	$1,072
FY 2018	$138,312	$14,991
FY 2019	$122,819	$22,092
FY 2020	$1,940	$18,315
FY 2021	$2,268	$25,016
FY 2022	$0	$10,367
FY 2023	$0	$4,769
FY 2024	($196,024)	$494
FY 2025	$0	$0
FY 2026	$0	$0
Total, TEC	$97,116	$97,116
Other Project Cost (OPC)		
FY 2015	$22	$22
FY 2016	$1,046	$1,046
FY 2017	$243	$175
FY 2018	$0	$68
FY 2019	$0	$0
FY 2020	$0	$0
FY 2021	$0	$0
FY 2022	$0	$0
FY 2023	$0	$0
FY 2024	$0	$0
FY 2025	$0	$0
Total, OPC	$1,311	$1,311

Financial Schedule – West Hackberry, continued

	(dollars in thousands)	
	Obligations	Costs
Total Project Cost (TPC)		
FY 2015	$22	$22
FY 2016	$1,046	$1,046
FY 2017	$28,044	$1,247
FY 2018	$138,312	$15,059
FY 2019	$122,819	$22,092
FY 2020	$1,940	$18,315
FY 2021	$2,268	$25,016
FY 2022	$0	$10,367
FY 2023	$0	$4,769
FY 2024	($196,024)	$494
FY 2025	$0	$0
FY 2026	$0	$0
Total, TPC	$98,427	$98,427

Financial Schedule – Bayou Choctaw

(dollars in thousands)

	Obligations	Costs
Total Estimated Cost (TEC)		
Design		
FY 2015	$0	$0
FY 2016	$0	$0
FY 2017	$33,074	$1,003
FY 2018	$43,111	$18,600
FY 2019	$19,000	$21,981
FY 2020	$1,940	$20,941
FY 2021	($2,787)	$9,535
FY 2022	($22,278)	$0
FY 2023	$0	$0
FY 2024	$0	$0
FY 2025	$0	$0
Total, Design	$72,060	$72,060
Construction		
FY 2015	$0	$0
FY 2016	$0	$0
FY 2017	$0	$0
FY 2018	$127,713	$0
FY 2019	$24,820	$19
FY 2020	$0	$5,146
FY 2021	$106,601	$20,778
FY 2022	$22,278	$33,174
FY 2023	$0	$114,388
FY 2024	$13,740	$89,169
FY 2025	$0	$32,478
FY 2026	$0	$0
Total, Construction	$295,152	$295,152

Financial Schedule – Bayou Choctaw, continued

	(dollars in thousands)	
	Obligations	Costs
TEC		
FY 2015	$0	$0
FY 2016	$0	$0
FY 2017	$33,074	$1,003
FY 2018	$170,824	$18,600
FY 2019	$43,820	$22,000
FY 2020	$1,940	$26,087
FY 2021	$103,814	$30,313
FY 2022	$0	$33,174
FY 2023	$0	$114,388
FY 2024	$13,740	$89,169
FY 2025	$0	$32,478
FY 2026	$0	$0
Total, TEC	$367,212	$367,212
Other Project Cost (OPC)		
FY 2015	$22	$22
FY 2016	$1,048	$1,048
FY 2017	$243	$175
FY 2018	$0	$68
FY 2019	$0	$0
FY 2020	$0	$0
FY 2021	$0	$0
FY 2022	$0	$0
FY 2023	$0	$0
FY 2024	$0	$0
FY 2025	$0	$0
Total, OPC	$1,313	$1,313

	(dollars in thousands)	
	Obligations	Costs
Total Project Cost (TPC)		
FY 2015	$22	$22
FY 2016	$1,048	$1,048
FY 2017	$33,317	$1,178
FY 2018	$170,824	$18,668
FY 2019	$43,820	$22,000
FY 2020	$1,940	$26,087
FY 2021	$103,814	$30,313
FY 2022	$0	$33,174
FY 2023	$0	$114,388
FY 2024	$13,740	$89,169
FY 2025	$0	$32,478
FY 2026	$0	$0
Total, TPC	$368,525	$368,525

Financial Schedule – Big Hill

(dollars in thousands)

	Obligations	Costs
Total Estimated Cost (TEC)		
Design		
FY 2015	$0	$0
FY 2016	$0	$0
FY 2017	$64,384	$1,210
FY 2018	$23,934	$13,899
FY 2019	$16,000	$19,831
FY 2020	$1,940	$17,910
FY 2021	($10,908)	$12,757
FY 2022	($29,743)	$0
FY 2023	$0	$0
FY 2024	$0	$0
FY 2025	$0	$0
Total, Design	$65,607	$65,607
Construction		
FY 2015	$0	$0
FY 2016	$0	$0
FY 2017	$21,000	$0
FY 2018	$50,418	$0
FY 2019	$87,820	$0
FY 2020	$0	$17,215
FY 2021	$201,242	$15,122
FY 2022	$29,743	$55,183
FY 2023	$0	$57,674
FY 2024	$149,405	$170,131
FY 2025	$0	$159,020
FY 2026	$0	$65,283
Total, Construction	$539,628	$539,628

Financial Schedule – Big Hill, continued

(dollars in thousands)

	Obligations	Costs
TEC		
FY 2015	$0	$0
FY 2016	$0	$0
FY 2017	$85,384	$1,210
FY 2018	$74,352	$13,899
FY 2019	$103,820	$19,831
FY 2020	$1,940	$35,125
FY 2021	$190,334	$27,879
FY 2022	$0	$55,183
FY 2023	$0	$57,674
FY 2024	$149,405	$170,131
FY 2025	$0	$159,020
FY 2026	$0	$65,283
Total, TEC	$605,235	$605,235
Other Project Cost (OPC)		
FY 2015	$22	$22
FY 2016	$1,048	$1,048
FY 2017	$243	$175
FY 2018	$0	$68
FY 2019	$0	$0
FY 2020	$0	$0
FY 2021	$0	$0
FY 2022	$0	$0
FY 2023	$0	$0
FY 2024	$0	$0
FY 2025	$0	$0
Total, OPC	$1,313	$1,313

Financial Schedule – Big Hill, continued

(dollars in thousands)

	Obligations	Costs
Total Project Cost (TPC)		
FY 2015	$22	$22
FY 2016	$1,048	$1,048
FY 2017	$85,627	$1,385
FY 2018	$74,352	$13,967
FY 2019	$103,820	$19,831
FY 2020	$1,940	$35,125
FY 2021	$190,334	$27,879
FY 2022	$0	$55,183
FY 2023	$0	$57,674
FY 2024	$149,405	$170,131
FY 2025	$0	$159,020
FY 2026	$0	$65,283
Total, TPC	$606,548	$606,548

Details of Project Cost Estimate

(dollars in thousands)

	Current Total Estimate	Previous Total Estimate	Original Validated Baseline
Total Estimated Cost (TEC)			
Design (PED)			
Design	$266,244	$266,244	N/A
Contingency	$0	$0	N/A
Total,PED	$266,244	$266,244	N/A
Land Acquisition	$0	$0	N/A
Construction			
Site Facilities Construction	$804,237	$1,182,827	N/A
Off-Site Facilities	$10,000	$12,044	N/A
Drilling/Wellhead/Casings	$12,381	$33,831	N/A
Pipeline Construction	$110,000	$104,268	N/A
Construction Management	$37,628	$58,799	N/A
Project Support	$48,284	$68,286	N/A
Contingency	$127,000	$131,118	N/A
Total, Construction	$1,149,530	$1,591,172	N/A
Total, TEC	$1,415,774	$1,857,416	N/A
Contingency, TEC	$127,000	$131,118	N/A
Other Project Cost (OPC)			
OPC except D&D			
Conceptual Design	$1,365	$1,368	N/A
Other OPC Costs	$3,885	$3,884	N/A
Start-up	$0	$0	N/A
Contingency	$0	$0	N/A
Total, OPC except D&D	$5,250	$5,252	N/A
D&D			
D&D	$0	$0	N/A
Contingency	$0	$0	N/A
Total, D&D	$0	$0	N/A
Total, OPC	$5,250	$5,252	N/A
Contingency, OPC	$0	$0	N/A
Total, TPC	$1,421,024	$1,862,668	N/A
Total, Contingency	$127,000	$131,118	N/A

Note: Project is being funded through the sale of SPR crude oil and not through the normal congressional appropriations process, with the possible exception of $500 million requested in supplemental funding.

Details of Project Cost Estimate – Bryan Mound

(dollars in thousands)

	Current Total Estimate - Bryan Mound	Previous Total Estimate	Original Validated Baseline
Total Estimated Cost (TEC)			
Design (PED)			
Design	$46,121	$46,121	$69,661
Contingency	$0	$0	$0
Total,PED	$46,121	$46,121	$69,661
Land Acquisition	$0	$0	0
Construction			
Site Facilities Construction	$238,425	$353,382	$200,735
Off-Site Facilities	$0	$0	$0
Drilling/Wellhead/Casings	$8,381	$12,422	$7,640
Pipeline Construction	$0	$0	$0
Construction Management	$11,000	$16,709	$10,277
Project Support	$10,284	$15,638	$9,618
Contingency	$32,000	$41,372	$15,400
Total, Construction	$300,090	$439,522	$243,670
Total, TEC	$346,211	$485,643	$313,331
Contingency, TEC	$32,000	$41,372	$15,400
Other Project Cost (OPC)			
OPC except D&D			
Conceptual Design	$342	$342	$342
Other OPC Costs	$971	$971	$971
Start-up	$0	$0	$0
Contingency	$0	$0	$0
Total, OPC except D&D	$1,313	$1,313	$1,313
D&D			
D&D	N/A	N/A	N/A
Contingency	N/A	N/A	N/A
Total, D&D	N/A	N/A	N/A
Total, OPC	$1,313	$1,313	$1,313
Contingency, OPC	$0	$0	$0
Total, TPC	$347,524	$486,956	$314,644
Total, Contingency	$32,000	$41,372	$15,400

Details of Project Cost Estimate – West Hackberry

(dollars in thousands)

	Current Total Estimate - West Hackberry	Previous Total Estimate	Original Validated Baseline
Total Estimated Cost (TEC)			
Design (PED)			
Design	$82,456	$82,456	N/A
Contingency	$0	$0	N/A
Total,PED	$82,456	$82,456	N/A
Land Acquisition	$0	$0	N/A
Construction			
Site Facilities Construction	$14,660	$189,305	N/A
Off-Site Facilities	$0	$6,639	N/A
Drilling/Wellhead/Casings	$0	$14,677	N/A
Pipeline Construction	$0	$0	N/A
Construction Management	$0	$10,298	N/A
Project Support	$0	$10,022	N/A
Contingency	$0	$1,466	N/A
Total, Construction	$14,660	$232,408	N/A
Total, TEC	$97,116	$314,865	N/A
Contingency, TEC	$0	$1,466	N/A
Other Project Cost (OPC)			
OPC except D&D			
Conceptual Design	$340	$342	N/A
Other OPC Costs	$971	$971	N/A
Start-up	$0	$0	N/A
Contingency	$0	$0	N/A
Total, OPC except D&D	$1,311	$1,313	N/A
D&D			
D&D			N/A
Contingency			N/A
Total, D&D	$0	$0	N/A
Total, OPC	$1,311	$1,313	N/A
Contingency, OPC	$0	$0	N/A
Total, TPC	$98,427	$316,178	N/A
Total, Contingency	$0	$1,466	N/A

Details of Project Cost Estimate – Bayou Choctaw

(dollars in thousands)

	Current Total Estimate - Bayou Choctaw	Previous Total Estimate	Original Validated Baseline
Total Estimated Cost (TEC)			
Design (PED)			
Design	$72,060	$72,060	$94,338
Contingency	$0	$0	$0
Total,PED	$72,060	$72,060	$94,338
Land Acquisition	$0	$0	$0
Construction			
Site Facilities Construction	$226,152	$315,349	$220,800
Off-Site Facilities	$0	$0	$0
Drilling/Wellhead/Casings	$4,000	$6,732	$4,753
Pipeline Construction	$0	$0	$0
Construction Management	$10,000	$14,562	$10,281
Project Support	$21,000	$29,925	$8,300
Contingency	$34,000	$25,978	$15,000
Total, Construction	$295,152	$392,546	$259,134
Total, TEC	$367,212	$464,606	$353,472
Contingency, TEC	$34,000	$25,978	$15,000
Other Project Cost (OPC)			
OPC except D&D			
Conceptual Design	$342	$342	$342
Other OPC Costs	$971	$971	$971
Start-up	$0	$0	$0
Contingency	$0	$0	$0
Total, OPC except D&D	$1,313	$1,313	$1,313
D&D			
D&D	N/A	N/A	N/A
Contingency	N/A	N/A	N/A
Total, D&D	N/A	N/A	N/A
Total, OPC	$1,313	$1,313	$1,313
Contingency, OPC	$0	$0	$0
Total, TPC	$368,525	$465,919	$354,785
Total, Contingency	$34,000	$25,978	$15,000

Details of Project Cost Estimate – Big Hill

(dollars in thousands)

	Current Total Estimate - Big Hill	Previous Total Estimate	Original Validated Baseline
Total Estimated Cost (TEC)			
Design (PED)			
Design	$65,607	$65,607	$95,350
Contingency	$0	$0	$0
Total,PED	$65,607	$65,607	$95,350
Land Acquisition	$0	$0	$0
Construction			
Site Facilities Construction	$325,000	$324,791	$244,150
Off-Site Facilities	$10,000	$5,404	$4,000
Drilling/Wellhead/Casings	$0	$0	$0
Pipeline Construction	$110,000	$104,268	$77,176
Construction Management	$16,628	$17,230	$12,753
Project Support	$17,000	$12,701	$9,401
Contingency	$61,000	$62,301	$13,000
Total, Construction	$539,628	$526,694	$360,480
Total, TEC	$605,235	$592,301	$455,830
Contingency, TEC	$61,000	$62,301	$13,000
Other Project Cost (OPC)			
OPC except D&D			
Conceptual Design	$342	$342	$342
Other OPC Costs	$971	$971	$971
Start-up	$0	$0	$0
Contingency	$0	$0	$0
Total, OPC except D&D	$1,313	$1,313	$1,313
D&D			
D&D	N/A	N/A	N/A
Contingency	N/A	N/A	N/A
Total, D&D	N/A	N/A	N/A
Total, OPC	$1,313	$1,313	$1,313
Contingency, OPC	$0	$0	$0
Total, TPC	$606,548	$593,614	$457,143
Total, Contingency	$61,000	$62,301	$13,000

Schedule of Appropriations Requests

Section 404 of the Bipartisan Budget Act of 2015 authorizes drawdown and sale of SPR crude oil over four fiscal years (FY 2017 – FY 2020) to finance SPR modernization. This CPDS reflects the high end of the cost ranges. The Total Project Cost (TPC) of $1.4B was approved at CD-1, and final scope will be established when each subproject is baselined (WH) or re-baselined (BM, BH, or BC). The intent is to execute SPR modernization within the authorized revenue ceiling proposed in the FY 2020 budget request shown below, with the exception of an additional five hundred million dollars requested in supplemental funding. The table below assumes receipt of the additional funding. Should that not be made available, scope will be reduced to fit within the $1.4B raised under Section 404 of the Bipartisan Budget Act of 2015, which would limit LE2 work almost exclusively to the Bryan Mound, Big Hill, and Bayou Choctaw SPR sites.

Request		FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Total
FY 2018	TEC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	OPC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	TPC	$ -	$ -	$375,400	$350,000	$174,600	$100,000	$ -	$ -	$ -	$ -	$ -	$1,000,000
FY 2019	TEC	$ -	$ -	$ 340,000 *	$ 350,000	$ 300,000	$ 10,000	$ -	$ -	$ -	$ -	$ -	$1,000,000
	OPC	$ 88	$ 4,190	$ 972	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$5,250
	TPC	$ 88	$ 4,190	$ 340,972	$ 350,000	$ 300,000	$ 10,000	$ -	$ -	$ -	$ -	$ -	$1,005,250
FY 2020	TEC	$ -	$ -	$ 340,000 *	350,000 **	$ 300,000	$ 450,000	$ -	$ -	$ -	$ -	$ -	$1,440,000
	OPC	$ 88	$ 4,190	$ 972	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$5,250
	TPC	$ 88	$ 4,190	$ 340,972	$ 350,000	$ 300,000	$ 450,000	$ -	$ -	$ -	$ -	$ -	$1,445,250
FY 2021	TEC	$ -	$ -	$ 340,000 *	$ 350,000 **	$300,000 ***	$450,000 ***	$ -	$ -	$ -	$ -	$ -	$1,440,000
	OPC	$ 88	$ 4,190	$ 972	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$5,250
	TPC	$ 88	$ 4,190	$ 340,972	$ 350,000	$ 300,000	$ 450,000	$ -	$ -	$ -	$ -	$ -	$1,445,250
FY 2022	TEC	$ -	$ -	$ 340,000 *	$ 350,000 **	$300,000 ***	$ -	$425,774****	$ -	$ -	$ -	$ -	$1,415,774
	OPC	$ 88	$ 4,190	$ 972	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$5,250
	TPC	$ 88	$ 4,190	$ 340,972	$ 350,000	$ 300,000	$ -	$ 425,774	$ -	$ -	$ -	$ -	$1,421,024
FY 2023	TEC	$ -	$ -	$ 340,000 *	$ 350,000 **	$300,000 ***	$ -	$425,774*****	$ -	$ -	$ -	$ -	$1,415,774
	OPC	$ 88	$ 4,190	$ 972	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$5,250
	TPC	$ 88	$ 4,190	$ 340,972	$ 350,000	$ 300,000	$ -	$ 425,774	$ -	$ -	$ -	$ -	$1,421,024
FY 2024	TEC	$ -	$ -	$ 340,000 *	$ 350,000 **	$300,000 ***	$ -	$425,774*****	$ -	$500,000 ******	$ -	$ -	$1,915,774
	OPC	$ 88	$ 4,190	$ 972	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$5,250
	TPC	$ 88	$ 4,190	$ 340,972	$ 350,000	$ 300,000	$ -	$ 425,774	$ -	$ -	$ -	$ -	$1,921,024
FY 2025	TEC	$ -	$ -	$ 340,000 *	$ 350,000 **	$300,000 ***	$ -	$425,774*****	$ -	$ -	$ -	$ -	$1,415,774
	OPC	$ 88	$ 4,190	$ 972	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$5,250
	TPC	$ 88	$ 4,190	$ 340,972	$ 350,000	$ 300,000	$ -	$ 425,774	$ -	$ -	$ -	$ -	$1,421,024

***** FY 2017 Omnibus authorized oil sales target of $340,000,000 (Appropriation). Actual proceeds were $323,195,827.

****** FY 2018 Omnibus authorized oil sales target of $350,000,000 (Appropriation). Actual proceeds were $347,828,624.

*** FY 2019 Omnibus authorized oil sales target of $300,000,000 (Appropriation). Actual proceeds were $299,999,961.

**** FY 2020 Omnibus authorized oil sales target of $450,000,000 (Appropriation). Sale postponed, and authorized completion changed to no later than FY 2022 as part of the CARES Act (P.L. 116-136).

***** FY 2021 Omnibus authorized oil sales target of $450,000,000 (Appropriation). Actual proceeds were $499,999,980.

****** FY 2024 Anticipating $493,000,000 in additional funding to address mandatory drawdown and macroeconomic impacts to the project.

4. Related Operations and Maintenance Funding Requirements

Not applicable for Project Engineering and Design.

Start of Operation or Beneficial Occupancy (fiscal quarter or date)	Establish at CD-2
Expected Useful Life (number of years)	25
Expected Future Start of D&D of this capital asset (fiscal quarter)	N/A

(Related Funding requirements)

(dollars in thousands)

	Annual Costs		Life Cycle Costs	
	Current Total Estimate	Previous Total Estimate	Current Total Estimate	Previous Total Estimate
Operations		N/A		N/A
Maintenance & Repair		N/A		N/A
Total *		N/A		N/A

*** Funding requirements are included in the Facilities Appropriation 089X0218.**

5. D&D Information

This project does not require D&D funding.

6. Acquisition Approach

The existing Strategic Petroleum Reserve Management and Operating Contractor did originally procure the Architect-Engineer (A-E) contractor. With S-3 concurrence in FY 2019, the M&O Contractor self-performed the remaining A-E scope and procured all Government Furnished Property and firm fixed priced construction contracts and one time and material contract for drilling two microseismic wells at Bryan Mound and Bayou Choctaw.

SPR Petroleum Account

($K)

FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted
$100	$100	$100	$0

Proposed Appropriation Language

For the acquisition, transportation, and injection of petroleum products, and for other necessary expenses pursuant to the Energy Policy and Conservation Act of 1975, as amended (42 U.S.C. 6201 et seq.), $100,000, to remain available until expended: Note.--A full-year 2024 appropriation for this account was not enacted at the time the Budget was prepared; therefore, the Budget assumes this account is operating under the Continuing Appropriations Act, 2024 and Other Extensions Act (Division A of Public Law 118-15, as amended). The amounts included for 2024 reflect the annualized level provided by the continuing resolution.

Mission

Replenish crude oil from emergency drawdown and respond to emergency response directives as needed.

Overview

The SPR Petroleum Account funds activities related to the acquisition, transportation, and injection of petroleum products into the Strategic Petroleum Reserve; test sales of petroleum products from the Reserve; and the drawdown, sale, and delivery of petroleum products from the Reserve. Remaining funds in the Petroleum Account will be available to repurchase product as practicable.

FY 2023 Key Accomplishments

- As of July 3, 2023, the SPR delivered all 26 million barrels of the Congressionally mandated sales from April 2023 to June 2023.
- As of February 1, 2024, the SPR has contracted for deliveries of over 20 million barrels.

Summary Funding Table
SPR Petroleum Account
($K)

	FY 2023 Enacted	FY 2024 Annualize CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted	
				$	%
Petroleum Acquisition, Transportation and Drawdown	100	100	100	0	0
Total, SPR Petroleum Account	**100**	**100**	**100**	**0**	**0**

Future Years Energy Program (FYEP)

($K)

	FY 2025 Request	FY 2026	FY 2027	FY 2028	FY 2029
SPR Petroleum Account	100	100	100	100	100

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 2026 - FY 2029. The outyear funding levels use the growth rates in outyear account totals published in the FY 2025 President's Budget for both the 050 and non-050 accounts. Actual future budget request levels will be determined as part of the annual budget process.

SPR Petroleum Account
- Remaining funds will be available for oil replenishment, fill, and/or exchange activities.

SPR Petroleum Account

Overview
The SPR Petroleum Account funds activities related to the acquisition, transportation, and injection of petroleum products into the Strategic Petroleum Reserve; test sales of petroleum products from the Reserve; and the drawdown, sale, and delivery of petroleum products from the Reserve. SPR Petroleum Account activities can include: 1) the incremental costs of withdrawing oil from the storage caverns and transporting it to the sales point where purchasers take title; 2) petroleum inventory acquisitions and associated transportation costs; 3) U.S. Customs duties; and 4) terminal throughput charges and other related miscellaneous costs.

SPR Oil Acquisition/Transportation/Drawdown
As of September 30, 2023, the SPR crude oil inventory was 351 million barrels. Currently, the Department is undergoing a series of non-emergency, multi-year oil sales pursuant to the Bipartisan Budget Act (BBA) of 2015 (Public Law 114–74), and the Fixing America's Surface Transportation (FAST) Act (Public Law 114-94), the Act to provide for reconciliation pursuant to titles II and V of the concurrent resolution on the budget for fiscal year 2018. Originally enacted drawdown and sales were scheduled as follows:

- From FY 2018 through FY 2025 (eight consecutive years) – sell 38 million barrels of crude oil, with 10 million barrels to be sold in FY 2023. Proceeds will be deposited into the General Fund of the Treasury (Bipartisan Budget Act, Section 403). NOTE: Sales for 2024 and 2025 under this Act (20MMB) were cancelled by the Consolidated Appropriations Act of 2023 in exchange for $10.4B in recissions ($74.25/bbl.)
- From FY 2017 through FY 2020 (four consecutive years) – sell the required volumes of SPR inventory to raise up to the authorized revenue ceiling to be deposited into the Energy Security and Infrastructure Modernization Fund (Bipartisan Budget Act, Section 404). In FY 2017, 6.3 million barrels were sold; in FY 2018, 4.7 million barrels were

sold, and in FY2019 4.2 million barrels were sold. Oil sales of 6.6 million barrels scheduled for FY 2020 were postponed until FY 2021 with revenues totaling $1.4 billion. Section 14002 of the CARES Act (P.L. 116-136) provides the Department flexibility to postpose through Fiscal Year 2022 a sale of crude oil from the Strategic Petroleum Reserve that was originally authorized for FY 2020.

- From FY 2017 through FY 2019 (three consecutive years) – sell 10 million barrels of crude oil in FY 2017, 9 million barrels in FY 2018, and 6 million barrels in FY 2019, for a total of 25 million barrels. Proceeds will be deposited in the General Fund of the Treasury (21st Century Cures Act, Section 5010). 92,678 barrels from the 2019 ESIM sales were allocated to the 21st Century CURES Act.
- From FY 2020 through FY 2021, sell 10 million barrels of crude oil. Proceeds will be deposited in the General Fund of the Treasury (Consolidated Appropriations Act, 2018, Section 501).
- From FY 2023 through FY 2025 (three consecutive years) – sell 16 million barrels of crude oil in FY 2023, 25 million barrels in FY 2024, and 25 million barrels in FY 2025, for a total of 66 million barrels. Proceeds will be deposited in the General Fund of the Treasury (Fixing America's Surface Transportation Act, Section 32204) and (Bipartisan Budget Act of 2015 P.L 114-74 Section 403) NOTE: Sales for 2024 and 2025 under this Act (50MMB) were cancelled by the Consolidated Appropriations Act of 2023 in exchange for $10.4B in recissions ($74.25/bbl.)
- From FY 2026 through FY 2027, sell 7 million barrels of crude oil. Proceeds shall be deposited in the General Fund of the Treasury during the fiscal year in which the sale occurs (An Act to provide for reconciliation pursuant to titles II and V of the concurrent resolution on the budget for fiscal year 2018, Section 20003).
- From FY 2022 through FY 2027, sell 100 million barrels of crude oil, with 30 million barrels to be sold in FY 2022, 35 million in FY 2026, and 35 million in FY 2027. Proceeds will be deposited in the General Fund of the Treasury (Bipartisan Budget Act of 2018 P.L 115-123, Section 30204). NOTE: Sales for 2026 and 2027 (70MMB) were cancelled by the Consolidated Appropriations Act of 2023 in exchange for $10.4B in recissions ($74.25/bbl.)
- In FY 2028, sell 5 million barrels of crude oil. Proceeds will be deposited in the General Fund of the Treasury (America's Water Infrastructure Act of 2018, Section 3009).
- From FY 2028 through FY 2031 (four consecutive years) – sell 87.6 million barrels of crude oil as mandated in the Infrastructure Investment and Jobs Act, P.L. 117-58 90002. Proceeds will be deposited in the General Fund of the Treasury and the Secretary of the Treasury shall deposit in the SPR Petroleum Account established under section 167(a) of the Energy Policy and Conservation Act (42 U.S.C. 6247(a) $43,500,000, to be used to carry out the sale in accordance with section 167 of the Energy Policy and Conservation Act (42 U.S.C. 6247).
- Sales proceeds from Emergency Oil Sales executed in FY 2022 and FY 2023 will be used for oil purchases and/or oil exchanges to replenish the SPR's oil inventory. This effort will help to ensure Drawdown Readiness remains at the forefront of the agency's mission.

SPR Petroleum Account
($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted	
				$	%
SPR Petroleum Account					
Petroleum Acquisition, Transportation and Drawdown	100	100	100	0	0
Total, SPR Petroleum Account	**100**	**100**	**100**	**0**	**0**

SPR Petroleum Account
Funding ($K)

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
SPR Petroleum Account		
Petroleum Acquisition, Transportation and Drawdown $100	**$100**	**$0**
Non-Emergency Drawdown • Provides for the costs of certain statutorily mandated crude oil sales.	*Non-Emergency Drawdown* • Provides for the costs of certain statutorily mandated crude oil sales.	• No change.

Appropriation Overview Summary
Naval Petroleum and Oil Shale Reserves

($K)

FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted
$13,004	$13,004	$13,010	+$6

Proposed Appropriation Language

For Department of Energy expenses necessary to carry out naval petroleum and oil shale reserve activities, $13,010,000 to remain available until expended: Provided, that notwithstanding any other provision of law, unobligated funds remaining from prior years shall be available for all naval petroleum and oil shale reserve activities.

Overview

The Naval Petroleum and Oil Shale Reserves (NPOSR) program manages five legal agreements that were executed as part of the 1998 sale of Naval Petroleum Reserve 1 (NPR-1) in Elk Hills, California. The legal agreements direct post-sale work, including environmental restoration and remediation, contract closeout, and records disposition. Legal agreements also include payment for post-employment medical and dental benefits to former NPR-1 Management & Operating (M&O) contractor employees. The NPR-1 program continues to work towards closing out the remaining environmental findings at the site, as required by the 2008 agreement between the Department of Energy (DOE) and the California Department of Toxic Substances Control (DTSC).

DOE also operated Naval Petroleum Reserve 3 (NPR-3) and the Rocky Mountain Oilfield Testing Center (RMOTC), co-located near Casper, Wyoming, until its sale in January 2015. DOE retains responsibility for Industrial Landfill number 2 (IND-2) located at NPR-3 in Natrona County, WY until a closure permit is issued by the Wyoming Department of Environmental Quality (WDEQ). Landfill remediation activities were completed in FY 2017 and ground water sampling began in compliance with WDEQ requirements. The period of sampling will be specified by WDEQ but is expected to continue for one to four years. No new FY 2025 budget authority is requested for NPR-3.

The program will continue the ongoing activities to attain release from the remaining environmental findings related to the sale of NPR-1. All 131 areas of concern (AOC) have undergone an initial investigation and the program has made recommendations to California's DTSC for either no further action (NFA) required status, additional field work investigation, or remedial action.

FY 2023 Key Accomplishments

Former Naval Petroleum Reserve No. 1 Environmental Remediation Program:

- Completed remedial actions at arsenic-contaminated sites including 52 well pads and 4 drilling mud catchment basins.
- Accomplished soil vapor extraction (SVE) and clearance sampling at solvent-contaminated site. Gained approval from California environmental regulator that the cleanup goals had been met and the SVE system could be decommissioned.
- Achieved consensus from landowners and California state and county regulators to consolidate arsenic-impacted soil into large, abandoned sumps in lieu of transporting to off-site landfills, resulting in a potential cost savings of $10M.
- Attained encroachment permit from CA Department of Water Resources (DWR) to excavate contaminated soil and regrade near the California Aqueduct where contamination from oilfield operations had impacted DWR-owned property.
- Carried out threatened and endangered species survey at large wastewater percolation sumps to ensure protection of plants and animals prior to beginning remedial excavation activities.
- Concluded a 30-day Public Comment Period in August for remediation Work Plans for nine Areas of Concern. Response to Comments documents is in preparation for each Work Plan.
- Continued stellar high-quality safety and health program: Recorded zero OSHA-reportable incidents, injuries/illnesses, and lost workdays.

- Former NPR-1 Current Remediation Status: 111 of 131 Areas of Concern (AOCs) have received No Further Action (NFA) designation.

Former Naval Petroleum Reserve No. 3 Environmental Remediation Program:

- Continue monitoring of Industrial Landfill Number 2 until a closure is issued by the Wyoming Department of Environmental Quality (WDEQ).

Summary Funding Table
Naval Petroleum and Oil Shale Reserves
($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted	
				$	%
Naval Petroleum and Oil Shale Reserves					
Production Operations	11,004	11,004	11,010	+6	+0.1%
Management	2,000	2,000	2,000	0	0.0%
Total, Naval Petroleum and Oil Shale Reserves	**13,004**	**13,004**	**13,010**	**+6**	**+0.1%**

The program will continue the ongoing activities to attain release from the remaining environmental findings related to the sale of NPR-1. All 131 areas of concern (AOC) have undergone an initial investigation, and the program has made recommendations to California's DTSC for either no further action (NFA) required status, additional field work investigation, or remedial action.

Future Years Energy Program (FYEP)

($K)

	FY 2025 Request	FY 2026	FY 2027	FY 2028	FY 2029
Naval Petroleum and Oil Shale Reserves	13,010	13,309	13,615	13,928	14,249

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 2026 - FY 2029. The outyear funding levels use the growth rates in outyear account totals published in the FY 2025 President's Budget for both the 050 and non-050 accounts. Actual future budget request levels will be determined as part of the annual budget process.

Naval Petroleum and Oil Shale Reserves
- Funding will be applied to continued environmental assessment and remediation activities.

Naval Petroleum and Oil Shale Reserves
Production Operations

The NPR-1 program continues to work towards closing out the remaining environmental restoration and remediation activities for 131 AOCs, as required by the 2008 agreement between DOE and California's DTSC. DOE will continue the monitoring and oversight of environmental remediation of the Elk Hills site and the work on records disposition.

The Department is requesting new FY 2025 budget authority of $13.010 million to fund the remediation work at the NPR-1 site. The new FY 2025 budget authority of $13.010 million will support the remediation will include installation of a soil vapor extraction system at Area of Concern (AOC) 072 ($4M) for volatile organic compounds, and the excavation and disposal of arsenic contaminated soil at AOC 044 ($3M). The clean closure to residential standards of the arsenic contaminated well pad sites (AOC 130) will be used with the remaining funds.

Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted	
				$	%
Total, Production Operations					
NPR-1 Closeout	11,004	11,004	11,010	+6	+0.1%
NPR-3 Disposition	0	0	0	0	0.0%
Total, Production Operations	**11,004**	**11,004**	**11,010**	**+6**	**+0.1%**

Production Operations
Funding

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Operations $11,004,000	**$11,010,000**	**+$6,000**
NPR-1 Closeout $11,004,000	**$11,010,000**	**+$6,000**
• Program will continue the ongoing activities to attain release from the remaining environmental findings related to the sale of NPR-1. The FY 2023 Request amount includes funding that supports remediation of 3 sub-areas of concern (AOCs).	• Program will continue the ongoing activities to attain release from the remaining environmental findings related to the sale of NPR-1. The FY 2025 Request includes funding that supports remediation of 3 AOCs.	• The increase in funding will be applied to the ongoing activities to attain release from the remaining environmental findings related to the sale of NPR-1.

Naval Petroleum and Oil Shale Reserves
Management

Overview

Management provides funding for payments to former NPR-1 M&O contractor employees for post-medical and dental benefits, a legal requirement of the 1998 NPR-1 sales agreement. Management also provides the Federal staffing resources and associated costs required to provide overall direction and execution of the NPOSR. There are a variety of inherently governmental functions, such as program management, contract administration, and budget formulation and execution that require a dedicated Federal workforce. NPOSR uses contractor support services and other related expenses to support the field environmental assessment, remediation, and management of the program.

Management
($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted	
				$	%
Washington Headquarters					
Salaries and Benefits	530	540	555	+25	+4.7%
Travel	50	40	30	-20	-40.0%
Support Services	420	420	415	-5	-1.2%
Other Related Expenses	1,000	1,000	1,000	0	0.0%
Total, Washington Headquarters	**2,000**	**2,000**	**2,000**	**0**	**0.0%**
NPR – Wyoming					
Salaries and Benefits	0	0	0	0	0.0%
Travel	0	0	0	0	0.0%
Support Services	0	0	0	0	0.0%
Other Related Expenses	0	0	0	0	0.0%
Total, NPR – Wyoming	**0**	**0**	**0**	**0**	**0.0%**
Total Management					
Salaries and Benefits	530	540	555	+25	+4.7%
Travel	50	40	30	-20	-40.0%
Support Services	420	420	415	-5	-1.2%
Other Related Expenses	1,000	1,000	1,000	0	0.0%
Total, Management	**2,000**	**2,000**	**2,000**	**0**	0.0%
Federal FTEs	**4**	**4**	**4**	**0**	
Support Services					
Technical Support					
Environmental, Safety, Security & Health	0	0	0	0	0.0%
Technical Services	400	400	400	0	0.0%
Total, Technical Support	**400**	**400**	**400**	**0**	**0.0%**
Management Support					
Business Administration	0	0	0	0	0.0%
IT Support	20	20	15	-5	-25.0%
Total Management Support	20	20	15	-5	-25.0%
Total, Support Services	**420**	**420**	**415**	**-5**	**-1.2%**

Other Related Expenses					
Rent to Others	0	0	0	0	0.0%
Communications, Utilities & Misc.	0	0	0	0	0.0%
Other Services	1,000	1,000	1,000	0	0.0%
Operation and Maintenance of Equipment	0	0	0	0	0.0%
Supplies and Materials	0	0	0	0	0.0%
Total, Other Related Expenses	**1,000**	**1,000**	**1,000**	**0**	**0.0%**

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Management $2,000,000	**$2,000,000**	**$0**
Salaries and Benefits $530,000	**$555,000**	**+$25,000**
• Continue monitoring activities at NPR-1 (cultural resources mitigation, environmental clean-up, oversight, and audit).	• Continue monitoring activities at NPR-1 (cultural resources mitigation, environmental clean-up, oversight, and audit).	• The cost of salaries and benefits has increased due to annual escalation.
Travel $50,000	**$30,000**	**-$20,000**
• Federal travel will be required for environmental cleanup at NPR-1.	• Federal travel will be required for environmental cleanup at NPR-1. No new FY 2025 budget authority is requested for NPR-3.	• The cost of travel has decreased due to meetings being held virtually
Support Services $420,000	**$415,000**	**-$5,000**
• Support Services for environmental clean-up of NPR-1.	• Support Services for environmental clean-up of NPR-1.	• Less support services are required since there are less open AOCs.
Other Related Expenses $1,000,000	**$1,000,000**	**$0**
• As in prior years, funding provides for post-employment medical and dental benefits for former M&O contractor employees at NPR 1.	• As in prior years, funding provides for post-employment medical and dental benefits for former M&O contractor employees at NPR 1.	• No change.

Northeast Home Heating Oil Reserve

($K)

FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted
$7,000	$7,000	$7,150	+$150

Proposed Appropriation Language

For necessary expenses for the Northeast Home Heating Oil Reserve storage, operation, and management activities pursuant to the Energy Policy and Conservation Act, $7,150,000 to remain available until expended.

Mission

FY 2025 will focus on ongoing commercial leases, oversight, management, and quality analysis of the Reserve as well as ongoing information technology support for the Reserve's sales system.

Overview

The Northeast Home Heating Oil Reserve (NEHHOR) provides a short-term supplement to the Northeast systems' commercial supply of heating oil in the event of a supply interruption. In FY 2012, NEHHOR converted from 2 million barrels of high sulfur heating oil to 1 million barrels of Ultra Low Sulfur Diesel (ULSD) to meet new Northeast states' emission standards. The FY 2025 program will continue operation of the 1-million-barrel Reserve. New leased commercial storage contracts went into effect on April 1, 2020, with the final option year extending through March 31, 2024.

FY 2023 Key Accomplishments

- Maintained Northeast Home Heating Reserve storage, operation, and management activities.

Summary Funding Table
Northeast Home Heating Oil Reserve
($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted	
				$	%
Northeast Home Heating Oil Reserve					
Northeast Home Heating Oil Reserve	7,000	7,000	7,150	+150	+2.1%
Total, Northeast Home Heating Oil Reserve	**7,000**	**7,000**	**7,150**	**+150**	**+2.1%**

Future Years Energy Program (FYEP)

($K)

	FY 2025 Request	FY 2026	FY 2027	FY 2028	FY 2029
Northeast Home Heating Oil Reserve	7,150	7,314	7,483	7,655	7,831

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 2026 - FY 2029. The outyear funding levels use the growth rates in outyear account totals published in the FY 2025 President's Budget for both the 050 and non-050 accounts. Actual future budget request levels will be determined as part of the annual budget process.

Northeast Home Heating Oil Reserve

- Funding will be available for continuing the leased Northeast Home Heating Oil Reserve subject to the annual budget and appropriations process and/or other executive or congressional actions.

Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted	
				$	%
Northeast Home Heating Oil Reserve					
Commercial Leases	6,500	6,500	6,500	0	0.0%
Information Technology Support	400	400	500	+100	+25.0%
Quality Control and Analysis	100	100	150	+50	+50.0%
Total, Northeast Home Heating Oil Reserve	**7,000**	**7,000**	**7,150**	**+150**	**+2.1%**

Energy Security and Infrastructure Modernization Fund
Proposed Appropriation Language

($K)

FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs 2023 Enacted
$0	$0	$0	$0

Proposed Appropriation Language
None.

Mission
Funds in the ESIM account will be used for Life Extension Phase II (LE2) SPR infrastructure modernization project.

Overview
Section 404 of the Bipartisan Budget Act of 2015 directed the Secretary to establish a Strategic Petroleum Reserve (SPR) Modernization Program to protect the United States economy from the impacts of emergency supply disruptions. The Energy Security and Infrastructure Modernization (ESIM) Fund was established in 2016 for the purpose of providing for the construction, maintenance, repair, and replacement of SPR facilities and associated capital equipment. In establishing the ESIM Fund, Congress made the following findings: 1) The SPR is one of the nation's most valuable energy security assets; 2) The age and condition of the SPR has diminished its value as a federal energy security asset; 3) Global oil markets and the location and amount of U.S. oil production and refining capacity have dramatically changed in the 40 years since the establishment of the SPR; and 4) Maximizing the energy security value of the SPR requires a modernized infrastructure that meets the drawdown and distribution needs of changed domestic and international oil and refining market conditions.

Section 404 also authorizes the drawdown and sale of crude oil from SPR worth up to $2 billion over four fiscal years (2017 through 2020) to supply revenue to the ESIM fund and thus finance the Life Extension Phase II (LE2) project. Section 14002 of the CARES Act (P.L. 116-136) provided the Department flexibility to conduct the final sale in FY 2020, FY 2021, or FY 2022. The Department has raised a total of $1.4B through authorized sales of SPR crude oil for this purpose.

The LE2 project will modernize aging SPR infrastructure through systems upgrades and equipment replacement to ensure the SPR is able to meet mission drawdown and distribution requirements and maintain operational readiness for the future.

FY 2023 Key Accomplishments

1. 100% long lead Government Furnished Property purchased
2. BH Physical Protection Construction mobilized in March 2023 and is in progress
3. 83% of Construction Contracts Awarded
4. General Contractors are in construction at all three baselined sites (BH, BH, and BC).
5. BC and BM outage in progress; outages began in September 2022 and May 2023, respectively.
6. External Independent Review by the Office of Project Management from May-September 2023 generated 7 major findings and 14 findings: One Major Finding was downgraded to a finding. All Major Findings are closed; findings forecasted close out in March 2024.
7. United States Army Corp of Engineers Fort Worth District-Department of Energy SPR Interagency Agreement in place for required real estate actions at Big Hill was achieved in August 2023
8. Level 1 Baseline Change Proposal (BCP) to re-baseline the Performance Measurement Baseline of Life Extension 2 Delays to the overall SPR-LE2 project, driven by emergency oil sales, macroeconomic conditions, and COVID-19 impacts was approved on December 1, 2023
9. Long-Term Storage Plan for Government Furnished Property developed for deferred scope from BCP-01

Energy Security and Infrastructure Modernization Fund
Funding by Congressional Control
($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted	
				$	%
Energy Security and Infrastructure Modernization Fund					
Oil Sale Revenue Targets	0	0	0	0	0%
Crude Oil Sales Revenue Offsetting Collections	0	0	0	0	0%
Total, Energy Security, and Infrastructure Modernization Fund	**0**	**0**	**0**	**0**	**0%**
Federal FTEs	**23**	**15**	**15**	**0**	**0%**

Overview

The Major Milestones (approved and estimated) for the LE2 project are as follows:

Life Extension Phase II Critical Decisions (CD):

CD	Milestone	Date (A)	TPC	CD-4
CD-0_a	Approve Mission Need	Oct 2015	$700M - $1400M	Sep 2022 – Sep 2028
CD-1_a	Approve Alternative Selection and Cost Range	Dec 2016	$750M - $1,420M	Oct 2021 – Sep 2024
CD-$3A_b$	(BH, WH, BM) Pipe, heat exchangers, meter stations	Jul 2017	N/A	N/A
CD-$3A_b$	(BC) Fire water pumps, sewage treatment package, compressors	Nov 2018	N/A	N/A
CD-$3B_b$	(BH, WH, BM) Oil injection and fire water pumps, well heads and casing material	Nov 2018	N/A	N/A
CD-$3B_b$	(BC) Site prep, degas module, secure WiFi	Oct 2019	N/A	N/A
CD-$3C_b$	(BH, WH, BM) Site prep, valve actuators, secure WiFi	Oct 2019	N/A	N/A
CD-$3C_b$	(BC) Degas equipment, site infrastructure including bridge repair	Jan 2021	N/A	N/A
CD-$3D_b$	(BH, WH, BM) Long lead equipment (electrical, valves), site infrastructure including crane and new levee crossing	Jan 2021	N/A	N/A
CD-2/3	Approve Performance Baseline/Approve Start of Construction BH	Jun 2021	$457M	Feb 2025
CD-2/3	Approve Performance Baseline/Approve Start of Construction BM	Jun 2021	$315M	May 2025
CD-2/3	Approve Performance Baseline/Approve Start of Construction BC	Jun 2021	$355M	Feb 2025

a – includes all 4 SPR Site (BH, BM, BC) and West Hackberry (WH). WH does not have CD-2/3 approval
b - Includes the type of equipment and services purchased but is not a complete list of all approved Long Lead Procurement (LLP) items (CD-3X)

LE2 involves work at the Bryan Mound, Big Hill, West Hackberry, and Bayou Choctaw storage sites. The major components of work activities at each site are:

- Bryan Mound and Big Hill: Process Piping, Pipelines, Process & Rotating Equipment
- West Hackberry: Brine System, Civil and Security Systems, Process Piping, and Process Equipment
- Bayou Choctaw: Brine Disposal System, Degas Plant, Roadways and Lighting, Security and Electrical Systems
- Cavern Secondary Well Drilling Program at Bryan Mound, Bayou Choctaw, and West Hackberry sites.

Description

The Life Extension Phase II project funds activities to modernize aging SPR infrastructure through systems upgrades and associated equipment replacement to ensure the ability to maintain operational and drawdown readiness capability. The scope of work includes system upgrades and associated equipment replacement for the following systems:

- Crude oil transfer systems
- Raw water systems
- Power distribution and electrical systems
- Physical security systems
- Firefighting systems
- Crude oil processing (degasification) plant
- Auxiliary systems and facilities

The Earned Value Management System (EVMS) was certified by DOE's Office of Project Management on August 10, 2022. The project technical baseline established (CD-2) and approval to begin construction (CD-3) will be achieved for the last remaining site, West Hackberry when funding is available. During 2023, LE2 was in the construction phase of the program at the three baselined sites, Bryan Mound, Big Hill, and Bayou Choctaw.

FY 2025 Anticipated Major Milestones:

- LE2 will be in the construction phase at all 3 baselined sites.
- All CD approvals will be granted, excluding CD-4, which is scheduled for FY 2027.

Energy Security and Infrastructure Modernization Fund
Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
SPR Modernization **$0**	**$0**	**$0**
• No Budget Request was made for FY 2023.	• No Budget Request is made for FY 2024.	• None.

Management
Funding ($K)

	FY 2023 Enacted	FY 2024 Request	FY 2025 Guidance Level	FY 2025	
				$	%
ESIM Program Direction					
Salaries and Benefits	0	0	0	0	0%
Travel	0	0	0	0	0%
Other Related Expenses	0	0	0	0	0%
Total, Management	**0**	**0**	**0**	**0**	**0%**
Federal FTES	**23**	**15**	**15**	**0**	

DEPARTMENT OF ENERGY
Funding by Site
TAS_0218 - Strategic Petroleum Reserve - FY 2025
(Dollars in Thousands)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget
National Energy Technology Lab			
Strategic Petroleum Reserve (SPR)	300	300	300
Total National Energy Technology Lab	**300**	**300**	**300**
Northeast Gasoline Supply Reserve (NGSR) - South Portland			
Northeast Gasoline Supply Reserve	2,209	2,209	0
Total Northeast Gasoline Supply Reserve (NGSR) - South Portland	**2,209**	**2,209**	**0**
Northeast Gasoline Supply Reserve (NGSR) - Raritan Bay			
Northeast Gasoline Supply Reserve	12,871	12,871	0
Total Northeast Gasoline Supply Reserve (NGSR) - Raritan Bay	**12,871**	**12,871**	**0**
Oak Ridge National Laboratory			
Strategic Petroleum Reserve (SPR)	570	570	600
Total Oak Ridge National Laboratory	**570**	**570**	**600**
Sandia National Laboratories			
Strategic Petroleum Reserve (SPR)	4,000	4,000	4,186
Total Sandia National Laboratories	**4,000**	**4,000**	**4,186**
Strategic Petroleum Reserve - Bayou Choctow			
Strategic Petroleum Reserve (SPR)	13,687	13,687	17,794
Total Strategic Petroleum Reserve - Bayou Choctow	**13,687**	**13,687**	**17,794**
Strategic Petroleum Reserve - Big Hill			
Strategic Petroleum Reserve (SPR)	19,827	19,827	24,731
Total Strategic Petroleum Reserve - Big Hill	**19,827**	**19,827**	**24,731**
Strategic Petroleum Reserve - Bryan Mound			
Strategic Petroleum Reserve (SPR)	19,162	19,162	27,016
Total Strategic Petroleum Reserve - Bryan Mound	**19,162**	**19,162**	**27,016**
Strategic Petroleum Reserve - West Hackberry			
Strategic Petroleum Reserve (SPR)	20,142	20,142	33,652
Total Strategic Petroleum Reserve - West Hackberry	**20,142**	**20,142**	**33,652**
Strategic Petroleum Reserve Project Office			
Strategic Petroleum Reserve (SPR)	105,477	105,477	122,490
Total Strategic Petroleum Reserve Project Office	**105,477**	**105,477**	**122,490**
Washington Headquarters			
Strategic Petroleum Reserve (SPR)	8,930	8,930	10,400
Total Washington Headquarters	**8,930**	**8,930**	**10,400**
Total Funding by Site for TAS_0218 - Strategic Petroleum Reserve	**207,175**	**207,175**	**241,169**

DEPARTMENT OF ENERGY
Funding by Site
TAS_0233 - Strategic Petroleum Reserve Petroleum Account - FY 2025
(Dollars in Thousands)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget
Strategic Petroleum Reserve Project Office			
SPR - Petroleum Account	100	100	100
Total Strategic Petroleum Reserve Project Office	**100**	**100**	**100**
Total Funding by Site for TAS_0233 - Strategic Petroleum Reserve Petroleum Account	**100**	**100**	**100**

DEPARTMENT OF ENERGY
Funding by Site
TAS_0316 - Northeast Home Heating Oil Reserve - FY 2025
(Dollars in Thousands)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget
Washington Headquarters			
Northeast Home Heating Oil Reserves	960	960	1,075
Total Washington Headquarters	**960**	**960**	**1,075**
Grants			
Northeast Home Heating Oil Reserves	6,040	6,040	6,075
Total Grants	**6,040**	**6,040**	**6,075**
Total Funding by Site for TAS_0316 - Northeast Home Heating Oil Reserve	**7,000**	**7,000**	**7,150**

DEPARTMENT OF ENERGY
Funding by Site
TAS_0219 - Naval Petroleum and Oil Shale Reserve - FY 2025
(Dollars in Thousands)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget
Naval Petroleum Reserve No 1			
Naval Petroleum and Oil Shale Reserve	11,004	11,004	11,010
Total Naval Petroleum Reserve No 1	**11,004**	**11,004**	**11,010**
Washington Headquarters			
Naval Petroleum and Oil Shale Reserve	2,000	2,000	2,000
Total Washington Headquarters	**2,000**	**2,000**	**2,000**
Total Funding by Site for TAS_0219 - Naval Petroleum and Oil Shale Reserve	**13,004**	**13,004**	**13,010**

Grid Deployment Office

Grid Deployment Office

Grid Deployment Office

($K)

FY 2023 Enacted[1,2]	FY 2024 Annualized CR[1]	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted
64,707	64,707	101,870	+37,163

Proposed Appropriation Language

For Department of Energy expenses including the purchase, construction, and acquisition of plant and capital equipment, and other expenses necessary for grid deployment 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, $101,870,000 to remain available until expended: Provided, that of such amount, $11,785,000 shall be available until September 30, 2026, for program direction.

Mission

The Grid Deployment Office (GDO) works to provide electricity to by maintaining and investing in critical generation facilities to ensure resource adequacy and improving and expanding transmission and distribution systems to ensure all communities have access to reliable, affordable electricity while supporting economic development.

Overview

GDO's priority is to develop and deploy innovative grid modernization solutions to address local, state, regional and national electricity system needs, while ensuring the availability of clean, firm generation capacity, like hydropower and nuclear energy. Working in strong partnership with energy sector stakeholders on a variety of grid initiatives, GDO supports the resilience of our Nation's electric system by mitigating risk and strengthening our transmission and distribution infrastructure. GDO's objectives are to:

- Accelerate the development of transmission and distribution infrastructure through maximizing investments, facilitating public and private partnerships, and improving siting and permitting processes.
- Improve market operations and signals, and increase access to affordable, sustainable, and reliable energy.
- Ensure the availability of firm and flexible generation capacity of resource adequacy, like hydropower and nuclear.
- Build off the Infrastructure Investment and Jobs Act (IIJA) and Inflation Reduction Act (IRA) to continue to modernize and transform the grid.

Through the Building a Better Grid Initiative[3], GDO works to modernize and upgrade the Nation's power sector, deploying cost-effective, cleaner, reliable, and more resilient electricity delivery technologies to benefit all communities. With a strong commitment to collaboration, GDO brings together communities and industry stakeholders to identify national transmission and distribution needs. Within the Department, GDO takes a holistic view of the electricity system by closely collaborating with the Offices of Electricity, Energy Efficiency and Renewable Energy, Clean Energy Demonstrations, Cybersecurity Energy Security and Emergency Response; the Power Marketing Administrations; the national laboratories; and other offices. Through these lines of effort, GDO will make the U.S. power grid more resilient to the impacts of natural and man-made threats, increase access to affordable and reliable clean energy, and create American jobs across industry sectors.

Within the Request, GDO funds activities that supports five key priorities:

- Planning – modernize distribution and transmission planning processes to drive the development of highest-need grid projects that provide greatest long-term benefits to consumers.

[1] The FY 2025 Budget Request to Congress proposes to split the Electricity appropriation account into two accounts: Electricity and Grid Deployment. Had the proposed FY 2025 structure been in place in FY 2023, the $64.7 million shown under the Electricity in FY 2023 would have appeared in Grid Deployment. The Comparability Matrix below shows details for the prior and proposed budget structures.

[2] The Consolidated Appropriations Act, 2023 provided an additional $1 billion in the Disaster Relief Supplemental to improve the resilience of the Puerto Rican electric grid. Funding was appropriated to the Electricity account and will be managed by GDO.

[3] https://www.energy.gov/gdo/building-better-grid-initiative

- Financing – support BIL and IRA provisions with complementary programs to accelerate transmission builds and deploy distribution level solutions that enhance the resilience of the grid.
- Permitting – coordinate with states and Federal permitting agencies to help facilitate and streamline siting and permitting processes while supporting meaningful engagement with communities affected by transmission development.
- Coordination – early, frequent, and collaborative engagement with States, Territories, American Indian Tribes, Alaska Natives, and stakeholders throughout the process of evaluating needed transmission and distribution infrastructure to meet energy goals and deploying the Department's tools and authorities to accelerate the infrastructure deployment while integrating energy justice principles.
- Partnerships – leverage partnerships with the national laboratories to further utilize laboratory expertise to plan, design, and execute grid deployment programs, focusing on grid planning modeling and technical assistance.

Grid Modernization Initiative and Grid Modernization Laboratory Consortium: The Grid Modernization Initiative (GMI) works across the U.S. Department of Energy (DOE) to create the modern grid of the future. The Grid Modernization Laboratory Consortium (GMLC) is a crosscutting strategic partnership between DOE and the national laboratories to bring together leading experts, technologies, and resources to collaborate on the goal of modernizing the Nation's grid. GDO activities will support the GMI and GMLC.

FY 2023 Key Accomplishments

Offshore Wind Transmission: Launched the Tribal Nation Technical Assistance Program for Offshore Wind Transmission. GDO offers technical assistance to help Federally Recognized Tribes and Alaska Native Villages successfully engage transmission planning and development for offshore wind in the US. GDO also offers educational resources, such as trainings and workshops, and provides tailored national laboratory expertise to help enable Tribes and Alaska Native Villages make informed decisions regarding offshore wind transmission.

National Transmission Needs Study: Released the public draft of the National Transmission Needs Study. The Needs Study provides information about present and anticipated future capacity constraints and congestion on the nation's electric transmission grid and serves as DOE's triennial state of the grid report. The findings of the Needs Study will provide public insight into areas of the power grid that would benefit from increased transmission capacity and unlock complementary IRA tools to finance and permit new transmission facilities to meet those needs.

National Transmission Planning Study (NTP Study): Expanded the portfolio of potential transmission expansion options identified by the National Transmission Planning Study. GDO completed preliminary reliability and extreme event analysis and developed a highly intricate model containing over 100,000 nodes that will help inform regional and interregional transmission planning processes. In addition, after deep engagement with a technical review committee, GDO developed a new set of zonal scenarios examining transmission development architectures, electricity demand forecasts, emission reduction trajectories, and modeling sensitivities that will enable the National Transmission Planning Study to provide new and refined results.

Grid Deployment Office
Funding by Congressional Control ($K)

	FY 2023 Enacted	FY 2023 Enacted (Comparable)[1]	FY 2024 Annualized CR	FY 2025 Request	FY 2025 vs FY 2023 ($)	FY 2025 vs FY 2023 (%)
Transmission Planning and Permitting	0	43,000	43,000	35,500	-7,500	-17.4%
Distribution and Markets	0	16,500	16,500	24,335	+7,835	+47.5%
Hydropower Incentives	0	0	0	250	+250	N/A
Microgrid Generation and Design Deployment	0	0	0	30,000	+30,000	N/A
Program Direction	0	5,207	5,207	11,785	+6,578	+126.3%
Grid Deployment Office	0	**64,707**	**64,707**	**101,870**	**+37,163**	**+57.4%**

Future Years Energy Program (FYEP)

	FY 2025 Request	FY 2026	FY 2027	FY 2028	FY 2029
Grid Deployment	101,870	104,000	107,000	109,000	112,000

Outyear Priorities and Assumptions

This FYEP shows outyear funding for FY 2026 to2029. Actual future budget request levels will be determined as part of the annual budget process.

GDO priorities in the outyears include the following:

- Developing transmission plans to demonstrate benefits to decarbonization and resiliency and tools and analyses to accelerate transmission buildout.
- Assisting in the formulation and/or expansion of wholesale electricity markets in the U.S.
- Providing technical assistance to support grid management and integration of distributed energy resources into the distribution market.
- Ensuring territories, Tribes, and rural communities have access to a clean, reliable, resilient, and equitable grid.
- Focusing on grid resiliency at scale by deploying microgrid solutions to communities.

Comparability Matrix

[1] The Consolidated Appropriations Act, 2023 provided an additional $1 billion in the Disaster Relief Supplemental to improve the resilience of the Puerto Rican electric grid. Funding was appropriated to the Electricity account and will be managed by GDO.

The tables below show the funding allocation for GDO for the FY 2023 Enacted and FY 2025 Request under the prior budget structure and the new budget structure proposed in FY 2025.

FY 2023 Enacted Comparability Matrix
($K)

	FY 2025 Budget Structure					
	Grid Deployment Office					
	Transmission Planning and Permitting	Distribution and Markets	Hydropower Incentives	Microgrid Generation and Design Deployment	Program Direction	**Total**
FY 2023 Budget Structure						
Grid Planning and Development	16,000	0	0	0	0	**16,000**
Grid Technical Assistance	25,000	0	0	0	0	**25,000**
Wholesale Electricity Market Technical Assistance and Grants	0	16,500	0	0	0	**16,500**
Interregional and Offshore Transmission Planning	2,000	0	0	0	0	**2,000**
Program Direction	0	0	0	0	5,207	**5,207**
Total	**43,000**	**16,500**	**0**	**0**	**5,207**	**64,707**

FY 2025 Request Comparability Matrix
($K)

	FY 2025 Budget Structure					
	Grid Deployment Office					
	Transmission Planning and Permitting	Distribution and Markets	Hydropower Incentives	Microgrid Generation and Design Deployment	Program Direction	**Total**
FY 2023 Budget Structure						
Grid Planning and Development	17,000	0	0	0	0	**17,000**
Grid Technical Assistance	14,000	0	0	0	0	**14,000**
Wholesale Electricity Market Technical Assistance and Grants	0	10,335	0	0	0	**10,335**
Interregional and Offshore Transmission Planning	4,500	0	0	0	0	**4,500**
New GDO Programs in FY 2025	0	14,000	250	30,000	0	**56,035**
Program Direction	0	0	0	0	11,785	**11,785**
Total	**35,500**	**24,335**	**250**	**30,000**	**11,785**	**101,870**

Infrastructure Investment and Jobs Act (IIJA) Investments
($K)

GDO received IIJA appropriations for FY 2022 and advance appropriations for FY 2023 to 2026 under the Electricity, Clean Energy Demonstrations, Energy Efficiency and Renewable Energy, and Nuclear Energy accounts. IIJA appropriations for GDO activities will remain in the initially appropriated accounts and will be managed by GDO. These activities managed by GDO are listed below.

Appropriated Funding Account[1]	FY 2022 IIJA Funding	FY 2023 IIJA Funding	FY 2024 IIJA Funding	FY 2025 IIJA Funding	Managing Organization
Electricity					
Preventing Outages and Enhancing the Resilience of the Electric Grid / Hazard Hardening (40101) Total funding: $5 billion	1,000,000	1,000,000	1,000,000	1,000,000	GDO
Transmission Facilitation Program – Revolving Fund (40106) Borrowing authority: $2.5 billion	0	$1,750,000 (revolving fund)	0	$750,000 (revolving fund)	GDO
Transmission Facilitation Program – Administration (40106) Total funding: $50 million	10,000	10,000	10,000	10,000	GDO
Smart Grid Investment Matching Grant Program (40107) Total funding: $3 billion	600,000	600,000	600,000	600,000	GDO
Modeling and Assessing Energy Infrastructure Risk (40125(d)) Total funding: $50 million	50,000	0	0	0	GDO
Total, Electricity	**1,660,000**	**3,360,000**	**1,610,000**	**2,360,000**	GDO
Clean Energy Demonstrations					
Program Upgrading Our Electric Grid and Ensuring Reliability and Resiliency (40103(b)) Total funding: $5 billion	1,000,000	1,000,000	1,000,000	1,000,000	GDO
Total, Clean Energy Demonstrations	**1,000,000**	**1,000,000**	**1,000,000**	**1,000,000**	
Energy Efficiency and Renewable Energy					
Hydroelectric Production Incentives (40331) Total funding: $125 million	125,000	0	0	0	GDO
Hydroelectric Efficiency Improvement Incentives (40332) Total funding: $75 million	75,000	0	0	0	GDO

[1] All provisions except the Transmission Facilitation Program include Program Direction to support Federal salaries and support services contractors. The Transmission Facilitation Program includes a separate administrative fund which supports these activities.

Maintaining and Enhancing Hydroelectricity Incentives (40333) Total funding: $553,600 million	276,800	276,800	0	0	GDO
Total, Energy Efficiency and Renewable Energy	**476,800**	**276,800**	**0**	**0**	
Nuclear Energy					
Civil Nuclear Credit Program (40323) Total funding: $6 billion	1,200,000	1,200,000	1,200,000	1,200,000	GDO
Total, Nuclear Energy	**1,200,000**	**1,200,000**	**1,200,000**	**1,200,000**	GDO
Total, IIJA Activities Managed by Grid Deployment Office	**4,336,800**	**5,836,800**	**3,810,000**	**4,560,000**	

Inflation Reduction Act (IRA) Investments
($K)

GDO received IRA appropriations in FY 2022 under the Electricity account. IRA appropriations for GDO activities will remain in the Electricity account and will be managed by GDO. These activities managed by GDO are listed below.

Appropriated Funding Account	FY 2022 IRA Funding	Managing Organization
Electricity		
Transmission Facility Financing (50151)	2,000,000 (direct loan)	GDO
Grants to Facilitate the Siting of Interstate Electricity Transmission Lines (50152)	760,000	GDO
Interregional and Offshore Wind Electricity Transmission Planning, Modeling and Analysis (50153)	100,000	GDO
Environmental Reviews (50301)	37,500[1]	GDO
Total, IRA Activities Managed by Grid Deployment Office	**2,897,500**	

[1] IRA Section 50301 Environmental Reviews appropriated $115 million to DOE. GDO manages $37.5 million of this amount, and the remainder is managed by other DOE offices.

Transmission Planning and Permitting

Overview

The Transmission Planning and Permitting program supports innovative efforts in transmission reliability and clean energy analysis and programs as well as energy infrastructure and risk analysis to enhance grid resilience.

A robust transmission system is the backbone of the Nation's economic, energy, and national security. The growing deployment of renewable and clean energy resources, already underway and expected to continue (e.g., onshore and offshore wind, solar, and emerging technologies), requires a significant buildout of transmission infrastructure to interconnect these resources and deliver their output and economic and reliability benefits to customers. More frequent natural and man-made threats to the grid also require a resilient and robust transmission network to ensure continued reliability of service. A transmission network that meets all of these national imperatives requires deliberate planning and a different approach that utilizes new planning tools and engages state, regional, Tribal, and territorial entities in the identification of long-term, flexible, and interregional solutions. Improved transmission planning alone is not enough, however, to achieve these objectives. States, regions, Tribes, and territories face challenges with siting and permitting and require technical assistance to overcome those institutional barriers.

Transmission Planning and Permitting addresses multi-faceted challenges to the development of needed transmission infrastructure to ensure a resilient, reliable, clean, and equitable electricity system while providing economic development opportunities. Modernizing transmission planning and improving siting and permitting can provide greater certainty to drive investment to the highest-need transmission projects and enable development of projects with the greatest long-term benefits to consumers.

Interregional Planning and Development

In FY 2025, the Interregional Planning and Development subprogram will implement the results of the first National Transmission Planning Study (NTP Study) and will initiate scoping the second study; develop a route specific designation process informed by the National Transmission Needs Study (Transmission Needs Study); begin preparing the second Transmission Needs Study; and partner with national laboratories to expand modeling capabilities for grid planning.

The FY 2025 Request assists regional planning bodies in implementing the results of the 2024 NTP Study through further analysis, modeling, or other planning activities. The study will utilize new modeling tools and methods to identify longer-term transmission needs under a variety of future scenarios, as well as potential solutions to those needs that provide high value to customers under a range of scenarios. The study tools, methods, and outputs will be particularly informative for interregional and inter-interconnect transmission expansion, which existing Federal Energy Regulatory Commission (FERC)-regulated local utility and regional planning processes typically do not address. In addition, the results of the study will help inform funding execution decisions for IIJA and IRA programs by identifying longer term transmission requirements and potential solutions. In FY 2025, GDO will continue further analysis, modeling, or other planning activities with specific entities requesting interregional planning assistance, such as various stakeholder forums in the Pacific Northwest. Currently, the geographic scope of the NTP Study includes the 48 contiguous states. GDO will consider how the 2024 NTP Study may aid planning for Alaska, Hawaii, and the U.S. Territories. The subprogram will also begin a scoping effort for the second NTP Study. Scoping efforts will determine the next best iteration of studies using methods and tools developed from the first study and determine whether new methods and tools should be developed.

Further, the Interregional Planning and Development subprogram will advance a process for National Interest Electric Transmission Corridor (NIETC) designation on a transmission route-specific, applicant-driven basis to facilitate the efficient consideration of projects seeking a FERC-issued permit in FY 2025. DOE may designate a NIETC after consideration of the National Transmission Needs Study[1]. The National Transmission Needs Study identifies high-priority national transmission needs—specifically, where new or upgraded transmission facilities could relieve expected future constraints and congestion driven by: insufficient infrastructure needed to meet reliability and resilience demands; deployment of clean energy consistent with Federal, state, and local policy and consumer preferences; higher electric demand as a result of building and

[1] https://www.energy.gov/gdo/national-transmission-needs-study

transportation electrification; and insufficient transfer capacity across regions. GDO will prioritize engaging with stakeholders and communities of interest early and often, ensuring that impacted communities are considered when designating a NIETC. In addition, in FY 2025, the program will begin conducting the next iteration of the National Transmission Needs Study, which Congress required every three years in its recent amendments to the Federal Power Act in the IIJA.

To complement GDO's existing portfolio of activities at the national laboratories, the FY 2025 Request will expand modeling capabilities at the national laboratories to assist local communities, states, regions, Tribes, territories, and stakeholders in electricity system planning at the transmission level. Additional funding to develop this national laboratory modeling capability is also requested in the Distribution and Markets program to ensure a holistic view of the electricity delivery system. This will expand the existing planning and modeling work by GDO at the national laboratories to conduct more granular, regionally-specific, scenario-based transmission and distribution studies with longer planning horizons. To inform more comprehensive grid planning assessments, this work may also consider stakeholder input into scenario definitions and reevaluate the historic weather data used in system planning to ensure it includes the type and frequency of extreme events experienced in recent years and likely to occur more regularly in the future.

Offshore Wind Planning and Development

The Offshore Wind (OSW) Planning and Development subprogram will build upon the provisions in IRA to provide technical assistance for phased transmission development that allows for the grid interconnection, integration, and interoperability of OSW along U.S. coasts. Specifically, the subprogram will:

- Identify a coordinated generation and transmission pathway to enable offshore wind deployment.
- Develop strategies to develop transmission that accesses OSW resources while improving onshore grid reliability and resilience and minimizing congestion and curtailment.
- Support alignment of near-term and long-term state or territory and Federal decarbonization goals and utility resource needs.
- Seek to minimize environmental and community impacts, institutionalize energy justice and equity in transmission planning, promote ocean co-use, and align with Tribal equities.
- Identify potential system benefits, cost allocation approaches, cost efficiencies, and aligned technical standards to maximize the utility of existing points of interconnection and future shared transmission infrastructure.

The FY 2025 Request will continue to provide technical assistance to encourage OSW electricity transmission and forward-looking transmission development for OSW integration along the U.S. coasts with a special focus on publishing recommendations for the West Coast and initiating study and convening efforts for the Gulf of Mexico. GDO closely collaborates with the Office of Energy Efficiency & Renewable Energy's Wind Energy Technologies Office to ensure OSW technologies align with transmission needs.

Technical Assistance

The Technical Assistance subprogram works with experts around the country, including the national laboratories and the Power Marketing Administrations, to provide data, tools, analyses, and other solutions to address the challenges and opportunities associated with the modernization of the North American grid. Technical assistance to states is expected to become increasingly critical as the energy transition continues and reliability and resilience imperatives drive states to take a greater role in transmission and energy system planning and analysis. Technical assistance is also expected to play a role as states seek to collaborate with each other to expand the national transmission network.

The FY 2025 Request prioritizes technical assistance that aims to optimize planning, siting, and permitting processes to accelerate transmission buildout for a resilient, clean, and affordable grid. GDO will fill the gaps needed to effectively deploy the Transmission Siting and Economic Development (TSED) grants program and the Coordinated Interagency Permits and Authorizations for Transmission (CITAP) program funded by IRA.

The purpose of the TSED grants program, appropriated under IRA section 50152, is to help streamline, standardize, and strengthen transmission siting and planning processes in order to reduce bottlenecks that are slowing the pace of the clean

energy transition. However, TSED's reach is statutorily limited to eligible entities and transmission projects. The CITAP program, authorized in Section 216(h) of the Federal Power Act, aims to streamline and coordinate federal permitting of key transmission facilities to speed development of transmission infrastructure. IRA section 50301, under Subtitle C Environmental Reviews, provided funding for staffing and support services to develop and deploy CITAP. GDO's FY 2025 Request enhances these two programs by developing technical assistance tools and processes that have broader applicability beyond TSED's eligible entities and CITAP's federal jurisdiction to accelerate planning, permitting, and siting for transmission development. Products may include geographic information system tools to improve siting; frameworks that align multiple states and jurisdictions for permitting applications; and public education material to ensure that Tribal equities, environmental impacts, and economic development opportunities are all considered.

Other technical assistance areas in FY 2025 include:

- Identifying regulatory, operations, and business models that align incentives for transmission development.
- Identifying implications of energy interdependencies to improve the alignment and integration of generation, distribution, and transmission planning.
- Integrating affordability, evolving customer expectations and behaviors, and electricity access and equity issues.
- Developing new approaches to maximizing use of existing energy, transportation, and other infrastructure rights-of-way to locate transmission facilities.
- Identifying interregional transmission needed to accommodate increases in demand, such as electrification of transportation and new or growing industries.
- Encouraging the deployment of advanced transmission technologies, including advanced conductors and grid enhancing technologies that maximize the use of existing transmission assets.
- Modeling ways to achieve grid-scale renewable energy and distributed energy resource integration.
- Analyzing transmission reliability issues stemming from changes in the generation resource mix and solutions to those issues.

In the FY 2025 Request, GDO will continue to execute its legal responsibilities for authorizing the export of electric energy, permitting the construction of transmission infrastructure across international borders, and helping better coordinate permitting of transmission on Federal lands. Exports of electricity and development of transmission infrastructure across international borders is expected to increase in FY 2024 and beyond as states, regions, and international partners look to improve reliability, resource diversity, and fuel security through greater interconnection. GDO will evaluate any new applications under Section 1222 of the Energy Policy Act of 2005, which authorizes DOE to participate in third party-financed transmission projects within the Western Area Power Administration and the Southwestern Power Administration regions. GDO will also review projects funded through IIJA and IRA that require review under the National Environmental Policy Act.

Transmission Planning and Permitting
Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Transmission Planning and Permitting					
Interregional Planning and Development	16,000	16,000	17,000	+1,000	+6.3%
Offshore Wind Planning and Development	2,000	2,000	4,500	+2,500	+125.0%
Technical Assistance	25,000	25,000	14,000	-11,000	-44.0%
Total, Transmission Planning and Permitting	**43,000**	**43,000**	**35,500**	**-7,500**	**-17.4%**

Transmission Planning and Permitting
Explanation of Major Changes ($K)

	FY 2025 Request vs FY 2023 Enacted
• Expands grid planning capabilities at the national laboratories to assist states and regions	+1,000
• Increases technical assistance to states for offshore wind transmission planning and alignment of technical standards to promote offshore interconnection and operations	+2,500
• Decreases technical assistance to focus on supporting state planning, siting, and permitting activities	-11,000
Total, Transmission Planning and Permitting	**-7,500**

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Transmission Planning and Permitting $43,000,000	**$35,500,000**	**-$7,500,000**
Interregional Planning and Development $16,000,000	*$17,000,000*	*+1,000,000*

• Conducted the NTP Study, which:
  ○ Worked with regional transmission planning organizations, states, developers, and other stakeholders to build a national-scale, long-term (i.e., 15- to 30-year) transmission planning analysis
  ○ Developed alternative approaches to national transmission planning
  ○ Developed new transmission planning models to vet transmission scenarios
• Conducted and completed draft of National Transmission Needs Study (final version issued in FY 2024)
• In consultation with key stakeholders, initiated a process to designate NIETCs
• Convened and led a regional workshop process with Northeastern states to initiate development of interregional transmission planning
	• Scope the second NTP Study based on GDO and stakeholder assessments of the first NTP Study
	• Facilitate adoption of NTP Study results, tools, and methods to states and regions, including focus on planning needs in the Pacific Northwest
	• Issue NIETC formal guidance document and advance the corridor designation process
	• Begin the next iteration of the triennial National Transmission Needs Study
	• Coordinate Federal agency participation and lead environmental review for NIETC designation
		• Expands grid planning capabilities at the national laboratories to assist states and regions, including stakeholders performing integrated regional planning in the Pacific Northwest

Offshore Wind Planning and Development $2,000,000	*$4,500,000*	*+2,500,000*

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
• Launched the Tribal Nation Technical Assistance Program for Offshore Wind Transmission program to help Federally Recognized Tribes and Alaska Native Villages successfully engage in transmission planning and development for offshore wind in the US • Published the Atlantic Offshore Wind Transmission Action Plan • Initiated the West Coast Offshore Wind Transmission Study and planning efforts • Initiated early scoping, literature review, and gap analysis for offshore wind transmission development in the Gulf of Mexico	• Provide technical assistance to encourage OSW electricity transmission and forward-looking transmission development for OSW integration • Continue to support Federally Recognized Tribes and Alaska Native Villages by providing technical assistance • Initiate the Gulf of Mexico Offshore Wind Transmission Study and planning efforts	• Increases technical assistance to states for offshore wind transmission planning and alignment of technical standards to promote offshore interconnection and operations
Technical Assistance $25,000,000	*$14,000,000*	*-$11,000,000*
• Expanded suite of tools for transmission development, such as tools for transmission data analytics, expanded benefit analysis, seams modeling, power flow modeling, and examination of renewable energy zones • Conducted environmental reviews and technical analyses needed for Federal authorization of transmission projects that cross U.S. international borders	• Initiate financial assistance awards to states and Tribes to streamline, standardize, and strengthen transmission siting and planning processes • Support operations and maintenance of transmission development tools • Conduct technical analyses and environmental reviews for projects seeking export authorizations and presidential permits for transmission projects crossing U.S. borders	• Decreases technical assistance to focus on supporting state planning, siting, and permitting activities

Distribution and Markets

Overview

The mission of the Distribution and Markets program is to work with electricity system partners and stakeholders to establish and improve centrally organized market components and bilateral market arrangements as well as advance distribution-level market opportunities that will enable a clean, reliable, resilient, and equitable grid. Market designs that incentivize price-responsive demand have the potential to improve efficiency and momentarily support variable renewable generation resources. Utility-scale storage and storage technologies at substations and in the distribution system could dramatically change how supply and demand are balanced in the short run. Markets can enable efficient, long-term investments, such as capacity markets and scarcity pricing, and value generator attributes (e.g., black-start, reactive power, emissions profile) to support reliability, resilience, and environmental goals. The need for integration of inverter-based resources and electric vehicles (EVs) has resulted in market and operational gaps for utilities and regulators. Analysis and market studies are necessary to develop innovative solutions to optimize and efficiently integrate these resources.

Wholesale Markets Technical Assistance and Grants

The mission of the Wholesale Electricity Market Technical Assistance and Grants subprogram is to work with electricity system partners and stakeholders to establish and improve centrally organized market components and bilateral market arrangements to ensure a clean, reliable, resilient, and equitable grid and allow customers to procure cost-effective energy to spur economic development.

Most Regional Transmission Organizations (RTOs) and Independent System Operators (ISOs) operate day-ahead and real time electricity markets as well as ancillary services markets.[1] Areas where current markets need to evolve to better ensure grid reliability, better value reliability, and maintain transmission system operation include resource adequacy, capacity markets, ancillary services markets, and integrated regional and interregional planning.

Funding will continue to support and expand activities initiated in FY 2023 and FY 2024 to address electricity market services and the value of organized markets in driving reliable, resilient, and low-cost electricity. Building blocks for realizing this vision include performing analytical studies and supporting regional convenings that will inform the development of tools that can be translated into simulations that help regulators envision future electricity markets and business structures.

Priorities for FY 2025 include advancing regulators' and market participants' understanding of the issues and possible transformative solutions by using and improving existing modelling capability to:

- Provide analysis to enable effective market/regulatory structures that yield transparent real-time price signals in all regions.
- Estimate the magnitude of expected price volatility increases and their effects short run operational responses, financial viability of needed resources, and long-term investment all regions.
- Develop options for modifying economic-based incentives and/or requiring specific actions to minimize resource adequacy cost while assuring reliability.
- Quantify the operational, system, and financial risks posed by different resources and resource mixes over a large spectrum of operating scenarios as well as develop paths, incentives, and requirements and standards for mitigating those risks.

Electricity markets have driven the system to offer the lowest costs, with the consequence of eliminating reserves needed to mitigate extreme weather events that are occurring more frequently. Energy markets, as they are currently formulated, cannot incent the cushion needed to address these issues. Supplementary actions, either through price or operating requirements, are currently being developed and implemented. Collective sharing of experiences, options, and solutions may help states, regions, and territories find cost-effective paths to provide extra market incentives and requirements to address issues associated with more extreme events and less firm generation.

[1] https://www.nga.org/electricity-markets/

GDO's FY 2025 activities will support helping states, regions, and territories design markets to incorporate transitional mixes of generation and load to ensure sufficient firm resources. Specific activities in this area will include:

- Evaluating the effects of low to zero marginal cost resources on energy market designs and the changes needed in market design to ensure stable compensation for needed generation resources. Analyses may include improvement of market design related to energy price formation or ancillary services to provide more stable pricing while incentivizing efficient investment in new generating capacity.
- Evaluating new product categories and ancillary services that may need to be created to allow system operators to schedule, dispatch, and pay for capacity to meet reliability and consumer needs, and evaluating whether scarcity pricing approaches adequately incentivize adequate resource procurement.
- Analyzing resource adequacy metrics, such as planning reserve margins, and the impacts of accelerated deployment of renewable resources and retirement of existing resources on resource adequacy.
- Aiding states and territories in preparing roadmaps to achieve more flexible load, including design of programs, incentives, and outreach programs.

Distributed Energy Resources (DER) Grid Planning and Markets

DER Grid Planning and Markets supports the grid management and integration of DERs into the distribution market. In FY 2025, this subprogram will focus on providing technical assistance to state utility commissions, state energy offices, and RTOs to support the integration and utilization of long-duration energy storage (LDES) technologies. LDES will play an important role in grid operations, especially in balancing load and generation over longer periods of time in areas with high penetration of intermittent renewable resources and providing resilience during situations in which continuity of electric service is under threat. There are a range of LDES technologies entering the market, each with a novel set of operating behaviors and unique cost profiles. DER Grid Planning and Markets will provide technical assistance to support key interested parties in understanding the benefits and capabilities of LDES technologies and its potential contribution to grid resilience. In addition, the subprogram will develop rate and market designs to support full market integration of LDES.

To complement GDO's existing portfolio of activities at the national laboratories, the FY 2025 Request will expand modeling capabilities at the national laboratories to assist local communities, states, regions, Tribes, territories, and stakeholders in electricity system planning at the distribution level. Additional funding to develop this national laboratory modeling capability is also requested in the Transmission Planning and Permitting program to ensure a holistic view of the electricity delivery system. This will expand the existing planning and modeling work by GDO at the national laboratories to conduct more granular, regionally- specific, scenario-based transmission and distribution studies with longer planning horizons. To inform more comprehensive grid planning assessments, this work may also consider stakeholder input into scenario definitions and reevaluate the historic weather data used in system planning to ensure it includes the type and frequency of extreme events likely to occur more regularly in the future.

Territory, Tribal, and Rural Community Development

Energy justice continues to be a high priority for GDO. Territory, Tribal, and Rural Community Development will work to ensure that communities have access to clean, reliable, and affordable electricity. This subprogram will support technical assistance to Tribes and rural utilities to enable clean energy development. For example, GDO will support Tribes and rural communities with under-resourced electric service providers (e.g., rural co-ops) to access and implement modern approaches to grid flexibility and resilience. Territory activities will focus on long-term recovery for communities impacted by extreme weather events. GDO's FY 2025 funding, along with contributions from other DOE offices, will support DOE's Communities Local Energy Action Program (LEAP). Communities LEAP aims to facilitate sustained community-wide economic and environmental benefits primarily through DOE's clean energy deployment work.

Distribution and Markets
Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Distribution and Markets					
Wholesale Markets Technical Assistance and Grants	16,500	16,500	10,335	-6,165	-37.4%
DER Grid Planning and Markets	0	0	7,000	+7,000	N/A
Territory, Tribal, and Rural Community Development	0	0	7,000	+7,000	N/A
Total, Distribution and Markets	**16,500**	**16,500**	**24,335**	**+7,835**	**+47.5%**

Distribution and Markets
Explanation of Major Changes ($K)

	FY 2025 Request vs FY 2023 Request
• Focuses wholesale electricity market activities on FOA monitoring and evaluation efforts while providing needed modeling for states, regions, and territories and.	-6,165
• DER Grid Planning and Markets is a new program requested in FY 2025	+7,000
• Territory, Tribal, and Rural Community Development is a new program requested in FY 2025.	+7,000
Total, Distribution and Markets	**+7,835**

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Distribution and Markets $16,500,000	**$24,355,000**	**+$7,835,000**
Wholesale Markets Technical Assistance and Grants $16,500,000	*$10,335,000*	*-$6,165,000*
• Initiated one major study on wholesale market challenges and potential solutions • Initiated FOA to states and ISO/RTOs for evaluating new markets and market improvements	• Develop at least one tool for modeling areas identified through FOA studies or for market design to ensure firm resources that maintain resource adequacy for extreme weather events • Support Pacific Northwest integrated regional planning efforts with wholesale market analyses	• Focuses on technical assistance for implementing results of studies awarded through FOA
DER Grid Planning and Markets $0	*$7,000,000*	*+$7,000,000*
• N/A	• Partner with communities, policymakers, regulators, and utilities to deploy distribution- and wholesale market-level solutions that value and support long-duration energy storage • Develop distribution models at a national laboratory to support states, regions, Tribes, local communities, and other stakeholders in electricity system planning at the distribution level	• New program requested in FY 2025
Territory, Tribal, and Rural Community Development $0	*$7,000,000*	*+$7,000,000*
• N/A	• Provide assistance to territories, Tribal communities, remote and rural areas, and disadvantaged communities • Fund the Department's Communities LEAP initiative	• New program requested in FY 2025

Hydropower Incentives

Overview

The U.S. hydropower fleet offers short and long-term flexibility to support and complement the deployment of variable renewable energy generation sources. As the Nation's first renewable source of electricity, hydropower has provided clean, low-cost electricity for over a century. Today's evolving power system has created new opportunities for hydropower to play an important role in a clean energy future. In 2023, hydroelectricity accounted for about 5.74% of U.S. utility-scale electricity generation and 26.84% of utility-scale renewable electricity generation[1]. However, the existing U.S. hydropower fleet faces key challenges, including asset modernization, operations optimization, and cybersecurity threats. The average U.S. hydropower plant is 64 years old[2], and as the fleet continues to age, maintaining efficient and cost-effective operations and ensuring the safety of hydropower dams becomes increasingly challenging. Maintaining and enhancing the existing hydropower fleet provides opportunities to restore reliability and performance as well as mitigate high operation and maintenance costs.

Of the 90,000 existing dams across the Nation, about 2,270 are Federal Energy Regulatory Commission regulated dams that have hydropower facilities for electricity generation[3]. Retrofitting existing dams and adding generation at non-powered dams can increase renewable energy production. DOE's 2016 Hydropower Vision report estimated that by FY 2050, almost 5 GW of renewable energy could be developed at non-powered dams utilizing existing water infrastructure with minimal environmental impacts[4]. However, due in part to lack of adequate financing[5] and a lengthy and uncertain regulatory process[6], hydropower development at non-powered dams has stalled in recent years.

To address the challenges of the existing U.S. hydropower fleet and incentivize new hydropower development at non-powered dams, the Infrastructure Investment and Jobs Act (IIJA) included provisions amending the Energy Policy Act 2005 (EPAct 2005) and appropriated funding to DOE to implement three hydropower incentive opportunities:

- Hydroelectric Production Incentives (Section 40331) – Section 40331 amended the existing EPAct 2005 Section 242 to authorize DOE to provide $125 million in incentive payments to hydroelectric projects developed at non-powered dams and to projects with less than 20 MW of capacity in areas of inadequate electric service for electricity generated and sold.
- Hydroelectric Efficiency Improvement Incentives (Section 40332) – Section 40332 amended the existing EPAct 2005 Section 243 to authorize DOE to provide $75 million of incentive payments to support owners or operators of existing hydroelectric facilities in making capital improvements that can improve their hydroelectric generation efficiency by at least 3%.
- Maintaining and Enhancing Hydroelectricity Incentives (Section 40333) - Section 40333 added Section 247 to the EPAct 2005 and directed $553.6 million to DOE for this new program. The program provides incentive payments to support and enhance existing hydropower facilities through capital improvements directly related to three main areas: improving grid resiliency, improving dam safety, and environmental improvements.

Hydropower Incentives, a new program proposed in the FY 2025 Budget Request, complements the IIJA provisions described above with long-term follow-up monitoring and analysis. In FY 2025, once the EPAct 2005 hydropower incentives under Section 247 have been distributed, analytical work is needed to ensure realization of a vision to: 1) modernize and maintain existing U.S. hydropower assets; 2) support grid reliability and the integration of other energy resources; 3)

promote environmental sustainability; and 4) ensure the safety and integrity of the Nation's hydropower dams. Therefore, the Hydropower Incentives Program requests resources to:

[1] https://www.eia.gov/electricity/monthly/archive/december2023.pdf
[2] https://www.eia.gov/todayinenergy/detail.php?id=30312#
[3] https://www.energy.gov/sites/default/files/2021/01/f82/us-hydropower-market-report-full-2021.pdf
[4] https://www.energy.gov/sites/default/files/2018/02/f49/Hydropower-Vision-021518.pdf
[5] https://www.energy.gov/sites/default/files/2021/01/f82/us-hydropower-market-report-full-2021.pdf
[6] https://www.nrel.gov/docs/fy22osti/79242.pdf

- Develop modeling and analyses with respect to the 10 years of Section 242 Hydroelectric Production Incentives that look at the effects (both past and future) of these incentives on the growth of U.S. hydropower capacity.
- Develop modeling and analyses with respect to the hydroelectric efficiency improvements under EPAct 2005 Section 243 that assesses increases in generation and operational reliability and the cost-effectiveness of improvements.
- Develop modeling and analytics with respect to hydroelectric improvement sub-topic areas under EPAct 2005 Section 247:
    - **Environmental** – number of river miles opened for fish habitat by fish passage improvements; impact on visitor usage resulting from recreational improvements; habitat improvement for fish species of special concern
    - **Grid Resiliency** - areas of grid resiliency that will be improved (e.g., black start capability, improved communications and controls); cost-effectiveness of improvements; geographic scope of improvements
    - **Dam Safety –** an assessment of where upgrades of infrastructure (such as spillways, gates, etc.) for dam safety could simultaneously incorporate technologies and approaches for additional generation and/or support improved environmental flows; an economic assessment of improvements to flood risk reduction

Hydropower Incentives
Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Hydropower Incentives	**0**	**0**	**250**	**+250**	**N/A**

Hydropower Incentives
Explanation of Major Changes ($K)

	FY 2024 Request vs FY 2023 Request
▪ Develops analytics for monitoring the impact of hydropower incentives on the modernization and maintenance of existing U.S. hydropower assets	+250
Total, Hydropower Incentives	**+250**

Hydropower Incentives Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Hydropower Incentives $0	**$250,000**	**+$250,000**
N/A	• Develop analytics for monitoring the impact of hydropower incentives on the modernization and maintenance of existing U.S. hydropower assets	• New program requested in FY 2025

Microgrid Generation and Design Deployment

Overview

The new Microgrid Generation and Design Deployment program focuses on grid resiliency at scale by deploying microgrid solutions to communities, including those with high frequency and/or long duration of outages.

A microgrid is a group of interconnected loads and distributed energy resources that acts as a single controllable entity with respect to the grid. It can connect and disconnect from the grid to operate in grid-connected or island mode. Advanced microgrids enable local power generation assets—including traditional generators, renewables, and storage—to keep the local grid running even when the larger grid experiences interruptions or, for remote areas, where there is no connection to the larger grid. In addition, advanced microgrids allow local assets to work together to save costs, extend duration of energy supplies, and produce revenue via market participation.[a] Microgrid deployment supports increased resilience, reliability, decarbonization, and affordability of the electricity delivery system.

Other programs across the Department have focused on research and stimulating community interest in microgrids; however, limited funding is currently available for full scale deployment of microgrids. For example, section 40101 of the Infrastructure Investment and Jobs Act (IIJA) can fund microgrid components or energy storage but cannot fund electric generation necessary for the microgrid to function. This statutory limitation on use of IIJA funds has been a significant barrier for applicants working to improve grid resilience with funding available through that program. In addition, the transmission capacity contract aspect of the Transmission Facilitation Program, IIJA section 40106, can buy microgrid capacity but cannot fund design activities. Place-based initiatives, such as DOE's Communities Local Energy Action Program (LEAP) may provide technical assistance for communities to consider microgrid deployment, but do not provide the funding for technology investment.

The Microgrid Generation and Design Deployment program is designed to bridge these gaps to enable full scale microgrid deployment. Leveraging the Department's existing microgrid research and development activities, the program will work with utilities, industry, states, Tribes, and communities to develop tailored microgrid solutions in high-risk regions. This approach will help enable integration and aggregation of distributed energy resources, improve community resilience, reduce technology risk, and accelerate microgrid deployment at scale.

In FY 2025, the program will initiate awards for 3-6 microgrid projects in communities that demonstrate a need for increased resilience and reliability of their electricity system. Focusing on deployment, the program will work in partnership with the Office of Electricity and other programs participating in the Grid Modernization Crosscut which continue to play crucial roles in technology development. Microgrid generation and design awards will enable communities to conduct strategic energy analysis, project design, and generation investment activities for microgrids, including:

- Scoping and planning (e.g., stakeholder engagement, critical load identification, threat assessment, and performance requirements)
- Data collection (e.g., loads, existing and potential generations, energy costs, and reliability performance)
- Conceptual design (e.g., microgrid architecture, generation analysis, controls and communications, design constraints, techno-economic modeling, and implementation options analysis)
- Project development (e.g., financing, acquisition, solicitation, and contractor selection)
- Implementation (e.g., engineering design, construction, commissioning, and performance testing)

While industry can produce dependable controls and protections for individual devices, building a more interoperable, controllable, and reliable grid environment requires partnership with and collaboration among many utilities and vendors across the nation. Additional DOE support for stakeholder-oriented analytical capabilities and tools for valuing and justifying microgrid investments fills a critical gap in the investment and regulatory space and will help accelerate deployment. The program will partner with communities, national laboratories, vendors, and utilities to demonstrate microgrid technologies in simulation, hardware-in-the-loop, co-simulation, and field deployments, reducing apprehension and catalyzing support for larger-scale adoption of microgrids.

[a] https://www.nrel.gov/grid/microgrids.html

Microgrid Generation and Design Deployment
Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Microgrid Generation and Design Deployment	**0**	**0**	**30,000**	**+30,000**	**N/A**

Microgrid Generation and Design Deployment
Explanation of Major Changes ($K)

	FY 2025 Request vs FY 2023 Request
• New program requested in FY 2025	+30,000
Microgrid Generation and Design Deployment	**+30,000**

Microgrid Generation and Design Deployment

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Microgrid Generation and Design Deployment $0	**$30,000,000**	**+$30,000,000**
N/A	• Initiate awards for 3-6 microgrid projects	• New program requested in FY 2025

Program Direction

Overview

Program Direction provides for the costs associated with the Federal workforce, including salaries, benefits, travel, training, building occupancy, IT services, security clearance, and other related expenses. It also provides for the costs associated with contractor services that, under the direction of the Federal workforce, support the Grid Deployment Office (GDO) mission.

The FY 2025 Program Direction Request reflects increased staffing to support new and expanded program activities requested for GDO in FY 2025. The Program Direction Request ensures adequate resources to fully execute GDO's mission, complementing current program direction for GDO's IIJA and IRA efforts and further enabling GDO's ability to increase and sustain support for grid deployment.

Salaries and Benefits support Federal employees who provide executive management, programmatic oversight, and analysis for the effective implementation of the GDO program. This includes staff at Headquarters (HQ) and at GDO's supporting Field Offices (National Energy Technology Laboratory (NETL) and Golden Field Office (GFO)). Travel includes transportation, subsistence, and incidental expenses that allow GDO to effectively provide the Department's electricity-related outreach to regions, states, territories, and Tribes regarding planning needs and issues, policies, siting protocols, and new energy facilities.

Support Services include contractor support directed by the Federal staff to perform administrative tasks and provide analyses to management. These efforts include, but are not limited to, issue-oriented support on science, engineering, environment, and economics that benefit strategic planning; technology and market analysis to improve strategic and annual goals; development of management tools and analyses to improve overall office efficiency; assistance with communications and outreach to enhance GDO's external communication and responsiveness to public needs; and development of program-specific information tools that consolidate organizational knowledge, track performance, inventory data, improve accessibility, and facilitate use by staff.

Other Related Expenses include corporate IT support (i.e., DOE's Energy Information Technology Services (EITS) desktop services and IT equipment) and working capital fund (WCF) expenses. It also includes office safety requirements, equipment upgrades and replacements, commercial credit card purchases using simplified acquisition procedures where possible, security clearance expenses, training, and other needs.

Program Direction
Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Program Direction Summary					
Washington Headquarters					
Salaries and Benefits	3,360	3,535	8,600	+5,240	+156.0%
Travel	30	82	90	+60	+200.0%
Support Services	1,111	678	1,602	+491	+44.2%
Other Related Expenses	235	287	840	+605	+257.4%
Total, Washington Headquarters	**4,736**	**4,582**	**11,132**	**+6,396**	**+135.1%**
Field Office Support					
Salaries and Benefits	442	554	578	+136	+30.8%
Travel	4	12	13	+9	+225.0%
Support Services	0	46	48	+48	N/A
Other Related Expenses	25	13	14	-11	-44.0%
Total, Field Office Support	**471**	**625**	**653**	**+182**	**+38.6%**
Total Program Direction					
Salaries and Benefits	3,802	4,089	9,178	5,376	+141.4%
Travel	34	94	103	69	+202.9%
Support Services	1,111	724	1,650	539	+48.5%
Other Related Expenses	260	300	854	594	+228.5%
Total, Program Direction	**5,207**	**5,207**	**11,785**	**6,578**	**+126.3%**
Federal FTEs	**19**	**18.5**	**43**	**+24**	**+126.3%**
Field Offices supporting GDO	2.5	2.5	2.5	**+0**	+0%
Total GDO-funded FTEs	**21.5**	**21**	**45.5**	**+24**	**+111.6%**

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Support Services and Other Related Expenses					
Support Services	**1,111**	**724**	**1,650**	**+539**	**+48.5%**
Other Related Expenses					
Other Services	196	143	224	+28	+14.3%
EITS Desktop Services	64	157	320	+256	+400%
WCF[1]	0	0	310	+310	N/A
Total, Other Related Expenses	**260**	**300**	**854**	**+594**	**+228.5%**

[1]WCF and EITS will be funded alternately between Program Direction from the Infrastructure Investment and Jobs Act (IIJA), the Inflation Reduction Act (IRA), and GDO's annual appropriations.

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Program Direction $5,207,000	**$11,785,000**	**+$6,578,000**
$3,802,000	*$9,178,000*	*+$5,376,000*
• Salaries and Benefits support 21.5 FTEs at HQ and NETL that provide executive management, programmatic oversight, and analysis for the effective implementation of the GDO program.	• Salaries and Benefits support 45.5 FTEs at HQ and Field Offices (NETL and GFO). The Field Offices provide financial assistance program support, program implementation, programmatic oversight, and analysis for the effective execution of the GDO program.	• Supports the Federal pay increase as well as the salaries and benefits for the additional 24 FTEs that support new and expanded program activities.
$34,000	*$103,000*	*+$69,000*
• Travel includes transportation, subsistence, and incidental expenses that allow GDO to effectively facilitate its mission.	• Travel includes transportation, subsistence, and incidental expenses that allow GDO to effectively facilitate its mission.	• Increase in travel for additional FTEs.
$1,111,000	*$1,650,000*	*+$539,000*
• Support Services include contractor support directed by the Federal staff to perform administrative tasks and provide analysis to management. Support Services may include support for post-doctoral fellows and Intergovernmental Personnel Act (IPA) assignments.	• Support Services include contractor support directed by the Federal staff to perform administrative tasks and provide analysis to management. Support Services may include support for fellows and IPA assignments.	• Reflects increase for support service contracts for new and expanded program activities.

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
$260,000	*$854,000*	*+594,000*
• Other Related Expenses include EITS desktop services and IT equipment; and WCF expenses, 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, training, and other needs.	• Other Related Expenses include EITS desktop services and IT equipment; and WCF expenses, 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, training, and other needs.	• Increase due to the number of new FTEs as well as updated projections for EITS, WCF, and other support.

DEPARTMENT OF ENERGY
Funding by Site
Grid Deployment Office - FY 2025
(Dollars in Thousands)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget
Argonne National Laboratory			
Grid Technical Assistance	2,000	2,000	0
Transmission Planning & Permitting (GDO)	0	0	1,120
Total Argonne National Laboratory	**2,000**	**2,000**	**1,120**
Golden Field Office			
Wholesale Electricity Market Technical Assistance and Grants (GDO)	11,755	11,755	0
Distribution & Markets (GDO)	0	0	7,363
Total Golden Field Office	**11,755**	**11,755**	**7,363**
Idaho National Laboratory			
Wholesale Electricity Market Technical Assistance and Grants (GDO)	500	500	0
Distribution & Markets (GDO)	0	0	2,313
Total Idaho National Laboratory	**500**	**500**	**2,313**
Lawrence Berkeley National Laboratory			
Grid Technical Assistance	500	500	0
Transmission Planning & Permitting (GDO)	0	0	280
Total Lawrence Berkeley National Laboratory	**500**	**500**	**280**
Lawrence Livermore National Laboratory			
Grid Technical Assistance	200	200	0
Transmission Planning & Permitting (GDO)	0	0	112
Total Lawrence Livermore National Laboratory	**200**	**200**	**112**
National Energy Technology Lab			
Grid Technical Assistance	5,000	5,000	0
Program Direction - GDO	625	625	0
Total Program Direction (OE)	625	625	0
Transmission Planning & Permitting (GDO)	0	0	2,800
Wholesale Electricity Market Technical Assistance and Grants (GDO)	750	750	0
Distribution & Markets (GDO)	0	0	1,470
Microgrid Generation & Design Deployment (GDO)	0	0	25,000
Program Direction GDO	0	0	653
Total National Energy Technology Lab	**6,375**	**6,375**	**29,923**
National Renewable Energy Laboratory			
Grid Planning and Development (formerly, Transmission Permitting & Tech Assist.)	8,500	8,500	0
Grid Technical Assistance	5,000	5,000	0
Interregional and Offshore Transmission Planning	1,910	1,910	0
Transmission Planning & Permitting (GDO)	0	0	16,129
Wholesale Electricity Market Technical Assistance and Grants (GDO)	1,395	1,395	0
Distribution & Markets (GDO)	0	0	3,873
Hydropower Incentives (GDO)	0	0	125
Microgrid Generation & Design Deployment (GDO)	0	0	2,500
Total National Renewable Energy Laboratory	**16,805**	**16,805**	**22,627**
Oak Ridge National Laboratory			
Grid Technical Assistance	600	600	0
Transmission Planning & Permitting (GDO)	0	0	336
Distribution & Markets (GDO)	0	0	1,000

DEPARTMENT OF ENERGY
Funding by Site
Grid Deployment Office - FY 2025
(Dollars in Thousands)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget
Total Oak Ridge National Laboratory	**600**	**600**	**1,336**
Pacific Northwest National Laboratory			
Grid Planning and Development (formerly, Transmission Permitting & Tech Assist.)	7,500	7,500	0
Grid Technical Assistance	5,000	5,000	0
Interregional and Offshore Transmission Planning	90	90	0
Transmission Planning & Permitting (GDO)	0	0	10,971
Wholesale Electricity Market Technical Assistance and Grants (GDO)	2,000	2,000	0
Distribution & Markets (GDO)	0	0	3,253
Total Pacific Northwest National Laboratory	**14,590**	**14,590**	**14,224**
Pacific Northwest Site Office			
Hydropower Incentives (GDO)	0	0	125
Total Pacific Northwest Site Office	**0**	**0**	**125**
Sandia National Laboratories			
Grid Technical Assistance	400	400	0
Transmission Planning & Permitting (GDO)	0	0	224
Microgrid Generation & Design Deployment (GDO)	0	0	2,500
Total Sandia National Laboratories	**400**	**400**	**2,724**
Washington Headquarters			
Grid Technical Assistance	6,300	6,300	0
Program Direction - GDO	4,582	4,582	0
Total Program Direction (OE)	4,582	4,582	0
Transmission Planning & Permitting (GDO)	0	0	3,528
Wholesale Electricity Market Technical Assistance and Grants (GDO)	100	100	0
Distribution & Markets (GDO)	0	0	5,063
Program Direction GDO	0	0	11,132
Total Washington Headquarters	**10,982**	**10,982**	**19,723**
Total Funding by Site for Grid Deployment Office	**64,707**	**64,707**	**101,870**

Federal Energy Management Program

Federal Energy Management Program

Federal Energy Management Program
($K)

FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 vs FY 2023 Enacted
$57,000	$57,000	$64,000	+$7,000

Proposed Appropriation Language
For Department of Energy expenses including the purchase, construction, and acquisition of plant and capital equipment, and other expenses necessary for state and community energy 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, $64,000,000, to remain available until expended: Provided, that of such amount, $17,200,000 shall be available until September 30, 2026, for program direction.

Mission
The Federal Energy Management Program (FEMP) enables federal agencies to meet energy-related goals, identify affordable solutions, facilitate public-private partnerships, and provide energy leadership to the country by identifying government best practices. Federal agencies have a tremendous opportunity and responsibility to lead by example in cutting energy waste and advancing America's progress toward energy independence, resiliency, and security. FEMP strives to build agencies' ability and agility to manage to their critical missions by becoming efficient, resilient, and secure. It supplies agencies with the information, tools, and assistance they need to meet and track their energy-related requirements and goals.

Overview
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 vehicles. FEMP's mission, in accordance with the Energy Act of 2020, Section 1012 (42 U.S.C. 8253(i)), is 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 been successfully reducing its energy use and carbon footprint since 2008. In FY 2022, the Federal government used 1.2 quads of primary energy at a cost of $19.1 billion, which represents a reduction in consumption of 23.5% since 2008.[1] Energy used in buildings and facilities represents about 60 percent of the total energy use of the Federal government, and vehicle and equipment energy use accounts for 40 percent.[2] In FY 2022, the emissions from onsite building fuels, electricity use, and vehicle fuels (grouped as scope 1 and 2 emissions) from standard and non-standard Federal operations[3] totaled 62.6 million metric tons of carbon dioxide equivalent (MTCO2e), which represents a 37.6 percent reduction in emissions.[4]

There is a significant opportunity and responsibility for the Federal government to cut its energy costs and use. Agencies have estimated and reported over $7 billion[5] 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 (EO) and statutory mandates while maintaining resilient, efficient, and secure installations in support of mission assurance. Federal agencies' needs include technology development and

[1] Table A-4 and Table A-2 http://ctsedwweb.ee.doe.gov/Annual/Report/Report.aspx.
[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 https://ctsedwweb.ee.doe.gov/Annual/Report/Report.aspx
[5] Agencies identified $7.7 billion in their evaluations of facilities comprising 87 percent of Federal covered facility square footage; https://ctsedwweb.ee.doe.gov/CTSDataAnalysis/Default.aspx?ReturnUrl=%2fCTSDataAnalysis%2fReports%2fPublicAgencyReport_ComprehensiveEvaluationFindings.aspx

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-related requirements and goals, a main instrument in deploying energy infrastructure across the Federal government is by administering the Assisting Federal Facilities with Energy Conservation Technologies (AFFECT) Grant Program under its Federal Energy Efficiency Fund (FEEF) Program authority.

FEMP's Budget Request of $64 million provides for technical assistance to help agencies with deployment of clean energy and water efficiency, decarbonize buildings, electricity purchases and fleet electrification, and decarbonization strategies across the Federal government in support of Executive Order (EO) and statutory energy and water management related goals and objectives. This includes finalizing and implementing Federal Clean energy Building Rule, EO 14057 prioritization of building electrification integrated solutions and training; expanding Carbon Free Electricity (CFE) support in reviewing tariffs and utility tariff design; and expanding Electric Vehicle Supply Equipment (EVSE) deployment and promotion of managed and bidirectional charging. For Energy Act (EA) 2020 and Climate Smart Buildings Initiative (CSBI), expansion of performance contracting support including training, technical assistance convening, state of the market assessments, and enhancing adaption of electrification technology utilized in performance contracts.

In FY 2025, FEMP will continue to leverage the FEEF Program/AFFECT grant providing competitive funding to Federal agencies to invest in energy and water infrastructure improvements, including decarbonization, electrification and resilience of Federal operations. Additionally, FEMP will implement its federal building decarbonization strategy through the development of tools and resources and agency engagements to support implementation of EO and statutory requirements. FEMP will leverage the use of privately financed performance contracting in the form of an Energy Savings Performance Contracts (ESPC), ESPC ENABLE contracts, and Utility Energy Service Contracts (UESC) to implement energy efficiency, clean energy technology integration, and adaptation at mission critical sites. Financing through performance contracting will significantly exceed the initial grant investment, help the government lead-by-example on climate and sustainability, and create good-paying jobs with a free and fair choice to join a union. Also, FEMP will continue to support Workforce Development to develop and maintain an open platform for offering a suite of internationally accredited training and educational content to support a future focused clean energy workforce. FEMP's training is developed with Federal agency input and available for use by all sectors and international users.

FY 2023 Key Accomplishments

Technical Assistance

- Helped agencies award **performance contracts leveraging over $480M in private investment,** including:
    - Awarded 16 Utility Energy Service Company Projects with investment value of $284 million. Based on voluntarily reported data from agencies, approximately 53% of project investment in FY21 and 24% in FY22 were located in disadvantaged communities. (FY23 data currently unavailable). GHG reductions were estimated at 60,847 MT CO2e.
    - Awarded 7 Energy Savings Performance Contracts (ESPC) with investment value of $200 million. Conducted an additional 10 agency engagements to assist in getting ESPC projects underway. For FY23 ESPC Awards, GHG reductions were 11,803 MT CO2e, and water reductions were 4,284 Kgals/year
- Developed several user-friendly tools to assist agencies in complying with statutes and EOs to include zero emissions vehicle (ZEV) guide to support electric vehicle supply equipment (EVSE) planning, deployment and tool support, including best practices for federal fleets.
- In collaboration with Federal Project Executives (FPEs) and other labs, provided technical assistance in support of Energy Act 2020 and EO 14057 to implement cost effective energy efficiency and carbon pollution-free electricity (CFE) projects.
- Completed national-scale analysis of solar PV, wind, battery storage, geothermal heat pumps, combined heat and power, and hot and chilled water thermal energy storage towards 100% net annual decarbonization (electric + thermal energy use) at federal buildings across the U.S.
- Conducted 8 innovative onsite energy/water treasure hunts, interactive regional trainings that engage all levels of agency staff in identifying low-to-no cost energy/water conservation measures, resulting in 5-25% energy savings with less than one year ROI.

- Energy management system (EnMS-50001 Ready) engaged 8 agencies, covering 144 sites and 204 participants that include 13 NASA sites, 6 VA Medical Centers and 3 multi-unit residential properties in Washington D.C. that provide transitional housing for at-risk families.

Workforce Development

- Completed over 65,000 Training hours for FY 2023.
- Welcomed 2,220 registrants and provided over 15,000 hours of training across 77 technical sessions during the 2022 Energy Exchange.
- Provided over 15,000 hours of on-demand training through the FEMP Training Catalog, an open platform for the energy and water community.
- Collaborated with GSA to ensure training programs aligns with job needs of federal workforce.
- Opened applications for the first ever FEMP Early Career Professionals Program, a training cohort.

Reporting and Statutory Requirements

- FEMP-Designated Products Procurement Requirements (under EPAct 2005 SEC. 104 and 42 U.S.C. § 8259b(b)) reviewed and updated 32 product categories (including 29 products covered by other government programs, EnergyStar and EPEAT) to determine the top 25% of energy efficiency for each product category.
- Provided government-wide data collection/management for mandated annual metrics, reporting, and analysis for OMB scorecards.
- Provided Audit Guidance to meet provisions in Energy Act 2020 and Executive Orders by tracking audit activity and efficiency project implementation.
- Migrated data IT systems to cloud platforms to accommodate new requirements and facilitate agency reporting.
- In accordance with 42 U.S.C. 8256, hosted Federal Energy and Water Awards (FEWA); Award Winning champions Shared Lessons Learned Forum; and the annual FEDS Spotlight.

AFFECT

- Selected 19 projects to receive $28 million that will lead to $837 million of investments to reduce the federal government's annual energy costs by $22.7 million and a reduction in greenhouse gas (GHG) emissions by 82,648 MTCO2e. Twenty five percent of selected projects are located in disadvantaged communities.

Federal Energy Management Program
Explanation of Major Changes

	($K) FY 2025 Request vs FY 2023 Enacted
Federal Energy Management	**+$3,800**
Expand technical assistance, guidance, and training across all focus areas to facilitate implementation of building decarbonization, fleet electrification, and optimized energy and water management strategies across the Federal government in support of statutory, regulatory, and Executive Order energy and water management related goals.	
Program Direction	**+$3,200**
The increase will support an additional 6 FTEs, $1.2 million in costs to migrate FEMP online presence from EERE to our own servers. Increased contract administrative support to perform HC, acquisitions and IT support formerly performed by EERE.	
Total, Federal Energy Management Program	**+7,000**

Federal Energy Management Program
($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 vs FY 2023 ($)	FY 2025 vs FY 2023 (%)
Office of Federal Energy Management Program					
Federal Energy Management	29,000	45,000	32,800	+3,800	+13%
Federal Energy Efficiency Fund	14,000	20,000	14,000	0	0%
Program Direction	14,000	17,190	17,200	+3,200	+23%
Total, Federal Energy Management Program	**57,000**	**82,190**	**64,000**	**+7,000**	**+12%**

Future Years Energy Program (FYEP)
($K)

	FY 2025 Request	FY 2026	FY 2027	FY 2028	FY 2029
Federal Energy Management Program	64,000	65,000	67,000	69,000	70,000

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. The FYEP above shows outyear funding inflated at 2.3% for FY 2026 - FY 2029. Actual future budget request levels will be determined as part of the annual budget process.

FEMP priorities in the outyears include:

- Support projects under the Assisting Federal Facilities with Energy Conservation Technologies (AFFECT) grant program to drive decarbonization of the Federal building stock and optimize energy and water management systems to advance compliance with Energy Act of 2020 and EO 14057.
- Provide technical assistance to Federal agencies to support Federal building decarbonization, performance contracting and energy project procurement development, and technical assistance for Electric Vehicle (EV) charging and fleet electrification.
- Provide statutorily required reporting and technical guidance. Provide audit guidance meeting provisions in Energy Act 2020 and E.O.'s in accordance with 42 U.S.C. 8256.
- Support the Federal Sustainability workforce by Providing 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.

Federal Energy Management

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 collaborates with stakeholders to provide the tools, resources, and guidance needed by agencies to implement: EO 13990 Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis; EO 14008, Tackling the Climate Crisis at Home and Abroad; EO 14057 Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability; and the Energy Act of 2020. FEMP supports the Executive Office of the President's Council on Environmental Quality and the Office of Management and Budget in the development of Federally focused Executive Orders, implementation guidance, establishing agency performance targets, and tracking agency performance.

FEMP activities address Federal agency needs for spurring technology innovation and deployment; leveraging performance contracting for infrastructure improvements; developing a skilled workforce; and fulfilling statutory requirements by delivering excellent, equitable, and secure federal services. FEMP strengthens agencies' ability and agility to strategically manage their energy and water infrastructure, while maintaining critical mission assurance objectives. This is achieved, through technical assistance focused on Federal building decarbonization, climate adaptation for mission assurance, Federal fleet electrification, and strengthening and empowering the federal workforce. FEMP seeks feedback from agencies, through the Interagency Energy Management Task Force, to inform prioritized activities. This feedback resulted in identification of major agency barriers for decarbonizing agency operations including lack of technology; lack of a skilled workforce; and lack of funding to address deferred maintenance and infrastructure requirements.

Federal Energy Efficiency Fund (FEEF) Program: 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 USC § 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 USC § 8253(a)-(b). AFFECT grants have been provided most years since 2014.

In FY 2025, FEMP is requesting $14 million in Assisting Federal Facilities with Energy Conservation Technologies (AFFECT) grant funding for Federal agencies to drive decarbonization of the Federal building stock and 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 greenhouse gas emissions and mitigate climate change, support achievement of the Administration's goals for agencies, exemplify enterprise-wide approaches that can more easily be replicated and sustained in the future with annual funds and/or performance contracting, and advance market transformation. These innovative projects may include technology and equipment purchases for decarbonization and electrification technologies, life-cycle cost buy-downs and/or bundling with performance contracts. FEMP AFFECT grants include security requirements and vetting to shape market forces to drive security and resilience.

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.

Technical Assistance**:** In FY 2025 FEMP is requesting $25 million for technical assistance to Federal agencies to support Federal building decarbonization, performance contracting and energy project procurement development, and technical assistance for Electric Vehicle (EV) charging and fleet electrification.

FEMP utilizes DOE's National Laboratory subject matter experts to support the development of tools and resources needed to overcome barriers, and share lessons learned and best practices. These efforts support implementation of energy and water efficiency, fleet electrification, and decarbonization projects and strategies, resulting in viable, replicable, energy and water projects. FEMP shares technical solution sets and resources that enable agencies to meet their statutory, regulatory, and executive order requirements in support of decarbonization strategies, reduce energy and water use, implement cost-effective energy and water conservation measures, and energy-related investment practices. In addition, FEMP will provide technical assistance to Federal agencies in support of implementation of their Climate Action Plans.

Federal Building Decarbonization: FEMP will assist Federal agencies in implementing building decarbonization strategies to enhance building energy performance. FEMP will support agencies in executing goals and actions in EO 14057, through guidance and resources for the EO 14057 Implementing Instructions. This will be achieved through the development and implementation of tools and resources needed to support deployment of energy efficiency building management technologies and strategies across the Federal government. Focus areas will include grid interactive facilities in support of the Energy Act 2020 Federal Smart Buildings initiative; Zero Energy Installations; and implementation of decarbonization facility management strategies and approaches.

Performance Contracting and Energy Project Procurement Development: FEMP will assist Federal agencies in implementing energy savings performance contracts (ESPCs), utility energy service contracts (UESCs), and other project financing options in pursuit procurement improvements, distributed energy projects, and demand response strategies. FEMP will be prioritizing assisting agencies with statutory compliance with ESPC implementation requirements set by EA2020 and advancing the inclusion of electrification and decarbonization measures within performance contracting.

***Federal Fleet Electrification*:** FEMP will provide technical assistance to Federal agencies around fleet optimization to identify Electric Vehicle (EV) conversion pathways and implement model business case methodologies in support of fleet electrification strategies. FEMP will provide tools and resources needed to support the widespread adoption of the Zero Emission Vehicle Planning and Charging (ZPAC) planning tool and annual Zero Emission Vehicle (ZEV) Plans, which identifies EV opportunities and prioritizes EV installations. In addition, FEMP will enhance the EVI Locate and ZEV Ready tools as resources for agencies to integrate EV charging infrastructure into building decarbonization strategies. In FY 2025, FEMP will demonstrate 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.

Reporting & Statutory Requirements: In FY 2025 FEMP is requesting $5.3 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 to include providing audit guidance throughout the Federal government. In accordance with 42 U.S. C 8256 FEMP will continue to recognize exceptional federal energy managers with awards and spotlight forums to share knowledge. FY 2025 efforts will continue to focus on tracking statutory, regulatory, and implementation of EO requirements.

FEMP develops annual reports and tracking tools on Federal agency performance. These analytical reports and tools 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.

Workforce Development: In FY 2025, FEMP is requesting $2.5 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 in collaboration with GSA. 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 training sessions, including the annual Energy Exchange training event. In addition, FEMP will assess opportunities to leverage new and existing funding opportunities to develop training content for the Federal energy and water management communities. All training will be available through the FEMP Training Catalog, an open platform for the energy and water community to receive accredited training.

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request Level	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Federal Energy Management Program **$43,000,000**	**$46,800,000**	**+$3,800,000**
FEEF - AFFECT $14,000,000	$14,000,000	$0
Awarded 10 projects totaling $14 million in funding under the Assisting Federal Facilities with Energy Conservation Technologies (AFFECT) grant program to drive decarbonization of the Federal building stock and fleet electrification, optimize energy and water management systems to advance compliance with Energy Act of 2020 and EO 14057.	Award 10 projects totaling $10 million in funding under the Assisting Federal Facilities with Energy Conservation Technologies (AFFECT) grant program.	No change. Grants that will continue to provide replicable solutions to the federal government at large.
Technical Assistance $21,939,000	$25,000,000	+$3,061,000
Provided technical assistance to Federal agencies to support Federal building decarbonization, performance contracting and energy project procurement development, and technical assistance for Electric Vehicle (EV) charging and fleet electrification.	Expand technical assistance to provide subject matter experts (SME) to agencies to enable more projects. Enhance partner outreach. Expand Resource Efficiency Manager (REM) services, expanded support for utility tariff design and addressing cybersecurity concerns with distributed generation.	Increase supports developing technical assistance for Federal agencies to meet agency identified support needs in resilience, bandwidth, and life-of-project assistance.
Reporting & Statutory Requirements $4,963,000	$5,300,000	+$337,000
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 and FleetDASH Fleet Reporting, Energy Act 2020 requirements, and Renewable Energy Reporting. Coordinated with Council on Environmental Quality (CEQ) and Office of Management & Budget (OMB) on Executive Order implementation.	Continue to provide statutorily required reporting and technical guidance. Provide audit guidance meeting provisions in Energy Act 2020 and E.O.'s. In accordance with 42 U.S.C. 8256, host Federal Energy Management Awards and present the Award Winning Champions Lessons Learned Forum and provide the annual FEDS Spotlight.	Complete migration, upgrades, and enhancements to accommodate new requirements and further facilitate agency reporting. Provide more extensive 42 U.S.C. 8256 required recognition.
Workforce Development $2,098,000	$2,500,000	+$402,000
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. Issued Federal Workforce Funding Opportunity, to develop educational modules relevant to clean energy technologies and their integration into Federal sector career training and education pathways.	In collaboration with GSA, continue training course certification in line with Federal Building Personnel Training Act (FBPTA) to ensure alignment with current job requirements of the federal workforce. Continue with investment in Performance Contracting National Resource Center (PCNRC) to sustain program activity and workforce development.	Expand FEMP training catalog with more accredited courses. Develop holistic energy manager training. Expand Early Career Professionals Program, a training cohort. Continue growing Energy Exchange as the premier federal training event.

Federal Energy Management Program
Program Direction

Overview

Salaries & 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.

The Program Direction Request reflects an increase in program staff at HQ for business operations functions and Golden Field Office personnel. Funding is also required to provide for Human Capital, administrative, acquisitions, and IT services previously provided by EERE.

Program Direction

($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Washington Headquarters					
Salaries & Benefits	8,300	8,300	8,625	+325	+3.9%
Travel	168	168	175	+7	+4.1%
Support Services	2,500	2,500	4,700	+2,200	+88.0%
Other Related Expenses	3,032	3,032	3,700	+668	+22.03%
Total, Washington Headquarters	**14,000**	**14,000**	**17,200**	**+3,200**	**+22.86%**
Total, Office of Federal Energy Management Programs	**14,000**	**14,000**	**17,200**	**+3,200**	**+22.86%**
Federal FTEs	**25**	**25**	**31**	**+5**	**+20.00%**

Activities and Explanation of Changes

FY 2023 Enacted		FY 2025 Request Level	Explanation of Changes FY 2025 Request Level vs. FY 2023 Enacted
Program Direction	**$14,000,000**	**$17,200,000**	**+$3,200,000**
Salaries & Benefits	$8,300,000	$8,625,000	+$325,000
Supported 25 approved FTEs that provide executive management, programmatic oversight, and analysis for the effective implementation of the program.		Support 31 approved FTEs that provide executive management, programmatic oversight, and analysis for the effective implementation of the program.	Expected payroll requirements and additional benefits projections.
Travel	$168,000	$175,000	+$7,000
Included transportation, subsistence, and incidental expenses to effectively facilitate its mission.		Includes transportation, subsistence, and incidental expenses to effectively facilitate its mission.	Expected increase in travel needs to perform more in person technical assistance.
Support Services	$2,500,000	$4,700,000	+$2,200,000
Included contractor support directed by the Federal staff to perform administrative tasks and provide analysis to management. Support Services included support for post-doctoral fellows.		Contractor support directed by the Federal staff to perform administrative tasks and provide analysis to management. Also support for post-doctoral fellows as acquired through ORISE.	Expand contractual support for acquisitions support formerly provided by EERE, Golden Field Office (GFO) support to include Chief Council, Acquisitions, Financial Assistance support, compliance support and associated IT shared service costs.
Other Related Expenses	$3,032,000	$3,700,000	+$668,000
Included Energy Information Technology Systems (EITS) desktop services and WCF expense, such as rent, supplies, copying, graphics, mail, printing, and telephones. It also included equipment upgrades and replacements, commercial credit card purchases using the simplified acquisition procedures to the maximum extent possible, security clearance expenses and other needs.		EITS desktop support services including mandated equipment upgrades, replacements and purchases. WCF expenses, such as rent, supplies, copying, graphics, mail, printing, and telephones. Commercial credit card purchases using the simplified acquisition procedures to the maximum extent possible, security clearance expenses and other needs.	Increased EITS Support and equipment procurement as well as WCF increases due to office relocation and increased staffing levels.

DEPARTMENT OF ENERGY

Funding by Site

Federal Energy Management Program - FY 2025

(Dollars in Thousands)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget
Golden Field Office			
FEEF/AFFECT (FEMP)	0	0	10,000
Total Golden Field Office	**0**	**0**	**10,000**
Idaho National Laboratory			
Federal Energy Management Program (FEMP)	0	0	334
Total Idaho National Laboratory	**0**	**0**	**334**
Lawrence Berkeley National Laboratory			
Federal Energy Management Program (FEMP)	0	0	3,800
Total Lawrence Berkeley National Laboratory	**0**	**0**	**3,800**
National Renewable Energy Laboratory			
Federal Energy Management Program (FEMP)	0	0	9,250
Total National Renewable Energy Laboratory	**0**	**0**	**9,250**
Oak Ridge Institute for Science & Education			
Federal Energy Management Program (FEMP)	0	0	1,875
Total Oak Ridge Institute for Science & Education	**0**	**0**	**1,875**
Oak Ridge National Laboratory			
Federal Energy Management Program (FEMP)	0	0	2,250
Total Oak Ridge National Laboratory	**0**	**0**	**2,250**
Pacific Northwest National Laboratory			
Federal Energy Management Program (FEMP)	0	0	4,550
Total Pacific Northwest National Laboratory	**0**	**0**	**4,550**
Washington Headquarters			
Federal Energy Management Program (FEMP)	0	0	14,741
Program Direction - FEMP	0	0	17,200
Total Washington Headquarters	**0**	**0**	**31,941**
Total Funding by Site for Federal Energy Management Program	**0**	**0**	**64,000**

Manufacturing and Energy Supply Chains

Manufacturing and Energy Supply Chains

Manufacturing and Energy Supply Chains
($K)

FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 vs FY 2023 Enacted
$19,000	$19,000	$113,350	+$94,350

Proposed Appropriation Language

For Department of Energy expenses including the purchase, construction, and acquisition of plant and capital equipment, and other expenses necessary for manufacturing and energy supply chain 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, *$113,350,000*, to remain available until expended: Provided further, that of such amount, *$20,000,000*, shall be available until September 30, 2026 for program direction.

Overview

DOE's Office of Manufacturing and Energy Supply Chains (MESC) plays a critical and unique role in catalyzing investments in America's energy future to support the re-shoring, skilling, and scaling of U.S. manufacturing across energy supply chains. MESC addresses vulnerabilities in U.S. energy supply chains, serves as the frontline of energy manufacturing deployment, and accelerates America's transition to a resilient, equitable energy future through direct investments in manufacturing capacity, and workforce development. MESC also develops and manages the energy supply chain-focused analytical tools needed to inform energy programs and investments across DOE, the U.S. Government, and the private sector by identifying gaps, vulnerabilities, and other needs across U.S. clean energy supply chains.

All of MESC's current and proposed activities support the Administration's Made in America efforts in the form of sustained investments in domestic manufacturing capacity for clean energy products and critical materials, and in the domestic workforce and industrial sectors needed to compete in the global manufacturing market. MESC also uses terms and conditions of Federal financial assistance awards and Federal procurements to maximize the use of goods, products, and materials produced in, and services offered in, the United States, in accordance with Executive Order 14005, *Ensuring the Future Is Made in All of America*, and consistent with applicable law.

MESC carries out its mission through three activity areas:

- Catalytic investments in companies scaling manufacturing capacity for key energy products and components in the U.S.;
- Investments in US workforce training institutions, from universities to vocational programs, to ensure the US workforce has the skills to lead in energy manufacturing; and
- Mapping, modeling and analysis of U.S. energy supply chains to support manufacturing and workforce investments and other program development at MESC, DOE, and across the U.S. Government.

MESC's FY 2025 Budget Request of $113,350,000 focuses on the following:

- **Manufacturing Capacity and Competitiveness:** Provides funding for competitive financial assistance programs to make direct investments in manufacturing capacity to strengthen, secure, and expand U.S. clean energy supply chains. These activities address known gaps and emerging vulnerabilities across the full spectrum of energy supply chains, focusing on bringing manufacturing capacity of essential materials and products that have historically been off-shored or under-invested back to the U.S., including manufacturing capacity for critical materials, grid infrastructure, clean power generation, carbon management technologies, sustainable vehicles, and efficient building and industrial materials. The subprogram also supports activities to ensure competitiveness of the U.S. industrial sector through investments in retrofits to reduce emissions and increase efficiency of existing manufacturing operations, as well as to build new facilities to produce cost-effective lower carbon chemicals, cement, metals, and other products.
- **Workforce Capabilities and Competitiveness:** Funds activities to support and sustain the U.S. clean energy manufacturing workforce, including the Industrial Assessment Centers (IACs) that help small and medium sized U.S. manufacturers save energy and improve productivity by providing no-cost operational improvement

assessments conducted by university-based teams of engineering students. Also funds clean energy transition workforce development, for direct assistance to develop the domestic workforce in areas such as the conversion of facilities to electric vehicles manufacturing.

- **Supply Chain Mapping, Modeling & Analysis:** Supports analytical tools and activities that will inform energy supply chain investments across and beyond DOE by identifying current and projected supply chain gaps at a granular, actionable level. The budget request develops a world-class supply chain analytics asset capable driving: vulnerability and opportunity assessment of U.S. supply chains, with integration and augmentation of National Laboratory capabilities and proprietary DOE energy supply chain data; dynamic scenario assessment and wargaming capabilities (i.e., supply chain simulations of export controls, bans, and other actions related to national and economic security) to inform international agreements; and industry collaboration and technical information exchange to validate insights.
- **Program Direction:** Enables MESC to maintain and support a world-class Federal workforce that supports analysis of the U.S. industrial sector as well as strategic investments and technical assistance to support private-sector efforts to boost the security of U.S. supply chains. The FY 2025 Budget Request sustains full-time equivalent (FTE) employees and contractors required to support the proposed base budget level and continues to establish base operations for the program, including administrative operations and support across all subprograms.

FY 2023 Key Accomplishments

- In collaboration with the Office of Technology Transitions, MESC launched a new Manufacturing Supply Chain Modeling, Mapping, and Analysis Lab Consortium to develop deep mapping tools to support integrated insights across supply chains to identify gaps and inform investment priorities and strategies.
- In early-FY 2023, the Department announced selections from the first IIJA funding opportunities. Twenty-one (21) Battery Materials Processing and Battery Component Manufacturing projects will receive a combined $2.8 billion to build and expand commercial-scale facilities in 12 states to process critical battery materials like lithium, nickel, and graphite, and manufacture components like cathodes, anodes, separators, and lithium salts, and to recycle spent batteries. The private sector will provide over $6 billion of matching funds bringing the total investment to more than $9 billion.
- MESC launched five additional Industrial Assessment Centers (IACs) with IIJA funding support, bringing the total to 37. IACs train engineering and other STEM students in energy efficiency and sustainability and providing on-site technical assistance to small and medium-sized manufacturers. They provide a no-cost assessment, including in-depth evaluations of a facility conducted by engineering faculty with upper class and graduate students from a participating university. The detailed analysis generates specific recommendations of energy, carbon, and waste reduction projects, with estimates of costs, performance, and payback times. Under IIJA, MESC recently expanded the IAC Program to include more Minority-Serving Institutions (MSIs). Three of the five newly funded IACs are at minority-serving institutions. Overall, 11 of the centers are at MSIs, as are four IAC “satellites” – partner institutions of the main centers – that are MSIs (three of which are HBCUs). Additionally, MESC is expanding the IAC Program to community colleges, technical schools, and union training programs, as well as affiliated apprenticeships and internships, which will increase the number of MSIs further while also expanding equitable access to high-quality clean energy and advanced manufacturing career pathways.

Manufacturing and Energy Supply Chains

($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Office of Manufacturing & Energy Supply Chains					
Manufacturing Capacity and Competitiveness [1]	-	-	53,350	53,350	N/A
Workforce Capacity and Competitiveness [2]	16,000	16,000	20,000	4,000	25.00%
Supply Chain Mapping, Modeling & Analysis [3]	2,000	2,000	20,000	18,000	900.00%
Program Direction	1,000	1,000	20,000	19,000	1,900.00%
Total, Manufacturing & Energy Supply Chains	**19,000**	**19,000**	**113,350**	**94,350**	**496.58%**

Proposed FY 2025 Budget Structure

Office of Manufacturing & Energy Supply Chains					
	Manufacturing Capacity and Competitiveness	Workforce Capacity and Competitiveness	Supply Chain Mapping, Modeling & Analysis	Program Direction	**TOTAL**
FY 2024 Budget Request Structure					
Office of Manufacturing & Energy Supply Chains					
Facility and Workforce Assistance		20,000			**20,000**
Batteries and Critical Materials	53,350				**53,350**
Energy Sector Industrial Base			20,000		**20,000**
Program Direction				20,000	**20,000**
TOTAL	**53,350**	**20,000**	**20,000**	**20,000**	**113,350**

[1] Formerly Batteries and Critical Materials
[2] Formerly Facility and Workforce Assistance
[3] Formerly Energy Sector Industrial Base

Explanation of Major Changes
($K)

	FY 2025 Request vs FY 2023 Enacted
Manufacturing Capacity and Competitiveness In FY 2025, the increase in funds will be used to invest in U.S. energy manufacturers' abilities to source essential equipment to build and modernize domestic factories by standing up U.S. manufacturing capacity in the equipment categories most vulnerable to procurement delays and shortages. As part of its strategies, MESC will stand up competitive prize for community engagement to reward energy manufacturing projects and their communities leveraging collaborative permitting and community and tribal engagement practices to create lasting economic value. MESC will foster the ability of at-scale U.S. manufacturers in energy supply chain segments of upmost national security to continue to innovate by providing access to manufacturing-scale pilot lines. The request will also allow MESC to support manufacturers in optimizing energy efficiency and environmental performance through the implementation of smart manufacturing, energy management, sustainable manufacturing, waste management, resiliency planning, and industrial decarbonization technologies.	**+$53,350**
Workforce Capacity and Competitiveness As part of the FY 2025 request, MESC will continue to invest in programs that enable the workforce development needed to support the clean energy transition. As part of continued efforts, MESC will complete and maintain analysis as clean energy manufacturing projects are deployed to identify key workforce gaps and ensure domestic competitiveness. Additional funds will be used for educational institutions or provide direct assistance to manufacturers to develop the domestic workforce in key supply chain areas such as the conversion of facilities to electric vehicles manufacturing, clean power materials and systems manufacturing, etc.	**+$4,000**
Supply Chain Mapping, Modeling & Analysis The increase in funds will allow MESC to adapt existing and build new National Laboratory capabilities, including expertise, to address regional energy sector supply chain and manufacturing gaps, issues, and strategies. Additional funds will support new targeted activities to coordinate supply chain analysis and policy across the Department, in order to build the capability to assess how new domestic processing and manufacturing capacity investments made possible by DOE programs are reshaping global supply chains and enhancing the share of manufacturing capacity the U.S. is poised to provide in the most critical energy supply chain segments. MESC will also provide support for coordination with energy supply chain industry partners on supply chain modeling, mapping, and analysis tools to provide a comprehensive and upgradeable framework for integrated cross-sector energy supply chain diagnostics and insights.	**+$18,000**
Program Direction FY 2025 request for program direction will allow MESC to meet estimated staffing needs of the office to execute expected roles and responsibilities. Specifically, funds requested will allow MESC to sustain FTEs and contractors required to support the proposed base budget level and continue to establish base operations for the program, including administrative operations and support across all subprograms.	**+$19,000**
Total, Manufacturing and Energy Supply Chains	**+$94,350**

Future Years Energy Program (FYEP)

($K)

	FY 2025 Request	FY 2026	FY 2027	FY 2028	FY 2029
Office of Manufacturing & Energy Supply Chains	113,350	116,000	118,000	121,000	124,000

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 MESC for FY 2026 - FY 2029. The outyear funding levels use the growth rates of 2.3% and match the outyear account totals published by the Office of Management and Budget. Actual future budget request levels will be determined as part of the annual budget process.

MESC priorities in the outyears include the following:

- Provide funding for resources and competitive financial assistance programs to make direct investments in manufacturing capacity to strengthen, secure, and expand U.S. clean energy supply chains; and support activities to ensure competitiveness of the U.S. industrial sector through investments in retrofits to reduce emissions and increase efficiency of existing manufacturing operations, as well as to help establish facilities to produce cost-effective lower carbon chemicals, cement, metals, and other products.
- Lead in the analysis and understanding of U.S. clean energy manufacturing workforce needs. Fund activities to support and sustain the U.S. clean energy manufacturing workforce, including the Industrial Assessment Centers (IACs), other educational institutions and training models, and direct support to clean energy manufacturers such as the conversion to electric vehicles manufacturing.
- Support analytical tools and activities that will inform energy supply chain investments across and beyond DOE by identifying current and projected supply chain gaps at a granular, actionable level.

Infrastructure Investment and Jobs Act (IIJA)

The Office of Energy Efficiency and Renewable Energy was appropriated funds through the Infrastructure Investment and Jobs Act (IIJA) (P.L. 117-58); however, MESC will manage the activities listed below. In FY 2023, approximately $1.6 billion of activities related to vehicles, buildings, advanced manufacturing, and energy efficiency moved to be managed by the new MESC office. In FY 2025, funding will continue for activities related to vehicles (battery manufacturing and recycling grants and battery material processing grants), buildings (implementation grants for industrial research and assessment centers and industrial research and assessment centers), and advanced manufacturing (advanced energy manufacturing and recycling grant program).

(dollars in thousands)

Appropriated Funding Organization	FY 2023 IIJA Funds	FY 2024 IIJA Funds	FY 2025 IIJA Funds	Managing Organization
Infrastructure Investment and Jobs Act				
Advanced Energy Manufacturing and Recycling Grant	150,000	150,000	150,000	MESC
Implementation Grants for Industrial Research and Assessment Centers	80,000	80,000	80,000	MESC
Industrial Research and Assessment Centers	30,000	30,000	30,000	MESC
ED - Advanced Manufacturing	**260,000**	**260,000**	**260,000**	MESC

(dollars in thousands)

Battery Manufacturing and Recycling Grants	600,000	600,000	600,000	MESC
Battery Material Processing Grants	600,000	600,000	600,000	MESC
VT - Vehicle Technologies	**1,200,000**	**1,200,000**	**1,200,000**	MESC
Total, MESC IIJA Coordination	**1,460,000**	**1,460,000**	**1,460,000**	

- **Battery Manufacturing and Recycling Grants:** The goal of this investment is to provide grants to ensure that the United States has a viable domestic manufacturing and recycling capability to support a North American battery supply chain. Focus on demonstration projects, construction of commercial-scale facilities, and retrofit or retooling of existing facilities for battery component manufacturing, advanced battery manufacturing, and recycling.
- **Battery Material Processing Grants:** The goal of this investment is to provide grants for battery materials processing to ensure that the United States has a viable battery materials processing industry. Funds can also be used to expand our domestic capabilities in battery manufacturing and enhance processing capacity.
- **Industrial Research and Assessment Centers:** The goal of this investment is to provide funding for institutions of higher education, community colleges, trade schools, and union training programs to identify opportunities for optimizing energy efficiency and environmental performance at manufacturing and other industrial facilities.
- **Implementation Grants for Industrial Research & Assessment Centers:** The goal of this investment is to fund upgrades for small- and medium-sized manufacturers that have been recommended in an assessment from an Industrial Assessment Center or Combined Heat and Power Technical Assistance Partnership.
- **Battery and Critical Mineral Recycling - State and Local Programs:** The goal of this investment is to award grants to states and units of local government to assist in the establishment or enhancement of state battery collection, recycling, and reprocessing programs.
- **Battery and Critical Mineral Recycling - Retailers as Collection Points:** The goal of this investment is to award grants to retailers that sell covered batteries or covered battery-containing products to establish and implement a system for acceptance and collection of covered batteries and covered battery-containing products for reuse, recycling, or proper disposal.
- **Advanced Energy Manufacturing and Recycling Grant Program:** The goal of this investment is to support manufacturing projects in communities that have experienced coal mine or coal-fired power plant closures. The Program will provide grants to small- and medium-sized manufacturers to build, expand, or re-equip facilities to produce or recycle property needed to support secure, resilient domestic clean energy supply chains. It also supports grants for manufacturers to install equipment that will substantially reduce greenhouse gas emissions manufacturing and industrial facilities.
- **State Manufacturing Leadership:** The goal of this investment is to provide funding to states to invest in smart manufacturing technologies.
- **Energy Efficient Transformer Rebates:** The goal of this investment is to provide rebates to industrial or manufacturing facility owners, commercial building owners, multifamily building owners, utilities, or energy service companies for the replacement of a qualified energy inefficient transformer with a qualified energy efficient transformer.
- **Extended Product System Rebates:** The goal of this investment is to provide rebates for qualified extended product systems (i.e., electric motor, electronic control, and driven load).

Inflation Reduction Act (IRA) Investments

MESC, through the Office of Energy Efficiency and Renewable Energy, was appropriated funds through the Inflation Reduction Act of 2022 (IRA), which are itemized below.

(dollars in thousands)

Appropriated Funding Organization	FY 2022 IRA Funds	Managing Organization
Inflation Reduction Act		
MESC IRA Program Direction	60,000	MESC
IRA Section 50143 Domestic Manufacturing Grants	1,940,000	MESC
IRA Section 30001 Defense Production Act	250,000	MESC
Total, MESC IRA Coordination	**2,250,000**	

- **Defense Production Act**: The Defense Production Act provides DOE with a vital tool to make targeted investments in key technology areas that are essential to ensuring power grid reliability and achieving our clean energy future. DOE's DPA program is focused on heat pumps and will invest in manufacturers with domestic operations to retool existing factories or build new factories for heat pumps and their components. These investments will bolster U.S. competitiveness and security while reducing reliance among U.S. consumers and businesses on volatile natural gas and home heating oil costs and supply.
- **Domestic Manufacturing Conversion Grants**: The goal of this investment is to provide grants for domestic production of efficient hybrid, plug-in electric hybrid, plug-in electric drive, and hydrogen fuel cell electric vehicles, in accordance with section 712 of the Energy Policy Act of 2005 (42 U.S.C. 16062).

Manufacturing and Energy Supply Chains
Manufacturing Capacity and Competitiveness

Description

The Manufacturing Capacity and Competitiveness (formerly Batteries and Critical Materials) subprogram is responsible for strategically strengthening and securing the manufacturing and energy supply chains needed to modernize the Nation's manufacturing capabilities and establish supply chain resilience. The subprogram builds important and strategic manufacturing capabilities through targeted activities including demonstrations, pilots, and full-scale commercial projects. Supply chain resilience targets weaknesses and gaps in the overall supply chain, including minerals, materials, processing, and capabilities needed for batteries and critical materials. The subprogram supports manufacturers in optimizing energy efficiency and environmental performance through the implementation of smart manufacturing, energy management, sustainable manufacturing, waste management, resiliency planning, and industrial decarbonization technologies. National laboratories, universities, industry, and other Federal agencies will apply their expertise and leverage their partnerships through this work in coordination with DOE offices and programs.

The subprogram provides funding for resources and competitive financial assistance programs to make direct investments in manufacturing capacity to strengthen, secure, and expand U.S. clean energy supply chains. These activities address known gaps and emerging vulnerabilities across the full spectrum of energy supply chains, focusing on bringing manufacturing capacity of essential materials and products that have historically been off-shored or under-invested back to the U.S., including manufacturing capacity for critical materials, grid infrastructure, clean power generation, carbon management technologies, sustainable vehicles, and efficient building and industrial materials. The subprogram also supports activities to ensure competitiveness of the U.S. industrial sector through investments in retrofits to reduce emissions and increase efficiency of existing manufacturing operations, as well as to build new facilities to produce cost-effective lower carbon chemicals, cement, metals, and other products.

The subprogram's mission includes various facets of strengthening U.S. manufacturing capacity, including investing in factories that make energy products in the U.S.; investing in factories that make the equipment used to make energy products in the U.S.; investing in sustainable, domestic sources of critical minerals and rare earth elements; and investing in increased pilot line capacity for at-scale energy manufacturers to innovate and test new designs and technologies in the U.S., to avoid IP loss to foreign nations.

Manufacturing Capacity and Competitiveness
Funding ($)

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs. FY 2023 Enacted
Manufacturing Capacity and Competitiveness $0	**$53,350,000**	**+$53,350,000**
• No funding in FY 2023.	• *Scaling Pilot Line and Innovation Capabilities:* Foster the ability of at-scale U.S. manufacturers in energy supply chain segments of upmost national security to continue to innovate by providing access to manufacturing-scale pilot lines, thereby avoiding intellectual property (IP) loss to countries, including covered nations, with cheaper and more widely available at-scale pilot line capacity, and thereby securing and maintaining a competitive and leading position in the global energy sector. This activity will remove barriers for domestic innovation and provide opportunities for domestically developed intellectual property in energy supply chain segments essential to national security to reach validation at commercial scale for 2-3 companies per year. • *Manufacturing Equipment Procurement Accelerator Network:* Invest in U.S. energy manufacturers' abilities to source essential equipment to build and modernize domestic factories and enable demand aggregation and supply scale-up through strategic investments in equipment manufacturers for key energy supply chains where equipment lead times and dependence is longest. Make competitive investments in equipment manufacturers in priority technology areas for DOE that are locating or expanding into the US. • *Innovations in Critical Minerals Sourcing & Permitting:* Stand up competitive prize for energy manufacturing projects using collaborative permitting and community / tribal engagement practices to design and develop projects to source critical minerals and rare earths relevant to energy supply chains in order to highlight how industry can accelerate U.S. supply chain development through forward-looking collaborative project design. • *Improving Manufacturing Efficiency and Competitiveness:* Reduce the risk for small and medium sized manufacturers to deploy emerging high efficiency technologies, advanced manufacturing, or low-carbon materials. Data from these projects will be used to further enhance lab capabilities to increase confidence and accelerate validation at additional sites.	• Support Scaling Pilot Line and Innovation Capabilities activities essential to avoiding IP loss to countries. • Support Manufacturing Equipment Procurement Accelerator Network. • Support Innovations in Critical Minerals Sourcing & Permitting activities, including funding a community engagement prize. • Support Improving Manufacturing Efficiency and Competitiveness activities, including deployment of smaller-scale solutions that reduce improve efficiency or reduce emissions at SMMs and build market confidence in new solutions. This activity would enable more efficient and competitive U.S. manufacturers in the near term and spur domestic manufacturing demand for these new technologies and solutions.

Manufacturing and Energy Supply Chains
Workforce Capacity and Competitiveness

Description

MESC's Workforce Capacity and Competitiveness (formerly Facility and Workforce Assistance) subprogram funds activities to support and sustain the U.S. clean energy manufacturing workforce.

The subprogram supports the Industrial Assessment Centers (IACs) that help small and medium sized U.S. manufacturers save energy and improve productivity by providing no-cost operational improvement assessments conducted by university-based teams of engineering students. In FY 2025, the subprogram builds on the IAC program's multi-decade track-record with four-year universities to develop skilled workforce and support manufacturers with technical assistance, including disadvantaged communities, energy communities, and areas with high industrial emissions.

In FY 2025, the subprogram is also supporting the IAC expansion program beyond four-year universities to community colleges, vocational programs, and other training institutions started with IIJA funding. Both the existing and expanded IAC centers will provide services in historically underserved communities and will continue to support engineers-in-training and Small- and Medium-Sized Manufacturers (SMMs) nationwide, including through the program's growing emphasis on decarbonization and resiliency planning alongside efficiency and performance.

The subprogram also supports clean energy transition workforce development, through direct assistance to develop the domestic workforce in areas such as modernized automotive and other manufacturing sectors. These activities will further build out the skilled trades workforce to support U.S. manufacturers for key supply chains including hybrid and electric vehicles, wind energy, nuclear energy, energy storage, hydrogen, and others, access trained workers for jobs that may not require a four-year degree.

Workforce Capacity and Competitiveness
Funding ($K)

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs. FY 2023 Enacted
Workforce Capacity and Competitiveness **$16,000,000**	**$20,000,000**	**+$4,000,000**
• Provide assessments to manufacturers on energy and water efficiency, waste reduction, and energy management processes. • Fund competitively selected partnerships between universities, and the private sector that emphasize student-led projects to develop new tools and processes that address energy management and manufacturing challenges. • Train the clean energy innovators and manufacturing energy management workforce of the future.	• *Industrial Assessment Centers Program:* Through the Industrial Assessment Centers Program, continue to provide assessments to manufacturers on energy and water efficiency, waste reduction, and energy management processes and fund competitively selected partnerships between universities, and the private sector that emphasize student-led projects to develop new tools and processes that address energy management and manufacturing challenges. • Train the clean energy innovators and manufacturing energy management workforce of the future. *Energy Workforce Development:* Further build out the skilled trades workforce to support U.S. manufacturers for key supply chains including hybrid and electric vehicles, wind energy, nuclear energy, energy storage, hydrogen, and others, access trained workers for jobs that may not require a four-year degree and support energy manufacturers transition to new products.	• Create new training and workforce deployment programs to support U.S. manufacturers in key supply chains and provide technical assistance to help energy manufacturers transition to make new energy products.

Manufacturing and Energy Supply Chains
Supply Chain Mapping, Modeling & Analysis

Description

MESC's Supply Chain Mapping, Modeling and Analysis (formerly Energy Sector Industrial Base) subprogram supports analytical tools and activities that will inform energy supply chain investments across and beyond DOE by identifying current and projected supply chain gaps at a granular, actionable level. The budget request develops a world-class supply chain analytics asset capable driving: vulnerability and opportunity assessment of U.S. supply chains, with integration and augmentation of National Laboratory capabilities and proprietary DOE energy supply chain data; dynamic scenario assessment and wargaming capabilities (i.e., supply chain simulations of export controls, bans, and other actions related to national and economic security) to inform international agreements; and industry collaboration and technical information exchange to validate insights.

Through the National Laboratory Consortium for Supply Chain Modeling and Analysis, the subprogram adapts existing and builds new National Laboratory capabilities, including expertise to address regional energy sector supply chain and manufacturing gaps, issues, and strategies. MESC is uniquely positioned with relevant subject matter expertise and objectivity to leverage existing, aggregate additional, and analyze sensitive energy supply chain data across funding opportunity application data, MESC's proprietary supply chain research, and the relevant research conducted by DOE's National Labs. Funding will harness existing and cultivate additional MESC and National Laboratory subject matter experts to develop a conceptual framework for a Supply Chain Readiness Level (SCRL) for uniform risk identification, evaluation, comparison across energy technology supply chain areas, to apply the framework to priority energy technologies, and to develop additional approaches for modeling and predictively assessing potential energy supply chain disruption impacts to the U.S. economy. This capability will inform future investments and policies aimed at addressing supply chain vulnerabilities, building supply capacity, and strengthening the resilience of U.S. energy supply chains.

The subprogram supports Cross-Department Supply Chain Coordination & Monitoring. As DOE's first integrated approach to supply chain assessment across energy supply chains, MESC's modeling, mapping, and analysis tools are a novel complement to and powerful new source of policy insight for the DOE Office of Policy's cross-department and interagency policy activities. Funding will support new targeted activities to coordinate supply chain analysis and policy across the Department, in order to build the capability to assess how new domestic processing and manufacturing capacity investments made possible by DOE programs are reshaping global supply chains and enhancing the share of manufacturing capacity the U.S. is poised to provide in the most critical energy supply chain segments. Such a dashboard would enable monitoring of the share of manufacturing capacity by the U.S., free trade agreement (FTA) countries, and Foreign Entities of Concern (FEOC) and could be used to inform energy investment selection, funding opportunity announcement focus, and investment program development across DOE and USG.

The subprogram also provides support for coordination with energy supply chain industry partners on supply chain modeling, mapping, and analysis tools to provide a comprehensive and upgradeable framework for integrated cross-sector energy supply chain diagnostics and insights. Analysis and technical information exchange would support validation and insight sharing across energy supply chains, in alignment with—and both informing and informed by—associated industry ecosystems, essential in a technology landscape that is rapidly evolving.

Supply Chain Mapping, Modeling & Analysis
Funding ($)

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs. FY 2023 Enacted
Supply Chain Mapping, Modeling & Analysis **$2,000,000**	**$20,000,000**	**+$18,000,000**
• Support analytical activities to begin creating coordinated and integrated network of existing and new models across DOE and the national laboratories capable of providing granular insight into energy sector supply chain vulnerabilities and opportunities.	• *National Laboratory Consortium for Supply Chain Modeling and Analysis:* Adapt existing and build new National Laboratory capabilities, including expertise, to address regional energy sector supply chain and manufacturing gaps, issues, and strategies. Funding will harness existing and cultivate additional MESC and National Laboratory subject matter experts to develop a conceptual framework for a Supply Chain Readiness Level (SCRL) for uniform risk identification, evaluation, comparison across energy technology supply chain areas, to apply the framework to priority energy technologies, and to develop additional approaches for modeling and predictively assessing potential energy supply chain disruption impacts to the U.S. economy. • *Cross-Department Supply Chain Coordination & Monitoring:* Support new targeted activities to coordinate supply chain analysis and policy across the Department. This will build the capability to assess how new domestic processing and manufacturing capacity investments made possible by DOE programs are reshaping global supply chains and enhancing the share of manufacturing capacity the U.S. is poised to provide in the most critical energy supply chain segments. • *Technical Assistance:* Support for coordination with energy supply chain industry partners on supply chain modeling, mapping, and analysis tools to provide a comprehensive and upgradeable framework for integrated cross-sector energy supply chain diagnostics and insights.	• Adapt existing and support emerging National Laboratory capabilities for the National Laboratory Consortium for Supply Chain Modeling and Analysis. • Support targeted activities for Cross-Department Supply Chain Coordination & Monitoring, enabling monitoring of the share of manufacturing capacity by the U.S., free trade agreement (FTA) countries, and Foreign Entities of Concern (FEOC). • Support Technical Assistance activities for validation and insight sharing across energy supply chains, in alignment with—and both informing and informed by—associated industry ecosystems, essential in a technology landscape that is rapidly evolving.

Manufacturing and Energy Supply Chains
Program Direction

Overview

Program Direction provides for the costs associated with the Federal workforce, including salaries, benefits, travel, training, building occupancy, IT services, security clearance, and other related expenses. It also provides for the costs associated with contractor services that, under the direction of the Federal workforce, support the MESC mission.

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

Travel & Training includes transportation, subsistence, and incidental expenses that allow MESC to effectively provide the Department's electricity-related 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 management. These efforts include issue-oriented support on science, engineering, environment, and economics that benefit strategic planning; technology and market analysis to improve strategic and annual goals; development of management tools and analyses to improve overall office efficiency; assistance with communications and outreach to enhance MESC's external communication and responsiveness to public needs; development of program specific information tools that consolidate corporate knowledge, performance tracking and inventory data, improve accessibility to this information, and facilitate its use by the entire staff.

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.

IIJA and IRA operating expenses currently support 108 essential FTEs who drive award negotiations and manage the projects in the multi-year journey between award and the project's commercial operation date. While MESC's first investment in new manufacturing capacity is already coming online later this year, in 2024, the projects with the longest construction cycles are currently slated to come online in 2029.

The FY 2025 MESC Program Direction Budget Request will:

- Provide additional FTEs to support mission critical work.
- Support strengthening MESC's overall performance, organization, budget, operations, human capital, and project management as the office continues to grow in support of its mission.

Program Direction

($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 vs FY 2023 ($)	FY 2025 vs FY 2023 (%)
Program Direction Summary					
Washington Headquarters					
Salaries & Benefits	600	600	12,670	+12,070	2012%
Travel	24	24	375	+351	1463%
Support Services	150	150	3,665	+3,515	2343%
Other Related Expenses	226	226	3,290	+3,064	1356%
Total, Washington Headquarters	**1,000**	**1,000**	**20,000**	**+19,000**	**1900%**
Total, MESC Program Direction	**1,000**	**1,000**	**20,000**	**+19,000**	**1900%**
Federal FTEs	**3**	**3**	**60**	**+57**	**2900%**

Program Direction
($)

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs. FY 2023 Enacted
Program Direction $1,000,000	**$20,000,000**	**+$19,000,000**
Salaries and Benefits $600,000	$12,670,000	+$12,070,000
• Salaries and Benefits supports FTEs that provide executive management, programmatic oversight, and analysis for the effective implementation of the programs.	• Salaries and Benefits supports 60 proposed FTEs that provide executive management, programmatic oversight, and analysis for the effective implementation of the programs.	• Funding will meet estimated staffing needs for new and ongoing activities.
Travel & Training $24,000	$375,000	+$351,000
• Travel includes transportation, subsistence, and incidental expenses to effectively facilitate its mission.	• Travel includes transportation, subsistence, and incidental expenses to effectively facilitate its mission.	• New funding for staff needs to travel as part of MESC duties.
Support Services $150,000	$3,665,000	+$3,515,000
• Support Services includes contractor support directed by the Federal staff to perform administrative tasks and provide analysis to management. Support Services may include support for post-doctoral fellows.	• Support Services includes contractor support directed by the Federal staff to perform administrative tasks and provide analysis to management. Support Services may include support for post-doctoral fellows. • New funding for technical/ administrative support service needs in launching and managing multiple years of project solicitation cycles and active project management.	• The increase reflects additional funding to be allocated for contractual support as needed to aid and support the planned increase in federal workforce responsible for executing MESC's requirements.
Other Related Expenses $226,000	$3,290,000	+$3,064,000
• 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.	• 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.	• New funding reflects costs associated with increase in FTEs.

DEPARTMENT OF ENERGY

Funding by Site

Office of Manufacturing & Energy Supply Chains - FY 2025

(Dollars in Thousands)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget
Argonne National Laboratory			
Facility and Workforce Assistance (MESC)	0	0	750
Total Argonne National Laboratory	**0**	**0**	**750**
Golden Field Office			
Facility and Workforce Assistance (MESC)	0	0	16,000
Total Golden Field Office	**0**	**0**	**16,000**
Idaho National Laboratory			
Analysis and Strategic Investment (MESC)	0	0	1,000
Total Idaho National Laboratory	**0**	**0**	**1,000**
Lawrence Berkeley National Laboratory			
Facility and Workforce Assistance (MESC)	0	0	500
Total Lawrence Berkeley National Laboratory	**0**	**0**	**500**
National Renewable Energy Laboratory			
Facility and Workforce Assistance (MESC)	0	0	432
Analysis and Strategic Investment (MESC)	0	0	4,000
Total National Renewable Energy Laboratory	**0**	**0**	**4,432**
Pacific Northwest National Laboratory			
Facility and Workforce Assistance (MESC)	0	0	200
Total Pacific Northwest National Laboratory	**0**	**0**	**200**
Undesignated Lab/Plant/Installation			
Battery and Critical Materials (MESC)	0	0	53,350
Analysis and Strategic Investment (MESC)	0	0	15,000
Program Direction - MESC	0	0	20,000
Total Undesignated Lab/Plant/Installation	**0**	**0**	**88,350**
Washington Headquarters			
Facility and Workforce Assistance (MESC)	0	0	2,118
Total Washington Headquarters	**0**	**0**	**2,118**
Total Funding by Site for Office of Manufacturing & Energy Supply Chains	**0**	**0**	**113,350**

State and Community Energy Programs

State and Community Energy Programs

State and Community Energy Programs
($K)

FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 vs FY 2023 Enacted
$493,000	$493,000	$574,000	+$81,000

Proposed Appropriation Language

For Department of Energy expenses including the purchase, construction, and acquisition of plant and capital equipment, and other expenses necessary for state and community energy 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, $574,000,000, to remain available until expended: Provided, that of such amount, $40,000,000 shall be available until September 30, 2026, for program direction.

Mission

The Office of State and Community Energy Programs (SCEP) partners with state and local organizations to significantly accelerate the deployment of clean energy technologies, catalyze local economic development and create jobs, reduce energy costs, and avoid pollution through place-based strategies involving a wide range of government, community, business, and other stakeholders.

Overview

SCEP invests in energy efficiency and clean energy generation through regional, state, and local partners to reduce energy demand and increase clean energy supply. This is done through the Weatherization Assistance Program (WAP), the State Energy Program (SEP), the Community Energy Programs (CEP), and the Energy Future Grants (EFG). Clean energy benefits all Americans, especially those historically underserved by the energy system and overburdened by pollution.

WAP predominantly provides formula funding to states to weatherize the homes of low-income individuals and families. By increasing the efficiency of homes, WAP allows low-income households to reduce their energy costs. The FY 2025 Budget request $385 million for WAP, including:

- $326 million for Weatherization Assistance to enable states to support a network of over 700 local service provider organizations to implement energy conservation measure in eligible homes. The program supports ~8,500 jobs and is expected to weatherize over 96,000 homes in FY 2025 (IIJA: $700 million, FY2025 Budget: $326 million).
    - $19.5 million for Enhancement and Innovation Grants (E&I) to help improve indoor air quality, advanced technologies, workforce development, and approaches to making manufactured housing more affordable.
    - $6.5 million Grants from Sustainable Energy Resources for Consumers (SERC) provides installation of renewable technologies in low-income housing.
- $49 million The Weatherization Readiness Fund (WRF) provides structural or health and safety repairs to low-income homes prior to weatherization. By avoiding deferrals, the fund ensures those with the greatest need can benefit from energy efficiency.
- $10 million for technical assistance and training through the existing Weatherization Training Center network.

SEP provides funding and technical assistance to states, territories, and the District of Columbia to enhance energy security, advance state-led energy initiatives, and increase energy affordability. The FY 2025 Budget requests $70 million for SEP, including:

- $64 million for the award of formula grants to support state energy projects. A key feature of these grants is that individual states determine the activities and projects they wish to undertake.
- $6 million in technical assistance tools, resources, and voluntary initiatives to assist state energy offices implement their clean energy plans and projects.

CEP supports communities through technical and financial assistance to increase the deployment of clean energy technologies through the design and implementation of local policies. The FY 2025 Budget requests $44 million for CEP, specifically:

- $36 million Local Government Energy Program to provide targeted competitive awards, on-site capacity, peer exchanges, and technical assistance to support the development and deployment of the transformative clean energy deployment programs of qualifying local governments, with a focus on disadvantaged communities and small (under 100,000 residents)-to-medium (under 250,000 residents)-sized jurisdictions.
- $8 million to fund the management and coordination of the Energy Communities Interagency Working Group (IWG)[1] which coordinates efforts across the Federal government to deliver resources to and build community clean energy and economic revitalization capacity in coal and power plant communities through the Energy Communities IWG.

EFG incubates novel approaches to clean energy technology deployment through partnerships at the community level focused on elevating impoverished, disenfranchised, marginalized, and/or overburdened communities. The FY 2025 Budget requests $35 million for EFG, specifically:

- $35 million to support the competitive selection of local government-led teams inclusive of cities, states and/or tribes in partnership with community organizations, utilities, and academia that to plan and design community-scale energy solutions addressing extreme heat impacts on low-income and disadvantaged communities.

FY 2023 Key Accomplishments

- Completed more than 26,0002 home energy retrofits resulting in an estimated savings of approximately $9.6 million annually.
- Implemented the first round of Sustainable Energy Resources for Consumers ($17.4 million) and Enhancement and Innovation ($37.9 million) grants.
- Implemented the second year of the expanded Weatherization Readiness Fund which allows for structural, or health and safety repairs prior to the retrofit activities.
- Developed memorandum of understanding (MoU) with the Department of Health and Human Services (HHS), Department of Housing and Urban Development (HUD) and Department of Agriculture (USDA) to coordinate and streamline services provided to low-income households with the aim of improving low-income housing, reducing home deferrals, and deepen clean energy retrofits.
- Continued improvements in workforce training, quality standards, and worker certification to improve the quality of the work performed.
- Completed a pilot Technology Action Group (TAG), which facilitated the participation of nine State Energy Offices in technical assistance and peer exchange activities focusing on increasing community energy resilience.
- Enrolled 17 partners, representing almost 30 percent of state correctional facilities, working with DOE towards achieving 20 percent portfolio-wide energy savings under the Sustainable Correctional Infrastructure Partnership (SCIP) Accelerator.
- Engaged 300 partners with goal to achieve 5 percent short-term and 25 percent long-term facility-wide energy savings through the Sustainable Wastewater Infrastructure of the Future (SWIFt) Accelerator.
- Initiated $27 million in competitive support for local government-led teams to advance community priorities for equitable clean energy policy innovation in the power, building, and/or transportation sectors.
- Awarded and actively managed $12 million in competitive awards focused on clean energy solutions to local governments.

[1] The Energy Communities IWG was previously funded through the Fossil Energy and Carbon Management account.

[2] Excludes IIJA funding.

State and Community Energy Programs
Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted	
				$	%
State and Community Energy Programs					
Weatherization Assistance Program	366,000	366,000	385,000	+19,000	+5%
State Energy Program	66,000	66,000	70,000	+4,000	+6%
Community Energy Programs	12,000	12,000	44,000	+32,000	+267%
Energy Future Grants	27,000	27,000	35,000	+8,000	+30%
Program Direction	22,000	22,000	40,000	+18,000	+82%
Total, State and Community Energy Programs	**493,000**	**493,000**	**574,000**	**+81,000**	**+16%**
Federal FTEs	**75**	**75**	**98**	**+23**	

Explanation of Major Changes ($K)	**FY 2025 vs FY 2023**
Weatherization Assistance Program: The increase for the Weatherization Readiness Fund will support structural health and safety repairs to over 4,500 dwellings. Then weatherization services that have been delayed or deferred will be provided. No change in funding is requested for Training and Technical Assistance and Weatherization formula grants.	**+19,000**
State Energy Program: The increase of $4 million will expand provision of “best practice" tools, “lead-by-example” methods, peer-to-peer forums, and strategic partnership initiatives.	**+4,000**
Community Energy Programs: The $24 million funding increase for the Local Government Energy Program will expand program capacity through competitive awards and technical assistance to support a variety of local clean energy solutions and innovations. The $8 million for Energy Communities IWG will continue support for energy communities in transition.	**+32,000**
Energy Future Grants: Increases the number of communities served from 25 to 40. The increase in funding reflects the priority to support earlier stage assistance to communities working in partnership with community organizations, utilities, and academia to create lasting energy solutions that benefit disadvantaged communities.	**+$8,000**
Program Direction: Supports increase of 23 FTEs, training and travel, support services and information technology expenses to support increased program activities and operations.	**+18,000**
Total, State and Community Energy Programs	**+81,000**

Future Years Funding

($K)

	FY 2025 Request	FY 2026	FY 2027	FY 2028	FY 2029
State and Community Energy Programs	574,000	600,700	614,500	628,700	643,100

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. The FYEP above shows outyear funding projected at the inflation rate of 2.3% for FY 2026 - FY 2029. Actual future budget request levels will be determined as part of the annual budget process.

SCEP priorities through partnership with state and local organizations, include the following:

- Provide targeted financial assistance to advance clean energy infrastructure and deployment of clean energy plans, practices, and technologies;
- Provide technical assistance to facilitate energy efficiency and renewable energy technology delivery through "best practice" tools, “lead-by-example” methods, peer-to-peer forums, and strategic partnership initiatives; and
- Implement the Justice40 Initiative, which established the goal that 40 percent of overall benefits of certain Federal investments flow to underserved and overburdened communities, including those investments in climate change, clean energy, and energy efficiency.

Infrastructure Investment and Jobs Act (IIJA)

The Office of Energy Efficiency and Renewable Energy (EERE) was appropriated funds through the Infrastructure Investment and Jobs Act (IIJA) (P.L. 117-58). Not all IIJA activities are managed by the organization to which funds were appropriated. Activities managed by SCEP are itemized below.

($K)

Appropriated Funding Organization	FY 2022 IIJA Funding	FY 2023 IIJA Funding	FY 2024 IIJA Funding	FY 2025 IIJA Funding	Managing Organization
EERE					
Weatherization Assistance Program	3,500,000	0	0	0	SCEP
Buildings					
Building, Training, and Assessment Centers	10,000	0	0	0	SCEP
Career Skills Training	10,000	0	0	0	SCEP
Energy Efficiency Revolving Loan Fund Capitalization Grants	250,000	0	0	0	SCEP
Energy Auditor Training Program	40,000	0	0	0	SCEP
Energy Efficiency & Renewable Energy Improvements at Public School Facilities	100,000	100,000	100,000	100,000	SCEP
Energy Efficiency Materials Pilot Program Grants	50,000	0	0	0	SCEP
Energy Efficiency					
Energy Efficiency and Conservation Block Grant Program	550,000	0	0	0	SCEP
State Energy Program	500,000	0	0	0	SCEP
Total, Appropriation Energy Programs	**5,010,000**	**100,000**	**100,000**	**100,000**	

Inflation Reduction Act (IRA) Investments

The Office of Energy Efficiency and Renewable Energy (EERE) was appropriated funds through the Inflation Reduction Act of 2022 (IRA) (P.L. 117-169) to support critical facilities and infrastructure activities. Not all IRA activities are managed by the organization to which funds were appropriated. The activities that SCEP will manage are identified below.

($K)

Appropriated Funding Organization	FY 2022 IRA Funding	Managing Organization
EERE		
Home Energy Performance-Based, Whole-House Rebates – § 50121	4,300,000	SCEP
High-Efficiency Electric Home Rebate Program, State Energy Offices – § 50122(a)(1)(A)	4,275,000	SCEP
High-Efficiency Electric Home Rebate Program, Indian Tribes Grants – § 50122 (a)(1)(B)	225,000	SCEP
State-Based Home Efficiency Contractor Training Grants – § 50123	200,000	SCEP
Assistance for Latest Building Energy Code Adoption – § 50131(a)(1)	330,000	SCEP
Assistance for Zero Energy Code Adoption – § 50131(a)(2)	670,000	SCEP
Total, Appropriation	**10,000,000**	

- **Home Energy Performance-Based, Whole House Rebates**: Grants to State energy offices for the implementation of a rebate program that encourages whole-house energy saving home energy retrofits by homeowners and other eligible entities.
- **High-Efficiency Electric Home Rebate Program, State Energy Office Grants:** Grants made to State energy offices to establish a high-efficiency electric home rebate program under which rebates shall be provided to eligible entities for qualified electrification projects.
- **High-Efficiency Electric Home Rebate Program, Indian Tribes Grants: Grants** made to Indian Tribes to establish a high-efficiency electric home rebate program under which rebates shall be provided to eligible entities for qualified electrification projects.
- **State-Based Home Efficiency Contractor Training Grants:** Financial assistance to States to develop and implement training and education to contractors involved in the installation of home energy efficiency and electrification improvements.
- **Assistance for Latest Building Energy Code Adoption:** Funds to States and units of local government to upgrade their residential and commercial building energy codes.
- **Assistance for Zero Energy Code Adoption:** Funds to States and units of local government to adopt “zero” building energy codes for residential and commercial buildings.

State and Community Energy Programs
Weatherization Assistance Program

Description

The Weatherization Assistance Program (WAP) is a foundational building block of DOE's vision for an equitable clean energy future for all, delivering on its national objective to increase the energy efficiency of dwellings owned or occupied by low-income persons, reduce their total residential energy expenditures, and improve their health and safety. WAP activities reduce the cost of residential household energy bills for low-income individuals. Energy bills are a disproportionately higher share of household income for low-income individuals relative to higher income households. Up to 40 million low-income households in the U.S. are eligible for low-income housing energy assistance.[1] Since 1976, WAP has performed over 7 million upgrades to low-income households, including 1 million retrofits supported through American Recovery and Reinvestment Act (ARRA) of 2009[2] funding. A total of $385 million is requested for DOE's WAP in FY 2025, including $49 million for the Weatherization Readiness Fund.

Weatherization Assistance Program ($326,000,000): The primary focus of funding in the FY 2025 Budget Request is to provide formula grants to 50 states, the District of Columbia, five U.S. Territories and one Native American Tribe to support nationwide delivery of services - resulting in up to 40,000 homes receiving weatherization services and allowing eligible low-income families to use retrofit enabled energy cost savings to purchase other basic needs such as food, medicine, and other essentials. The formula grant allocations provided to states include funds for state-managed training and technical assistance (State T&TA) activities, at approximately 17 percent of the WAP formula funding. Per 42 U.S.C. 6866, the total of DOE T&TA and State T&TA cannot exceed 20 percent of total WAP funding.

The WAP formula grants support the largest, and one of the most technically advanced, networks of residential energy retrofit providers in the country, providing a foundation for related services funded by other Federal and non-Federal sources. Funds are allocated on a statutory formula basis and awarded to a single agency (referred to collectively as Grantees) within each recipient's jurisdiction that manages the deployment of services to increase the energy efficiency of homes occupied by families with household incomes of 200 percent or less of the Office of Management and Budget's (OMB) Annual Federal Poverty Guidelines.[3] These agencies, in turn, contract with approximately 700 local service provider organizations, including Community Action Agencies and local governmental and nonprofit agencies, supporting approximately 8,500 jobs, and delivering weatherization services to low-income families in every geographic area of the country.

Weatherization service providers choose a comprehensive package of efficiency and energy improvement measures for each home based on a completed energy audit. Typical energy conservation measures include installing insulation, sealing ducts, repairing or replacing heating and cooling systems, reducing air infiltration, improving hot water production and use, and reducing electric base load consumption. The consistent delivery of quality services is addressed through active Federal, state, and regional training and technical assistance programs. The program leverages both Federal and non-Federal funding sources[4] to expand the array of services available for each home or to increase the number of homes weatherized. In FY 2025, the program will emphasize reduced weatherization assistance deferrals, enhanced workforce

[1] U.S. Department of Energy, Weatherization Assistance Program Briefing Book (Draft Copy), December 2019.
[2] http://www.gpo.gov/fdsys/pkg/PLAW-111publ5/pdf/PLAW-111publ5.pdf .
[3]

200 Percent or less of Federal Government's Poverty Guidelines for the 48 contiguous states and the District of Columbia			
Calendar Year	First Person	Each Additional Person	Four-Person Family
2023	$29,160	$10,280	$60,000
2022	$27,180	$9,440	$55,500
2021	$25,760	$9,080	$53,000

[4] National Association of State Community Services Programs, Weatherization Assistance Program Annual Funding Report, 2021.

development, heightened consideration on equity and justice, expanding appliance electrification, and providing relief from high energy burden for low-income families in the disadvantaged communities across the country.

The State T&TA enables grantees to develop, train, and continually improve the skills of the local workforce performing weatherization retrofits. State T&TA may be used for technical and non-technical training for grantee staff and their subgrantees, including training contractors that work within their DOE-funded weatherization program. Activities must be designed to maximize energy savings, minimize production costs, improve program management and crew/contractor "quality of work," including minimizing the potential for waste, fraud, and abuse. Per program guidance, grantees' training plans include a provision to provide comprehensive training aligned to the job-task analysis of their profession (Quality Control Inspector, Energy Auditor, Crew Leader, and Retrofit Installer) on a regular basis for all field workers.

DOE will also implement a fifth year of Enhancement and Innovation (E&I) competitive awards, as provided for in the recent reauthorization of WAP (P.L. 116-260). In the FY 2025 Request, DOE will allocate up to a maximum of $19.5 million of WAP funds to make competitive awards to proposals that create model strategies and approaches targeted at deep energy efficiency retrofits by leveraging multiple funding sources and developing broad community partnerships. DOE will continue to focus these E&I funds on the statutory purposes to achieve comprehensive services and installation of energy conservation measures.

In FY 2025, DOE intends to use up to 2 percent of WAP funding (approximately $6.5 million) for Sustainable Energy Resources for Consumers (SERC) awards, as allowed per Title IV of the Energy Independence and Security Act of 2007.[1] As listed in EISA, Section 411(b), the purpose of the SERC Grants are to: (1) expand WAP for residential buildings to include materials, benefits, and renewable and domestic energy technologies not covered by the Program; and (2) work with existing partners to expand and enhance the Program. SERC grants focus on energy technologies that provide real opportunities to avail low-income communities greater access to renewable energy resources.

Training and Technical Assistance ($10,000,000): WAP's Headquarters (HQ) T&TA will continue a nationally focused portfolio of research, modeling, work performance guidelines and education, and hands-on support services that sustain the entire WAP network and its workforce. These activities are designed and developed annually to improve program effectiveness, service delivery, resource accountability, and operational efficiency. Specifically, these funds support the development and implementation of a variety of tools needed to implement work quality, training accreditation, and workforce development across the 57 recipient agencies DOE partners with to deploy low-income weatherization services. Some examples of the activities to be undertaken in FY 2025 include:

- Maintenance and upgrades to the Standard Work Specifications (SWS) online tool https://sws.nrel.gov/ . This tool houses the SWS for home energy upgrades, which serves as the backbone of the WAP's work quality initiatives. The enhanced functionality of the tool assists grantees to develop work quality standards as well as illustrated field guides, work orders and checklists. The SWS requires regular review and updating to ensure it is current with national codes, technology, and best practice for residential upgrades. The SWS online tool requires ongoing maintenance to respond to users' needs and ensure consistent functionality.
- Maintenance of the Energy Auditor (EA) and Quality Control Inspector (QCI) home energy professional (HEP) certifications and their underlying resources, such as the job task analyses and certification schemes. The HEP QCI certification is required of all grantees and subgrantees who perform program monitoring and inspection duties and must be maintained to retain their American National Standards Institute (ANSI) accreditation.
- Development of training resources to respond to continually evolving needs in the field, including an enhanced curriculum, managing multiple funding streams, and updating of the ASHRAE 62.2 curriculum, and updating several modules related to weatherizing multi-family buildings.
- Enhancements to the Weatherization Assistant Program's suite of energy auditing tools for single family buildings, manufactured homes, and multi-family buildings, including user requested changes and modeling of non-energy benefits. For example, a non-energy benefit, such as sewer and water costs savings, can be readily attributed to the installation of showerheads and aerators, which are measures that WAP may install.

[1] Energy Independence and Security Act of 2007, Section 411(b). Pub. L. 110–140, title IV, §411(b), Dec. 19, 2007, 121 Stat. 1600. https://www.govinfo.gov/content/pkg/PLAW-110publ140/pdf/PLAW-110publ140.pdf

- Evaluation of service delivery models to ensure equitable distribution of benefits. By design, WAP serves households disproportionately impacted by energy costs and inefficient homes. Based on a June 2020 report by Oak Ridge National Laboratory (ORNL), the energy burden as a percent of income for the WAP-eligible population was estimated at 13.9 percent compared to 3.0 percent for higher-income U. S. households.1 This report will be updated in FY 2025 as new data is available and will also assist DOE in identifying regions where high energy burden correlates with other factors, such as household demographics or environmental justice communities. Service delivery will be studied with the goal of identifying and sharing best practices and strategies among the weatherization provider networks. Service providers and stakeholders will be engaged throughout this work, and the scope includes:
    - Implementation strategies and technical assistance tools for Grantees based upon study results regarding opportunities for more equitable distribution of resources, which include allocation formulas.
    - Following guidance from the White House and in alignment with the Justice40 initiative, DOE will continue reviewing data from all service area types (urban, rural, etc.) to ensure at least 40 percent of benefits flow to disadvantaged communities. Input from the weatherization network and other stakeholders will be critical in identifying existing barriers to service, and the T&TA resources that DOE may develop to assist in overcoming identified barriers.
    - Explore and develop methodologies to estimate non-energy impact savings and evaluate the feasibility of accounting for them in determining inclusion of energy conservation measures in WAP retrofits. On average, weatherization reduces annual household energy costs by $372, and results in an average first-year savings of 29.3 Metric Million British Thermal Units (MMBtu) per site-built home.[2] It is generally acknowledged that WAP also positively impacts household (e.g., available income, improved comfort) and societal issues (e.g., water savings, avoided emissions, economic development), but that these non-energy impacts are more difficult to quantify. Developing savings estimates is critical in calculating and maximizing the investments and benefits in disadvantaged communities.[3] DOE will continue its work to develop savings estimates for non-energy impacts to provide a more holistic measure of the community benefits realized by the program and integrate non-energy impacts in the cost-effectiveness test for weatherization services.
- Continuity of DOE coordination with partner Federal agencies to ensure client eligibility is streamlined with Health and Human Services' Low Income Home Energy Assistance Program and the Housing and Urban Development's Lead Hazard Control and Healthy Homes Program and the U.S. Department of Agriculture's home repair programs. The scope of work will be expanded to develop tools and technical assistance resources for WAP Grantees, including a framework for blending multiple funding sources in low-income households and advancing environmental justice and energy equity in local communities throughout the country.

Weatherization Readiness Fund ($49,000,000): The FY 2025 Budget Request will expand a home repair fund to address structural issues, health and safety issues and reduce the frequency of deferred homes that are not weatherization-ready when WAP work crews enter the home to perform retrofit services. Deferral of service occurs when the condition of the home prohibits and/or limits the ability of the service provider to deliver weatherization services. Deferrals reduce implementation efficiency but also mean work must be postponed indefinitely until the structural deficiency or health and safety hazard can be resolved. Many low-income households are unable to afford the necessary repairs, particularly in homes of underserved and disadvantaged communities. These funds would be distributed using the existing State T&TA allocation process for each WAP Grantee. This would address the goals of environmental justice and equity and expand the number of homes that can be weatherized. According to a 2020 American Public Health Association report, racial inequality in housing causes Native American, Latino and Black households to have higher rates of repair needs and higher cost burdens.[4]

[1] ORNL, Background Data and Statistics on Low-Income Energy Use and Burden for the WAP. For the purposes of this analysis, WAP-eligible households are identified as those living at or below 200 percent of U.S. federal poverty guidelines based on household income and size. The term energy burden is defined herein as the percentage of household income spent on home energy expenditures (e.g., heating and cooling, appliances, lighting).

[2] ORNL/TM-2014/338, Weatherization Works: Summary of Findings from the Retrospective Evaluation of the U.S. Department of Energy's Weatherization Assistance Program, September 2014, energy savings number expressed as 2021 dollars.

[3] OMB M-21-28. https://www.whitehouse.gov/wp-content/uploads/2021/07/M-21-28.pdf

[4] American Public Health Association, Creating the Healthiest Nation: Health and Housing Equity. May 2020.

The Weatherization Readiness Fund provides a path for real-time, onsite remedies for these structural repair issues. The establishment of these funds separately from the formula funds and State T&TA includes exclusion from WAP's Savings-to-Investment Ratio (SIR) of 1.0 or greater. Specifying this amount of funding as excluded from SIR will allow WAP to repair homes that otherwise would be deferred.

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Weatherization $366,000,000	**$385,000,000**	**+$19,000,000**
Weatherization Assistance $326,000,000	$326,000,000	$0
Financial Assistance: • Awarded and actively managed 57 weatherization formula grantees, which resulted in 26,000 low-income home energy retrofits. • Managed SERC awards process for installation of renewable and new technologies in low-income dwellings. • Competitively selected and managed WAP Innovation and Enhancement projects for deep energy efficiency retrofits by leveraging multiple funding sources and developing broad community partnerships.	Financial Assistance: • Award and actively manage 57 weatherization formula grantees, which will support approximately 40,000 or more low-income residential energy retrofits. • Manage SERC awards process for installation of renewable and new technologies in low-income dwellings. • Competitively select and manage WAP Enhancement and Innovation projects for deep energy efficiency retrofits by leveraging multiple funding sources and developing broad community partnerships.	• No change in funding.
Training and Technical Assistance $10,000,000	$10,000,000	$0
• Continued improvements in workforce training, quality standards, and worker certification to improve the quality of the work performed. • Implemented equitable statewide distribution review of DOE WAP funds to understand the energy burden on a by-county basis and development of best practices and tools for Grantee use to assist state-level staff in making allocation decisions. • Developed targeted resources for WAP Grantees to further quality installation of energy conservation measures, develop workforce, and coordination with other funding streams through existing interagency working group.	• Continue improvements in workforce training, quality standards, and worker certification to improve the quality of the work performed. • Undertake additional evaluations to ensure 40 percent of the benefits accrue to disadvantaged communities, workforce models and recruitment efforts on behalf of WAP. • Continue equitable statewide distribution review of DOE WAP funds to understand the energy burden on a by-county basis and development of best practices and tools for Grantee use to assist state-level staff in making allocation decisions.	• No change in funding.

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
	• Continue exploration and development of methodologies to estimate non-energy impact savings and evaluate the feasibility of including them in determining inclusion of energy conservation measures in WAP retrofits. • Coordinate with Federal partner agencies, including HHS, HUD, and USDA, leveraging and braiding resources and Technical Assistance.	
Weatherization Readiness Fund $30,000,000	$49,000,000	+$19,000,000
• The second year of the funding for the Weatherization Readiness Fund addressed structural, or health and safety repairs needed to low-income homes that are not provided for under current WAP funding allocations.	• The Weatherization Readiness Fund addresses structural, or health and safety repairs needed to low-income homes that are not provided for under current WAP funding allocations.	• The increase for the Weatherization Readiness Fund will allow over 4,500 dwellings to receive weatherization services that would otherwise be deferred.

Description

The State Energy Program (SEP) strategically engages the leadership of states in deploying clean energy technologies across the United States. SEP funding transforms the energy economy state by state, establishing and implementing clean energy policies, plans, and programs to reduce energy costs, enhance economic competitiveness, improve emergency planning, and improve the environment. States have purview over many of the policy and program levers that can catalyze greater investment in clean energy and help the country realize the suite of economic and environmental benefits associated with clean energy. SEP provides states with capacity building resources, technical assistance, and fosters networks for sharing best practices to facilitate the adoption of plans, policies, and programs appropriate to state and regional circumstances.

FY 2025 funding will provide foundational formula-based grants to 50 states, Washington, D.C., and 5 U.S. territories to advance their energy priorities through the design and implementation of energy efficiency and renewable energy programs. These grants support state energy offices in their development and implementation of energy programs that deploy portfolios of clean energy technologies addressing their specific goals and needs. A broad range of activities encompass the state energy offices' formula work. These activities include: energy planning; building energy code adoption; implementation and compliance in continued coordination with EERE's Building Technologies Office; financing mechanisms for institutional retrofit programs; loan programs; energy savings performance contracting to retrofit government buildings and facilities; comprehensive residential energy programs for homeowners; transportation programs that accelerate the use of alternative fuels, including electric vehicles and infrastructure; and programs that remove barriers and support supply side and distributed renewable energy.

SEP will also provide technical assistance to state energy offices and related stakeholders. SEP technical assistance tools, resources, and voluntary initiatives support state clean energy leadership, including developing plans and programs, establishing financing, implementing data management, and empowering organizations. Technical assistance is an interdependent component to the financial assistance activities—making technology deployment more efficient and effective, and enhancing the likelihood of program success. Technical support resources are integral to:

- Developing tools and solutions that address pervasive barriers;
- Creating national energy initiatives and strategic partnerships focused on deployment and sharing best practices;
- Convening peer exchanges to showcase replicable models;
- Providing technical data and information from leading experts;
- Improving web-based reporting and monitoring systems; and
- Adopting metrics that support quantitative and qualitative evaluation of state planning activities.

SEP is supporting states' workforce development efforts by conducting research, providing information, and facilitating peer exchange. SEP has worked with DOE's National Renewable Energy Laboratory (NREL) to compile state-by-state forecasts for clean energy jobs in the next five to ten years and is now expanding that analysis to U.S. territories. NREL is also developing a State Clean Energy Workforce Development Program Evaluation Framework that states will be able to use for their programs. SEP's efforts are intended to help states fill existing critical clean energy jobs that will support emissions reductions and environmental justice.

In addition to the work outlined above, SEP supports technical assistance initiatives that have made significant progress toward clean energy leadership goals. These activities produced significant results in FY 2023 and 2024 and will continue in FY 2025. Examples include:

- The Energy Savings Performance Contracting (ESPC) Campaign is a voluntary initiative to expand and enhance the use of ESPC across the municipal and state governments, universities and colleges, K-12 schools, and hospitals (MUSH) market with a goal to achieve $1 billion in measured and verified savings.
- The Better Climate Challenge (BCC) represents more than 25 public sector partners working with DOE to reduce portfolio-wide GHG emissions by at least 50% within 10 years.
- The Low-income Energy Affordability Data (LEAD) Tool is a SCEP-led collaboration with NREL that helps states, communities, and other stakeholders improve their understanding of housing and energy characteristics for low-

and moderate-income households. LEAD is the only free, publicly available analytical tool for analyzing the correlative and causal factors affecting household energy burden.

- The State and Local Planning for Energy (SLOPE) Platform is a SCEP-led collaboration with eight EERE technology offices and the National Renewable Energy Laboratory (NREL) to integrate and deliver data on energy efficiency, renewable energy, and sustainable transportation into an easy-to-access online platform to enable data-driven state and local energy planning.

SEP partners with the National Association of State Energy Officials (NASEO) to enhance collaboration with states. NASEO provides direct technical assistance to all 56 State and Territory Energy Offices (SEOs) in support of state energy efficiency and renewable energy programs. NASEO is the only non-profit organization for all 56 governor-designated SEOs in the states, territories, and District of Columbia. SCEP funds NASEO through a multi-year cooperative agreement that includes in-person workshops, peer exchanges, written deliverables, and state-focused outreach to support the delivery of energy efficiency and renewable energy programs in states and ensure coordination between DOE and the SEOs.

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
State Energy Program $66,000,000	**$70,000,000**	**+$4,000,000**
• Advanced deployment of effective energy efficiency and renewable energy policies and technologies by state governments. • Awarded and actively managed 56 formula grants supporting ($60,000,000) in state energy projects. • Developed and delivered a portfolio of strategic technical assistance offerings to state energy offices and in sectors that focus on areas of joint state and local interest and collaboration.	• Continue to advance deployment of effective energy efficiency and clean energy policies and technologies by state governments. • Award and actively manage 56 formula grants supporting ($64,000,000) in state energy projects.	• The increase of $4 million will expand provision of “best practice" tools, “lead-by- example” methods, peer-to-peer forums, and strategic partnership initiatives.

Description

The Community Energy Programs (CEP) fund activities that support the acceleration of the clean energy economy at the local level. CEP is supported by funds from annual appropriations and the Infrastructure Investment and Jobs Act (IIJA) (P.L. 117-58) to assist local and tribal governments, public schools, nonprofit organizations, workforce development groups, and other community-serving entities. Activities range from conducting energy efficiency projects to developing decentralized local energy resources. Emphasis is on prioritizing low- and moderate-income and overburdened communities by removing barriers to participation and providing more financial and technical support to those communities that are most in need of these grants. SCEP manages specific community-oriented energy programs funded under the IIJA and the Inflation Reduction Act of 2022 (P.L. 117-169). These subprograms and funding amounts are identified on pages 5 and 6 of the SCEP budget section. In addition to IIJA and IRA programs, CEP includes:

Local Government Energy Program ($36,000,000): SCEP's Local Government Energy Program is a place-based initiative that empowers American communities with high impact, clean energy solutions tailored to their needs. The Program provides financial awards, on-site capacity, and technical assistance to support the deployment of transformative clean energy projects that spark additional investments and deliver community benefits. Emphasis is placed on disadvantaged communities and energy communities, or small-to-medium-sized jurisdictions that are committed to, but in the earlier phases of progress toward clean energy goals. SCEP also uses a portion of the funds for technical assistance targeted to scaling best practices across local governments.

Energy Communities IWG ($8,000,000): The Energy Communities IWG (formerly known as) the Interagency Working Group on Coal and Power Plant Communities and Economic Revitalization), is led by the Executive Office of the President (EOP), managed by DOE, and implemented through a partnership of 11 federal agencies. The funding request will support technical assistance and capacity building efforts to deliver Federal investments that can create good-paying jobs, spur economic development, remediate environmental damage, and support energy workers in coal, oil, gas, and power plant communities impacted by the energy transition. Funding will support energy communities by:

- Maintaining a readily accessible clearinghouse of energy community-relevant funding opportunities from the Energy Communities IWG's agency partners. Providing stakeholders with a call-center like navigator resource that can help communities quickly identify the right funding opportunity for their needs and connect them with an agency point of contact to assist them.
- Gathering data and conducting analyses that guide effective Federal policy design, program implementation, and stakeholder outreach.
- Conducting stakeholder events with prioritized energy communities to discuss their needs resulting from the energy transition and connect them with Federal resources.
- Creating additional Rapid Response Teams to provide on-the-ground technical assistance and coordination of Federal funding opportunities to energy communities lacking capacity and impacted by significant transition of fossil energy assets.

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Community Energy Programs $12,000,000	**$44,000,000**	**+$32,000,000**
Local Government Energy Program $12,000,000	$36,000,000	+$24,000,000
• Awarded and actively managed $12 million in competitive awards focused on clean energy solutions to 12 to 20 local governments. • Launched the Local Government Energy Program initiative. Deliver replicable, place-based competitive awards and technical assistance to support localized decarbonization initiatives that create good paying clean energy jobs in energy communities and disadvantaged communities and small-to-medium-sized jurisdictions.	• Award and actively manage additional competitive awards focused on clean energy solutions to approximately 30 local governments that support localized decarbonization initiatives that create good paying clean energy jobs in energy communities and disadvantaged communities and small-to-medium-sized jurisdictions	• The number of potential communities served increases from 12 to 30 through competitive awards and technical assistance increase local clean energy solutions and innovations.
• Fostered environmental justice and clean energy workforce development outcomes in local energy program planning.	• Continue emphasis on environmental justice and clean energy workforce development in local energy program planning.	• Expand environmental justice and workforce development outcomes in local energy planning.
Energy Communities IWG $0	$8,000,000	+$8,000,000
• No funding requested in SCEP in FY 23 Enacted. The Energy Communities IWG was funded at $3 million in FY 2023 through the Fossil Energy and Carbon Management account.	• Continue technical assistance to support identification of, and application for, financial assistance from agencies across the Federal government to support economic revitalization of coal and power plant communities. • Support targeted investments across the Federal government to help affected communities impacted by the climate crisis and shift to a clean energy economy.	• Conduct performance metric analyses and reporting. • Provide additional technical assistance to energy communities, particularly those without an IWG Rapid Response Team. • Grow and manage an ever-larger network of Rapid Response Teams. • Use AmeriCorps volunteers to assist the Rapid Response Teams.

State and Community Energy Programs
Energy Future Grants

Description

The Energy Future Grants (EFG) initiative will incentivize state, local, territory and tribal governments in partnership with community organizations, utilities, and academia to incubate novel approaches to clean energy technology deployment, prioritizing investments that meet energy needs at the local level and are inclusive in improving the economic well-being of impoverished and disenfranchised communities, and/or communities that have been marginalized or overburdened. Clean energy technology deployment is essential to decarbonizing the U.S. economy. DOE will award state, local, territorial, and tribal awards allocated on a competitive basis that are designed to encourage state and local-level early action, leadership, and partnership with the U.S. Government in a nationwide push to meet the President's clean energy goals.

In FY 2025, SCEP will continue the Energy Future Grants (EFG) initiative, with a particular focus on strengthening community resiliency by addressing the impacts of extreme heat on low-income and disadvantaged communities. SCEP will undertake the FY 2025 EFG in coordination with DOE's Office of Clean Energy Demonstrations (OCED) to deliver solutions at greater scale and impact. SCEP will work with OCED in a joint effort to plan, design, and demonstrate community-scale energy solutions addressing extreme heat impacts on low-income and disadvantaged communities. The $35 million requested for EFG will be used for community engagement, planning, and design phases across a suite of projects. OCED would then utilize the $70 million requested in OCED's budget request for the implementation and demonstration of these community solutions. This program model will build upon best practices learned in previous EFG iterations to deliver more targeted program outcomes. An important program priority is to secure clean energy benefits for all Americans, especially those historically underserved by the energy system and overburdened by pollution. This is why clean energy policy proposals that prioritize benefits for disadvantaged communities will receive preference in the selection of awards. EFG complements the Local Government Energy Program by focusing on communities that are in the later phases of progress toward transformative energy technology and/or meeting a clean energy or decarbonization target or set of goals. Rather than focus on capacity building, the program will enable those communities to adopt the policies and transformative energy technologies needed to achieve their clean energy goals.

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Energy Future Grants $27,000,000	**$35,000,000**	**+$8,000,000**
• Provided $27 million in competitive support for local government-led teams, inclusive of cities, states and/or tribes that advance community priorities for equitable clean energy policy innovation in the power, building, and/or transportation sectors. • Developed and delivered technical assistance offerings to address technical and capacity needs to scale policies beyond competitive awardees into new jurisdictions and geographies.	• Provide $35 million in funding to address extreme heat impacts on low-income and disadvantaged communities through a competitive solicitation. • Continue to administer competitive grants issued from FY 2024 FOA.	• Increases support for local government clean energy solutions and innovations that benefit disadvantaged communities. • Increases the number of communities served from 25 to 40.

State and Community Energy Programs
Program Direction

Overview

Program Direction provides for the costs associated with the Federal workforce, including salaries, benefits, travel, training, building occupancy, information technology (IT) services, security clearance, and other related expenses. It also provides for the costs associated with contractor services that, under the direction of the Federal workforce, support the office. The FY 2025 Request will:

- Support 98 FTEs to develop, implement, and manage expanding SCEP activities.
- Support the new Office of Community Engagement, which aims to strengthen community engagement efforts.

Salaries and Benefits supports Federal employees who provide executive management, expanded programmatic oversight, and analysis for the effective implementation of the program.

Travel and Training includes transportation, subsistence, and incidental expenses that allow SCEP to effectively provide the Department's electricity-related 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 management. These efforts include issue-oriented support on science, engineering, environment, and economics that benefit strategic planning; technology and market analysis to improve strategic and annual goals; development of management tools and analyses to improve overall office efficiency; assistance with communications and outreach to enhance SCEP's external communication and responsiveness to public needs; development of program-specific information tools that consolidate corporate knowledge, performance tracking and inventory data, improve accessibility to this information, and facilitate its use by the entire staff.

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. The FY 2025 request will also continue to include funding for NEPA related activities.

Office of Community Engagement (OCE) The goal of OCE is to partner with state and local organizations to rapidly accelerate the deployment of clean energy technologies and practices. This will achieve through strategies that involves a comprehensive range of government, community, and business stakeholders to promote local economic development and the creation of high-quality jobs. OCE is managed and staffed by SCEP, which will effectively facilitate communication and engagement with communities regarding their clean energy opportunities. It will also provide access to resources throughout DOE and other federal agencies. It is envisioned to become the hub point for the Department's work at the community level. OCE costs are estimated at $10 million and supports 10 FTEs. These costs are integrated into the Program Direction activities table below.

Program Direction

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Program Direction $22,000,000	**$40,000,000**	**+$18,000,000**
Salaries and Benefits $14,500,00	$22,000,000	+$7,500,000
• Requested 75 FTEs to provide executive management, programmatic oversight, and analysis for the effective implementation of the program. Funding also provided support for S3 operations.	• The Request supports approximately 98 FTEs that provide executive management, expanded programmatic oversight, and analysis for the effective implementation of the program. Funding also provides support for S3 operations.	• The increase provides funding the anticipated pay raise and accounts for 23 additional FTEs, including 10 FTEs for the Office of Community Engagement.
Travel and Training $525,000	$2,000,000	+$1,475,000
• Travel included transportation, subsistence, and incidental expenses to effectively facilitate its mission.	• Travel includes transportation, subsistence, and incidental expenses to effectively facilitate its mission. Although SCEP is increasing its use of remote monitoring methods, such as, desktop monitoring, there remains a need to expand site specific monitoring of grantees for optimal program effectiveness.	• The increase in travel funding reflects SCEP's anticipated travel requirements at the staffing and programmatic activities, which includes increased on-site monitoring of grantees.
Support Services $2,300,000	$7,400,000	+$5,100,000
• Support Services included contractor support directed by the Federal staff to perform administrative tasks and provide analysis to management. Support Services also included support for post-doctoral fellows.	• Support Services includes contractor support directed by the Federal staff to perform administrative tasks and provide analysis to management. Support Services may include support for post-doctoral fellows. Also includes operation and maintenance costs associated with SCEP's IT modernization project.	• The increase provides funding for contract support to execute SCEP priorities, including IT systems development to ensure SCEP can collect and analyze data on its investments. Also included is the anticipated increase in labor rates for support service contracts.
Other Related Expenses $4,675,000	$8,600,000	+$3,925,000
• Other Related Expenses included EITS desktop services and WCF expense, such as rent, supplies, copying, graphics, mail, printing, and telephones. It also included equipment upgrades and replacements, security clearance expenses and other needs	• 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, security clearance expenses and other needs.	• Increase reflects expenses associated with FTE projection of 98. The increase also includes additional funding to ensure that all SCEP staff have the necessary information technology tools to work effectively. Total includes increase for continuing EITS services.

DEPARTMENT OF ENERGY

Funding by Site

Office of State and Community Programs - FY 2025

(Dollars in Thousands)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget
Golden Field Office			
Training and Technical Assistance (SCEP)	0	0	1,700
Local Government Energy Program (SCEP)	0	0	36,000
Energy Future Grants (SCEP)	0	0	35,000
State Energy Program Grants (SCEP)	0	0	1,325
Program Direction - SCEP	0	0	1,000
Weatherization Readiness Fund (SCEP)	0	0	4,000
Total Golden Field Office	**0**	**0**	**79,025**
Lawrence Berkeley National Laboratory			
Training and Technical Assistance (SCEP)	0	0	100
State Energy Program Grants (SCEP)	0	0	600
Total Lawrence Berkeley National Laboratory	**0**	**0**	**700**
National Energy Technology Lab			
IWG (SCEP)	0	0	7,000
Total National Energy Technology Lab	**0**	**0**	**7,000**
National Renewable Energy Laboratory			
Training and Technical Assistance (SCEP)	0	0	4,200
State Energy Program Grants (SCEP)	0	0	1,400
Total National Renewable Energy Laboratory	**0**	**0**	**5,600**
Oak Ridge Institute for Science & Education			
Training and Technical Assistance (SCEP)	0	0	400
State Energy Program Grants (SCEP)	0	0	1,500
Total Oak Ridge Institute for Science & Education	**0**	**0**	**1,900**
Oak Ridge National Laboratory			
Training and Technical Assistance (SCEP)	0	0	1,200
Total Oak Ridge National Laboratory	**0**	**0**	**1,200**
Washington Headquarters			
Training and Technical Assistance (SCEP)	0	0	1,600
State Energy Program Grants (SCEP)	0	0	1,175
Program Direction - SCEP	0	0	39,000
IWG (SCEP)	0	0	1,000
Total Washington Headquarters	**0**	**0**	**42,775**
Grants			
Weatherization Assistance Program (SCEP)	0	0	320,000
State Energy Program Grants (SCEP)	0	0	64,000
Weatherization Readiness Fund (SCEP)	0	0	45,000
Total Grants	**0**	**0**	**429,000**
Undesignated LPI			
Weatherization Assistance Program (SCEP)	0	0	6,000
Training and Technical Assistance (SCEP)	0	0	800
Total Undesignated LPI	**0**	**0**	**6,800**

DEPARTMENT OF ENERGY

Funding by Site

Office of State and Community Programs - FY 2025

(Dollars in Thousands)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget
Total Funding by Site for Office of State and Community Programs	**0**	**0**	**574,000**

Clean Energy Demonstrations

Clean Energy Demonstrations

Office of Clean Energy Demonstrations
($K)

FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 vs FY 2023 Enacted
$89,000	$89,000	$180,000	+$91,000

Proposed Appropriation Language

For Department of Energy expenses, including the purchase, construction, and acquisition of plant and capital equipment and other expenses necessary for clean energy demonstrations 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, $180,000,000 to remain available until expended: Provided, that of such amount, $80,000,000 shall be available until September 30, 2026, for program direction.

Mission

The Office of Clean Energy Demonstrations (OCED) delivers clean energy demonstration projects at scale in partnership with the private sector to accelerate deployment, market adoption, and the equitable transition to a decarbonized energy system.

Overview

OCED invests in demonstration projects that will catalyze private sector capital this decade to achieve commercial liftoff across a range of technology areas and set the Nation on a course to a modernized and advanced 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 will fund first-of-a-kind (FOAK) commercial-scale demonstrations that achieve sustained operations and deploy them at commercially viable scales to lay the foundation for a clean energy economy. Private industry is 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. While OCED will be focused on executing its existing portfolio in FY 2025, OCED will continue to perform market analysis in all technology sectors to assess where federal support of demonstration projects could best facilitate the 2035 and 2050 climate change goals.

OCED IIJA and IRA funding supports demonstration projects in clean hydrogen; industrial demonstrations; carbon management; advanced nuclear reactors; long-duration energy storage; rural or remote areas, and on current and former mine land. OCED is also using FY 2023 annual appropriations to fund distributed energy systems demonstrations. OCED programs and funding are focused predominantly on these demonstration-to-deployment objectives, as differentiated from research and development. The majority of OCED's demonstrations are intended to transition into sustained, long-term operations following the project period of performance, building confidence among investors, financiers, industry, customers, and communities in the value, viability, and overall performance of the solution. Funding decisions are also focused on greenhouse gas emission reductions, job creation, energy and environmental justice, and energy transition communities.

FY 2023 Key Accomplishments

Announced more than $21 billion in funding opportunities to demonstrate clean energy projects that will create new energy markets, reduce carbon emissions, and deliver reliable, affordable, resilient energy to all

- Almost all of OCED's IIJA and IRA provisions are oversubscribed;
- OCED selected 116 projects – 36 through funding opportunity announcements (FOAs) and 80 through prizes;
- Hydrogen: In October 2023, OCED announced selections for seven hydrogen hubs ($7 billion) that are expected to collectively produce three million metric tons of hydrogen annually, reaching nearly a third of the 2030 U.S. production target and lowering emissions from hard-to-decarbonize industrial sectors that represent 30 percent of total U.S. carbon emissions (link);
- Hydrogen: in September 2023, OCED released a Request for Proposals soliciting an independent entity to administer a demand-side initiative to help accelerate commercial liftoff of the clean hydrogen economy (link);

- Industrial Demonstrations: In March 2023, OCED issued a FOA for approximately $6 billion in funding to accelerate decarbonization projects in energy-intensive industries and provide American manufacturers a competitive advantage in the emerging global clean energy economy. Applications were submitted in August 2023 and OCED is expected to announce selections in FY 2024 (link);
- Advanced Reactor Demonstrations: OCED continued work on its two advanced reactor demonstration projects transferred from DOE's Office of Nuclear Energy to OCED during FY 2022. Both projects are focused on making front-end progress on design, engineering, and licensing with the goal of submitting their Construction Permit Applications to the Nuclear Regulatory Commission in 2024. During FY 2023, one of the projects, X-energy, entered a joint development agreement with Dow Chemical to demonstrate the Xe-100 at Dow's Seadrift, Texas site;
- Carbon Capture Demonstrations: In February 2023, OCED issued a FOA for up to $1.7 billion for approximately six projects to demonstrate commercial-scale carbon capture technologies integrated with CO2 transportation and geologic storage infrastructure (link). OCED is expected to make selections in FY 2024. In addition, in May 2023, OCED selected nine integrated Front-End Engineering Design (FEED) Studies for award negotiations to support the development of community-informed integrated carbon capture, transport, and storage (CCS) systems (link). Some awards have been issued in FY 2023;
- Carbon Capture Large-Scale Pilot Projects: In February 2023, OCED issued a funding opportunity for $820 million for up to 10 projects focused on de-risking transformational carbon capture technologies and catalyzing significant follow-on investments for commercial-scale demonstrations on carbon emission sources across the power and industrial sectors. Applications were submitted in July 2023 and selections will be announced in FY 2024 (link);
- Regional Direct Air Capture (DAC): In August 2023, OCED announced up to $1.2 billion to advance the development of two commercial-scale direct air capture facilities in Texas and Louisiana. These projects – the first of this scale in the U.S. – aim to kickstart a nationwide network of large-scale carbon removal sites to address legacy carbon dioxide pollution and complement rapid emissions reduction (link);
- Energy Improvement in Rural or Remote Areas: In March 2023, OCED issued a FOA worth at least $300 million for projects that increase energy affordability and promote climate resilience and $15 million for a prize competition to help rural communities build the capacity needed for clean energy development and deployment. These programs will improve the resilience, reliability, and affordability of energy systems in communities across the country with 10,000 or fewer people. In August 2023, OCED received applications and will make selections in FY 2024 (link);
- Mine Land: In April 2023, OCED issued a FOA for about $450 million in funding for deploying clean energy projects in mining communities across the Nation to help strengthen rural economies, create new, good-paying jobs, and reduce harmful greenhouse gas emissions that jeopardize public health and pollute local ecosystems. Applications were submitted in August 2023 and selections will be announced in FY 2024 (link);
- Long-Duration Energy Storage: In September 2023, OCED selected 15 projects across 17 states and one tribal nation to accelerate the development of long-duration energy storage technologies ($325 million). These demonstration projects will increase community control of local power systems, mitigate risks associated with disruptions to the grid, and help communities develop reliable and affordable energy systems (link);
- In September 2023, OCED issued a FOA for $50 million using FY 2023 annual appropriations focused on flexible operations for distributed and renewable energy systems. See link: https://www.energy.gov/oced/articles/new-funding-opportunity-50m-commercial-scale-distributed-energy-systems-demonstration

Completed first wave of new "Pathways to Commercial Liftoff" initiative

- OCED, in coordination with the Office of Technology Transitions, Loan Programs Office, and applied energy offices in the Office of the Under Secretary for Science and Innovation, completed work on several of DOE's Pathways to Commercial Liftoff reports. These reports provide public and private sector actors with a perspective as to how and when various technologies could reach full-scale commercial adoption – including a common analytical fact base and critical signposts for investment decisions. These products were developed after extensive consultations with private industry and the investment community to help accelerate the commercialization of clean energy technologies and enable the Nation's broader industrial strategy. The reports can be found at: www.energy.gov/liftoff.

Held extensive engagement with stakeholders

- Created community benefits plans (CBP) requirements and provided FOA-specific CBP Guidance for all FOAs;
- Conducted communications work and stakeholder engagement framework to advance OCED's mission, vision, and goals, including speaking at roughly 40 conferences and events, and hosting more than 50 listening sessions, workshops, and webinars;
- Met with key industry leaders to better understand and help address private sector risks.

Built an organizational structure

- Increased OCED federal staffing to 209 federal staff on-board as of September 30, 2023;
- Obtained Head of Contracting Authority to issue awards;
- Developed policies and procedures to guide OCED's work; and
- Awarded key support service contracts, including for independent engineering and financial oversight/audits.

Office of Clean Energy Demonstrations
($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted	
				$	%
Clean Energy Demonstrations	64,000	64,000	100,000	+36,000	+56%
Program Direction	25,000	25,000	80,000	+55,000	+220%
Total, Office of Clean Energy Demonstrations	**89,000**	**89,000**	**180,000**	**+91,000**	**+102%**

SBIR/STTR[1] ($K):

- FY 2023 Enacted: SBIR $0; STTR $0
- FY 2024 Annualized CR: SBIR $0; STTR $0
- FY 2025 Request: SBIR $0; STTR $0

[1] While OCED funds extramural projects, the funding does not support R&D and therefore is not subject to the SBIR/STTR transfer.

Future Years Energy Program (FYEP)
($K)

	FY 2025 Request	FY 2026	FY 2027	FY 2028	FY 2029
Office of Clean Energy Demonstrations	180,000	184,000	189,000	193,000	197,000

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 2026 - FY 2029. The outyear funding levels use the growth rates in outyear account totals published in the FY 2025 President's Budget for both the 050 and non-050 accounts. Actual future budget request levels will be determined as part of the annual budget process.

The OCED priorities in the outyears include the following:

- *Program Direction:* At current annual appropriations funding levels, OCED will deplete all available IIJA, IRA, and annual appropriations-provided program direction (PD) funding before the end of existing portfolio execution. If that happens, it could significantly jeopardize OCED's ability to provide proper project management oversight to ensure the proper execution of OCED's demonstration projects. This Budget Request increases funding for Program Direction to mitigate the risk associated with transitioning from limited IIJA and IRA administrative expenses funding for oversight of selected IIJA and IRA awards.

- *Clean Energy Demonstrations:* As OCED proves success with its existing portfolio, OCED will use lessons learned to identify future demonstrations to help position the U.S. to be a global leader in creating a clean energy economic infrastructure. Future OCED demonstrations will continue to support first-of-a-kind, large-scale clean energy projects to help achieve 2035 and 2050 climate change goals.

Infrastructure Investment and Jobs Act (IIJA) Investments

OCED was appropriated funds through the Infrastructure Investment and Jobs Act (IIJA) (P.L. 117-58). Not all IIJA activities will be managed by the organization to which funds were appropriated. Activities that OCED will manage, including those appropriated to other organizations, are itemized below.

($K)

Appropriated Funding Organization	FY 2022 IIJA Funding	FY 2023 IIJA Funding	FY 2024 IIJA Funding	FY 2025 IIJA Funding	Managing Organization
Total, OCED IIJA Coordination	**5,827,250**	**5,126,250**	**5,176,250**	**5,226,250**	
Total IIJA - Clean Energy Demonstrations (OCED)	**5,127,250**	**4,426,250**	**4,476,250**	**4,526,250**	
Advanced Reactor Demonstration Program	677,000	600,000	600,000	600,000	OCED
Carbon Capture Demonstration Projects Program	937,000	500,000	500,000	600,000	OCED
Carbon Capture Large-Scale Pilot Projects	387,000	200,000	200,000	150,000	OCED
Current and Former Mine Land Clean Energy Demonstrations	100,000	100,000	100,000	100,000	OCED
Electric Grid Upgrade Program – Ensuring Reliability and Resiliency	1,000,000	1,000,000	1,000,000	1,000,000	GDO
Energy Improvement in Rural and Remote Areas	200,000	200,000	200,000	200,000	OCED
Energy Storage Demonstration Pilot Grant Program	88,750	88,750	88,750	88,750	OCED
Industrial Emissions Demonstration Projects	100,000	100,000	150,000	150,000	OCED
Long Duration Energy Storage Demonstration & Joint Initiative	37,500	37,500	37,500	37,500	OCED
Regional Clean Hydrogen Hubs	1,600,000	1,600,000	1,600,000	1,600,000	OCED
Total IIJA - Fossil Energy and Carbon Management (FECM)	**700,000**	**700,000**	**700,000**	**700,000**	
Regional Direct Air Capture (DAC) Hubs	700,000	700,000	700,000	700,000	OCED

Inflation Reduction Act (IRA) Investments

OCED was appropriated funds through the Inflation Reduction Act of 2022 (IRA) (PL 117-169) to support critical facilities and infrastructure activities, as shown in the table below.

($K)

	FY 2022 IRA Funding	Managing Organization
Office of Clean Energy Demonstrations, OCED		
Advanced Industrial Facilities Deployment Program	5,512,000	OCED
Administrative Expenses	300,000	OCED
Total, OCED	**5,812,000**	

Clean Energy Demonstrations

Overview

In FY 2025, OCED will manage and oversee the execution of over $25 billion in federal funding in its portfolio, and total project cost including recipient cost share requirements of over $50 billion. As such, OCED is requesting limited new program funding in FY 2025.

Extreme Heat Demonstration ($70 million)

$70 million in funding is requested to strengthen community resiliency and address the impacts of extreme heat on low-income and disadvantaged communities as part of a joint project with Office of State and Community Energy Programs (SCEP) which has also requested $35 million for the initial stages of this program. This demonstration program will advance community-scale solutions to the inter-related community and household impacts that come with extreme heat, often in conjunction with other extreme weather, and the solutions that connect them. The $35 million requested for SCEP's Energy Future Grants will be used for the planning and design phase of the projects, including SCEP leading engagements with local communities and joint SCEP/OCED collaboration on planning and design. OCED and SCEP will jointly develop this program, issue a solicitation, and select awardees to maximize impact through the potential for replication across jurisdictions. OCED's $70 million request will fund the federal share of 3 to 6 community-scale demonstration projects that mitigate extreme heat impacts.

National Laboratory Demonstration Support Program ($30 million)

Funding is requested to support private sector demonstration projects and associated communities by increasing accessibility to the deep expertise housed in DOE's National Laboratory network. This effort will focus on leveraging and optimizing existing National Laboratory capabilities and expertise to enhance the likelihood of successful completion of commercial demonstration projects. Support may be provided through targeted technical assistance and vouchers for project-specific needs such as testing and validation or technical risk identification and risk management support to address emerging risks or issues common to capital-intensive FOAK demonstration projects.

Clean Energy Demonstrations
Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted	
				$	%
Energy Demonstrations	50,000	50,000	70,000	+20,000	+40%
National Laboratory Demonstration Support Program	0	0	30,000	+30,000	N/A
Demonstration Planning and Analysis	14,000	14,000	0	-14,000	N/A
Total, Clean Energy Demonstrations	**64,000**	**64,000**	**100,000**	**+36,000**	**+56%**

Clean Energy Demonstrations

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Clean Energy Demonstrations **$64,000,000**	**$100,000,000**	**+$36,000,000**
Energy Demonstrations $50,000,000	$70,000,000	+$20,000,000
• Initiated a new competition to support demonstrations that integrate renewable and distributed energy systems. The goal of this investment was to de-risk solutions needed to manage variable generation; control flexible loads; and integrate energy storage electric vehicle charging, and other facilities into the U.S. transmission and distribution grids.	• Strengthen community resiliency and address the impacts of extreme heat on low-income and disadvantaged communities.	• Funding is part of a joint project with SCEP, which has also requested $35 million for this program.
National Laboratory Demonstration Support Program $0	$30,000,000	+$30,000,000
• No funding requested.	• Leverage National laboratory facility capability and expertise to support clean energy demonstrations.	• Initiate efforts to support private sector demonstration projects and associated communities by increasing accessibility to the deep expertise housed in DOE's National Laboratory network to improve likelihood of commercial success.
Demonstration Planning and Analysis $14,000,000	$0	-$14,000,000
• Invested in filling knowledge gaps on achieving market "liftoff" for clean energy demonstration technologies. • Funded oversight, such as an independent engineering and data management contracts that assisted OCED oversight of project engineering, construction, and operations.	• No funding requested in Clean Energy Demonstrations.	• This activity is more appropriately funded through Program Direction.

Program Direction

Overview

Program Direction (PD) enables OCED to maintain and support a world-class federal workforce and funds the necessary support service contractors for OCED to achieve its mission. OCED anticipates FY 2025 total PD costs to be at least $215 million, comprised of funding from IIJA, IRA, and OCED's annual PD appropriations. The application of funds from each of these individual accounts depends, in part, on actual and projected annual PD appropriation levels. OCED manages its total PD requirements in a manner which maximizes available balances in the outyears.

At current IIJA, IRA, and annual appropriation funding levels, OCED will deplete its available PD funding before the end of existing portfolio execution. If that were to occur, it will significantly jeopardize OCED's ability to provide project management oversight to ensure the proper execution of OCED's demonstration projects. This budget mitigates this risk by increasing annual appropriations for OCED PD to facilitate the transition off limited IIJA and IRA resources available for oversight of projects awarded IIJA and IRA funding.

The FY 2025 OCED Program Direction Budget Request will:

- Support the salaries, benefits, and some of the associated costs for an estimated 188 FTEs of OCED's estimated total of 330 FTEs[1], including federal staff that OCED pays for in other DOE Departmental Elements;
    - Support strengthening OCED's overall performance, organization, budget, operations, human capital, and project management as the office continues to grow;
    - Support the execution of OCED's demonstration projects oversight, including independent engineering and data management that will assist OCED to oversee project engineering, construction, and operations;
    - Support project management activities and coordination with other DOE offices on the execution and management of demonstration projects, including filling knowledge gaps on achieving market liftoff;
    - Set a foundation for OCED to request additional PD funding in the annual budget as OCED will deplete all available IIJA, IRA, and annual appropriations PD dollars prior to project completion.

Salaries and Benefits: The FY 2025 Request assumes a 2.0 percent federal staff pay increase in calendar year 2025 and the annualization of the 5.2 percent increase from calendar year 2024 to support an estimated total of 188 FTEs funded by annual appropriations.

Travel: The Request provides funding for travel for mission-related activities, such as project oversight, outreach, and information exchanges with stakeholders including industry and energy communities.

Support Services: The Request includes funds for support service contractors to help OCED complete its mission, including providing independent engineering support; financial oversight/audits; support from National Laboratories to help OCED perform project management oversight; data analytics for project management oversight; liftoff reports and strategic analysis; and administrative support.

Other Related Expenses: The Request includes funding for OCED's contribution to the DOE Working Capital Fund, information technology services, staff training, and other investments for business operations.

In FY 2025, OCED plans to use a combined $135 million of IIJA PD and IRA PD funding to support the remaining 142 FTEs of OCED's estimated total of 330 FTEs not covered by the annual appropriation, as well as cover the majority of the travel, support services, and other related expenses requirements.

[1] The salaries, benefits, and some of the associated costs for the remaining 142 FTEs of OCED's estimated total of 330 FTEs is planned to be covered by IIJA and IRA funding.

Program Direction
Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted	
				$	%
Program Direction					
Salaries and Benefits	15,259	16,052	45,500	+30,241	+198%
Travel	1,000	1,000	3,400	+2,400	+240%
Support Services	6,000	6,000	18,660	+12,660	+211%
Other Related Expenses	2,741	1,948	12,440	+9,699	+354%
Total, Program Direction	**25,000**	**25,000**	**80,000**	**+55,000**	**+220%**
Federal FTEs	**63**	**63**	**188**	**+125**	**+198%**
Support Services					
Technical Support	3,000	3,000	8,000	+5,000	+167%
Management Support	3,000	3,000	10,660	+7,660	+255%
Total, Support Services	**6,000**	**6,000**	**18,660**	**+12,660**	**+211%**
Other Related Expenses					
Other Services	641	455	2,900	+2,259	+352%
Working Capital Fund	1,000	711	4,540	+3,540	+354%
Energy Information Technology Services	1,100	782	5,000	+3,900	+355%
Total, Other Related Expenses	**2,741**	**1,948**	**12,440**	**+9,699**	**+354%**

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 vs FY 2023
Program Direction **$25,000,000**	**$80,000,000**	**+$55,000,000**
Salaries and Benefits $15,259,000	$45,500,000	+$30,241,000
• Funding supported salaries and benefits to provide project management support, competitive solicitation development support, and financial control. • Supported costs associated with federal employee benefits, including health insurance costs and retirement.	• Funding supports salaries and benefits for about 188 FTEs to provide project management support, competitive solicitation development support, and financial control.	• Increased funding for staff as OCED transitions salaries and benefits costs from IIJA/IRA into annual appropriations. • Increase also accounts for a 2.0 percent increase in federal salaries and the annualization of the CY 2023 5.2 percent pay increase.
Travel $1,000,000	$3,400,000	+$2,400,000
• Funding supported staff travel for onsite solicitation process requirements and project management support as well as outreach to stakeholders including those in traditionally disadvantaged energy communities and industry. This included conducting information exchanges and administration during competitive cycle and travel related to the implementation and award of projects from the FY 2023 solicitation and ongoing awards.	• Funding will support staff travel for onsite requirements and project management support as well as outreach to stakeholders including those in traditionally disadvantaged energy communities and industry.	• Additional funding reflects anticipated travel needs as OCED transitions from issuing awards to project execution. OCED will also have additional staff on-board.
Support Services $6,000,000	$18,660,000	+$12,660,000
• Funded support services to provide technical and administrative support during project solicitation cycle, and during office management of project implementation. • Contract support for data gathering and analysis, developing communications and marketing tools and content, and conducting	• Funding for various support service functions, including engineering support; communications; data gathering and analysis; and other functions associated with project management oversight. • Contract support for data gathering and analysis, developing communications and marketing tools and content, and	• Increase for scope previously funded under Clean Energy Demonstrations, Demonstration Planning and Analysis in FY 2023. Funds provide support services for managing multiple years of active project management requirements.

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 vs FY 2023
other required data collection, verification, validation, and reporting requirements.	conducting other required data collection, verification, validation, and reporting requirements.	
Other Related Services $2,741,000	$12,440,000	+$9,699,000
• Funding for Energy IT Services, Working Capital Fund, training, and other services.	• Funding for Energy IT Services, Working Capital Fund, training, and other services.	• Largest driver of additional cost is GSA rental costs at Forrestal and Germantown headquarters paid for by OCED.

DEPARTMENT OF ENERGY

Funding by Site

TAS_2297 - Office of Clean Energy Demonstrations (OCED) - FY 2025

(Dollars in Thousands)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget
Washington Headquarters			
Clean Energy Demonstrations	14,000	0	0
Program Direction - OCED	25,000	25,000	80,000
Total Washington Headquarters	**39,000**	**25,000**	**80,000**
Undesignated LPI			
Clean Energy Demonstrations	50,000	64,000	100,000
Total Undesignated LPI	**50,000**	**64,000**	**100,000**
Total Funding by Site for TAS_2297 - Office of Clean Energy Demonstrations (OCED)	**89,000**	**89,000**	**180,000**

Indian Energy Policy and Programs

Indian Energy Policy and Programs

Office of Indian Energy
($K)

FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 vs FY 2023 Enacted
$75,000	$75,000	$95,000	+$20,000

Proposed Appropriation Language
For necessary expenses for Indian Energy activities in carrying out the purposes of the Department of Energy Organization Act (42 U.S.C. 7101 et seq.), $95,000,000, to remain available until expended: Provided, That of the amount appropriated under this heading, $14,000,000 shall be available until September 30, 2026, for program direction.

Overview
The Office of Indian Energy Policy and Programs (Office of Indian Energy, or IE) offers financial and technical to Indian Tribes, including Alaska Native villages, and eligible Tribal entities for advancing Tribal energy development, efficiency, and use; reducing or stabilize energy costs; enhancing and strengthening Tribal energy and economic infrastructure; and bringing electrical power and service to Indian land and homes -- with the ancillary benefit of creating jobs in American Indian and Alaska Native communities. IE achieves its mission through financial assistance, technical assistance, and education and outreach. This assistance is intended to overcome barriers to energy development, increase energy reliability and resiliency, and electrify Indian lands and homes.

Financial assistance supports funding opportunities toward energy development and electrification in Indian Country. Technical assistance supports American Indians and Alaska Natives in overcoming barriers to project development and in planning to transition to clean energy. The FY 2025 Budget Request reflects an overall increase to continue the multi-year initiatives started in FY 2022 to: 1) transition all of the nation's Tribal Colleges and Universities (TCUs) to renewable energy; and 2) electrify the roughly 20,000 Tribal homes that currently lack electricity. DOE will continue to work with the US Department of Agriculture (USDA), the Department of the Interior (DOI), states, Indian Tribes, and local utilities to ensure that resources are properly aligned, the right mix of loans, grants, and technical assistance is deployed, and the objectives are achieved as cost-effectively as possible, while fully respecting Tribal sovereignty and self-determination. The FY 2025 Budget Request also provides funding to expand its current efforts for the transition of Indian Country to clean energy, including building capacity within Tribes and Tribal organizations. Specifically, in addition to the two initiatives, the FY 2025 Budget Request provides funds for IE to continues its support Native community's transition to clean energy through its ongoing financial and technical assistance and support for the Clean Energy Innovator Fellows Program which funds recent graduates and energy professionals to assist and provide critical resources to Tribes and Tribal entities in advancing clean energy solutions.

Technical assistance is provided at no cost to Indian Tribes and Tribal entities to address a specific technical or financial barrier or to assist with energy planning. Between FY 2010 and FY 2023, over 445 technical assistance requests were completed, providing technical, financial, and energy planning expertise to overcome barriers to Indian energy development. This technical assistance provides Tribes and Tribal entities with a tangible product or specific deliverable to address a need or barrier and move projects forward. The FY 2025 Request continues to support technical assistance and expand DOE's network of subject matter experts and partner organizations to provide local technical assistance.

Financial assistance provides funding opportunities for energy infrastructure deployment to American Indian and Alaska Native communities across the Nation in the form of competitive grant awards. Between FY 2010 and FY

2022, DOE's Office of Indian Energy invested over $120 million in more than 210 Tribal energy projects, leveraged by over $93 million in recipient cost share. Seventy-six percent (over $93 million) has been invested in hardware installation projects in more than 100 Native communities, projects having tangible impacts in these often underrepresented and disadvantaged communities. These investments will install nearly 46-megawatts (MW) of new generation and provide electricity to over 8,800 Tribal buildings across the Nation. The FY 2025 Budget Request provides funds for IE to continues its support Native community's transition to clean energy through its ongoing financial assistance and to support IE's efforts to reduce the cost share barrier to Tribes and eligible Tribal in applying for grants while expanding the financial assistance to more Tribes.

For decades, Tribes have stated the need for Tribal energy staff capacity to develop climate-resilient energy systems. With appropriate capacity, Tribes have an opportunity to not only access the once-in-a-century federal resources but to build much needed energy resilient infrastructure on Tribal lands. As a pilot, IE is exploring different models to 1) establish a Tribal Energy Managers program and 2) support Intertribal organizations. Currently, Tribes do not have offices that are comparable to "state energy offices" and Intertribal organizations can potentially fill that need. In FY 2025 IE will dedicate funding to help address Tribal capacity needs.

IE is leading an interagency energy transition MOU with coal impacted Tribes. IE's intention is to help convene planning meetings with Tribes on energy visioning and strategic planning focused on economic revitalization opportunities. In FY 2025, IE plans to expand our energy transition work beyond coal impacted Tribes.

In FY 2023, IE committed an additional $72 million to 31 clean energy projects on Tribal lands, which represent an additional 18.6 MW of new clean generation and power to 2,300 Tribal buildings.
Specifically, in May, the Office of Indian Energy announced $34 million in funding to deploy clean energy technologies in 18 American Indian and Alaska Native communities, 67% of which represent disadvantaged communities not previously funded. These projects are estimated to result in more than nine megawatts of new clean energy generation and affect 1,000 Tribal buildings.

In September, DOE announced $38 million in funding for clean energy projects in 13 American Indian and Alaska Native communities to bolster ongoing efforts to reduce and stabilize energy costs, increase energy security and resilience, and provide electric power to Native communities. These cost-shared projects, valued at nearly $55 million, are estimated to result in more than 9.6 megawatts of new clean energy generation and over 2,600 megawatt-hours of battery storage and affect over 1,300 Tribal buildings. This investment will yield tangible benefits year after year to improve the quality of life for these underserved communities.

In addition to the 420 technical assistance requests completed between FY 2010 and FY 2022, in FY 2023 IE completed 25 additional requests, providing technical, financial, and energy planning expertise and tangible products and deliverables to overcome barriers to Indian energy development.

IE has been advising DOE programs on best practices on Tribal engagement, consultation, policy, outreach, and implementation of Tribal specific provisions in the Infrastructure Investment and Jobs Act and Inflation Reduction Act.

Office of Indian Energy
Appropriation Level and Program Level Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Assistance Programs[1]					
Financial Assistance	**56,000**	**56,000**	**71,000**	**15,000**	**27%**
Technical Assistance	**5,000**	**5,000**	**10,000**	**5,000**	**100%**
Total, Assistance Programs	**61,000**	**61,000**	**81,000**	**20,000**	**33%**
Program Direction					
Salaries and Benefits	**4,856**	**5,036**	**5,276**	**420**	**9%**
Travel	**265**	**265**	**265**	**0**	**0%**
Support Services	**5,576**	**5,396**	**5,156**	**-420**	**-8%**
Other Related Expenses	**3,303**	**3,303**	**3,303**	**0**	**0%**
Total, Program Direction	**14,000**	**14,000**	**14,000**	**0**	**0%**
Total, Office of Indian Energy	**75,000**	**75,000**	**95,000**	**20,000**	**27%**
Federal FTEs	**29**	**29**	**29**	**0**	**0%**

Future Years Energy Program (FYEP)

($K)

	FY 2025 Request	FY 2026	FY 2027	FY 2028	FY 2029
Office of Indian Energy	95,000	97,000	99,000	102,000	104,000

Outyear Priorities and Assumptions

Office of Indian Energy Policy and Programs priorities in the outyears include the following:

- transition all of the nation's TCUs to renewable energy;
- electrify the roughly 20,000 Tribal homes that currently lack electricity. DOE will coordinate with U.S. Department of Agriculture and the Department of Interior; and
- continue to expand its network of subject matter experts and partner organizations to provide technical assistance.

[1] Formerly named Tribal Energy Program which was an EERE Program

Office of Indian Energy
Assistance Programs

Overview

The Office of Indian Energy Policy and Programs serves all federally recognized Indian Tribes, including Alaska Native Regional Corporations and Village Corporations, as well as Tribal and Intertribal organizations, and Tribal energy development organizations. Numerous factors challenge Indian Tribes interested in developing their vast energy resources. Energy and infrastructure development in Indian Country is constrained due to limited funding and financing, inadequate infrastructure, limited technical capacity, and a complicated legal and regulatory structure governing Indian lands. As a result, many Indian Tribes spend a disproportionate amount of their income on energy (28.3% higher on average than the U.S. National median energy burden of 3% with some paying well over 4 times the national average) and a significant number, especially in Alaska, experience a severe energy burden (i.e., paying more than 10% of income on energy)[1], one in three American Indians and Alaska Natives (32%) live in poverty, which is nearly double the United States average (18%)[2], are nearly five times as likely to live in inadequate housing[3], and eight times more likely to live in overcrowded housing (16% versus 2% for the United States).[4]

In consultation with Tribal Leaders, Alaska Native Regional Corporations and other constituents, IE achieves its mission by: (1) promoting Indian energy development, efficiency, and use; (2) helping to reduce or stabilize the cost of electricity; (3) enhancing and strengthening Tribal energy and economic infrastructure; and (4) electrifying Indian lands and homes. IE achieves its mission through financial assistance, technical assistance, and education and outreach.

Financial assistance, primarily through competitive grants to Indian Tribes and other eligible Tribal entities, supports the deployment of clean energy technology, infrastructure, efficiency, and electrification projects, reducing energy costs, increasing reliability and resiliency, and building human capacity within and among Tribes. The FY 2025 Budget Request increase would support IE's efforts to reduce the cost share barrier to Tribes and eligible Tribal in applying for grants while expanding the financial assistance to more Tribes.

Technical assistance is provided at no cost to Indian Tribes and Tribal entities to address a specific technical or financial barrier or to assist with energy planning and providing a tangible product or specific deliverable to address a need or barrier and move projects forward. In the area of technical assistance, IE is expanding its support through the use of local Subject Matter Experts (SME's) to assist American Indian and Alaska Native communities in developing energy projects and providing support for energy planning. In Alaska, this was implemented through an interagency agreement with the Denali Commission for local SME's. The FY 2025 Budget Request will provide funding for DOE laboratory research to help guide the transition of Indian Country to clean energy.

Policy initiatives include coordination and collaboration with various sectors of government that are critical to investment, job creation, project development, and sustainability of energy systems throughout Indian Country, including the Indian Country Energy and Infrastructure Working Group (ICEIWG) and the White House Council on Native American Affairs (WHCNAA). ICEIWG advises the Office of Indian Energy Director and the Secretary of Energy on behalf of Indian Tribes on their policy priorities. Policy analysts survey energy needs and energy

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[1] Megan Day, Ricardo Oliveira, Jon Weers, and Aaron Vimont. (2019) Low-Income Energy Affordability Data (LEAD) Tool Methodology. https://lead.openei.org/assets/docs/LEAD-Tool-Methodology.pdf.

[2] U.S. Census Bureau 2006-2010 American Community Survey. https://catalog.data.gov/dataset/2006-2010-american-community-survey-5-year-selected-population-tables.

[3] U.S. Housing and Urban Development (HUD) report (2017), Assessment of American Indian, Alaska Native, and Native Hawaiian Housing Needs. https://www.huduser.gov/portal/native_american_assessment/home.html.

[4] U.S. Census Bureau 2013 American Housing Survey Data. https://www.census.gov/programs-surveys/ahs/data/2013/ahs-2013-summary-tables/national-summary-report-and-tables---ahs-2013.html

resources on Indian lands, including available infrastructure support, and develop strategies for electrification and energy development and deployment. The Office participates in the WHCNAA and represents DOE on the Economic Development, Energy, and Infrastructure Committee to serve Tribes and Tribal communities by strengthening and developing federal programs and policies that support prosperous and resilient Tribal communities. As a government-wide effort, the WHCNAA and participating agencies are committed to supporting Tribal economic revitalization and energy transition. In support of this effort, in December 2022 the DOE and DOI entered into an MOU with the Navajo Nation[1] to partner on their transition away from coal. DOE, in coordination with the WHCNAA and with involvement from DOD and the General Services Administration (GSA), is launching a new initiative to increase federal agencies' use of Tribal energy through purchasing authority established by statute, Indian Energy Purchase Preference.[2] Policy initiatives also include coordination and collaboration through a Memorandum of Understanding with the Department of the Interior on issues including electrification and energy development in Indian Country. The Office of Indian Energy is working across DOE through the Tribal Energy Steering Committee and in consultation with Tribes to implement the policies and directives of Executive Order 13175 and includes broader actions to improve the Department's DOE Tribal Consultation Process and DOE Order 144.1, "Department of Energy American Indian Tribal Government Interactions and Policy."

IE's FY 2025 budget priorities are continuing and expanding efforts towards (1) universal energy access for Indian country, (2) 100% renewable TCUs; (3) transitioning Indian Country to clean energy; and (4) building capacity in Indian Country.

Universal Energy Access for Indian Country
Tens of thousands of U.S. citizens living on Tribal land currently live in homes without electricity. Without electricity, these families lack access to what many consider basic necessities like wired lights, computers, and refrigeration. The Department of Energy, working through the Office of Indian Energy, seeks to remedy this inequitable situation and bring clean energy to every Tribal home that wants it. IE will work in partnership with the USDA, DOI, states, Indian Tribes, and local utilities to ensure that incentives are properly aligned, the right mix of loans, grants, and technical assistance is deployed, and that universal electrification is achieved as cost-effectively as possible, while fully respecting Tribal sovereignty and self-determination.

100% Renewable Tribal Colleges and Universities (TCUs)
Tens of thousands of Tribal students' study at the nation's 37 TCUs each year[3] – seeking an education that will lead to meaningful work that will help their homelands and provide good paying jobs for their families. This initiative will combine the ingenuity of Tribal students with the vast energy potential of Tribal lands to bring renewable energy projects to every Tribal college and university in the nation, with the ultimate goal of those schools being powered by 100% renewable energy and becoming net-zero. Students will be engaged in hands-on learning, with opportunities to help plan, design, and install renewable projects at their schools – helping to equip them to go on to good paying jobs in the renewable energy sector.

Transitioning Indian Country to Clean Energy
Building on past successes, IE will expand efforts to transition American Indian and Alaska Native communities to clean energy while building local economies, stabilizing, or reducing energy costs, and building local capacity. Native communities pay some of the highest energy costs in the country. By transitioning to clean energy, Native Nations can tap into their vast energy resources, build local economies and internal capacity, and increase resiliency for future generations. The FY 2025 Budget Request increase would also support IE's efforts to reduce the cost share barrier to Tribes and eligible Tribal in applying for grants while expanding the financial assistance to

[1] https://www.facebook.com/watch/?v=867025754721364

[2] FACT SHEET: Biden-Harris Administration Announces New Actions to Support Indian Country and Native Communities Ahead of the Administration's Second Tribal Nations Summit | The White House

[3] American Council on Education Issue Brief (C. Nelson and J. Frye). *Tribal College and University Funding: Tribal Sovereignty at the Intersection of Federal, State, and Local Funding* (2016). https://www.acenet.edu/Documents/Tribal-College-and-University-Funding.pdf#:~:text=Tribal%20colleges%20and%20universities%20%28TCUs%29%20continue%20to%20provide,enroll%20nearly%2028%2C000%20full-%20and%20part-time%20students%20annually. Accessed March 25, 2022.

more Tribes. Further, IE is leading an interagency energy transition MOU with coal impacted Tribes. IE's intention is to help convene planning meetings with Tribes on energy visioning and strategic planning focused on economic revitalization opportunities. In FY 2025, IE plans to expand our energy transition work beyond coal impacted Tribes.

The FY 2025 Budget Request includes funding for DOE laboratory research to help guide the transition of Indian Country to clean energy. The research may include, but not limited to: (1) development of a roadmap for electrification of unelectrified homes; (2) development of skid mounted integrated renewable energy battery systems to power unelectrified homes; (3) pathways for manufacturing opportunities (e.g., solar system assembly); (4) roadmap for government tribal power purchase; and (5) Indian Energy development to increase grid resilience.

Capacity Building

Indian country has only just barely tapped into its vast energy resources. IE will work through technical assistance, education, and outreach to build skills and knowledge in Indian country to take advantage of these energy resources, provide good paying jobs, and power Indian country with renewable energy. IE will partner with Tribal climate and energy education programs to train and build capacity of community members, college students, and professionals in Indian Country – and – expand IE's local network of technical assistance providers to more effectively target the needs of Tribes.

For decades, Tribes have stated the need for Tribal energy staff capacity to develop climate-resilient energy systems. With appropriate capacity, Tribes have an opportunity to not only access the once-in-a-century federal resources but to build much needed energy resilient infrastructure on Tribal lands. As a pilot, IE is exploring different models to 1) establish a Tribal Energy Managers program and 2) support Intertribal organizations. Currently, Tribes do not have offices that are comparable to "State energy offices" and Intertribal organizations can potentially fill that need. In FY 2025 as part of the Tribal Energy Managers program IE will dedicate funding to help address Tribal capacity needs including support for the Clean Energy Innovator Fellows Program which funds recent graduates and energy professionals to assist and provide critical resources to Tribes and Tribal entities in advancing clean energy solutions.

Indian Energy
Assistance Programs

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Assistance Programs $61,000,000	**$81,000,000**	**$20,000,000**
Financial Assistance $56,000,000	$71,000,000	$15,000,000
Competitive grant program supported energy development and electrification in Indian Country, and associated support contracts.	Competitive grant program supporting energy development and energy access in Indian Country, and associated support contracts. Financial Assistance: Maximize available funding for financial assistance awards and expand opportunities for historically underserved populations, including those who have not previously received funding from IE.	The increase in funding will maximize the amount of funding for awards, reduce cost share, and increase the number of awards to those not previously funded.
Technical Assistance $5,000,000	$10,000,000	$5,000,000
Technical Assistance disseminated information to Indian Country through in-person and on-line training, internships, regional/national workshops, webinars, and printed guides and materials. On-request technical assistance efforts provided high-level support for electrification and energy development in Indian Country. Efforts focused on building partnerships and leveraging resources to maximize education, training, and technical assistance.	Technical Assistance: Enhancing technical assistance by expanding the network of local service providers to target the needs of Tribes more effectively. Additional DOE laboratory support for research to help guide Indian Country to transition to clean energy. Education and Outreach: Expand STEM[1] education and internship programs, vocational/technical opportunities for non-traditional students, and increase outreach efforts to engage American Indian and Alaska Native communities and better educate the public on Tribal energy potential, development challenges, and viable deployment solutions.	The increase in funding will enable the expansion of technical assistance to more Tribes and increased local providers. This funding will allow the number of tribes receiving technical assistance by twenty percent. The additional funding will support research to transition to Indian Country to clean energy.

[1] Science, technology, engineering, and mathematics (STEM) is a broad term used to group together these academic disciplines.

Office of Indian Energy

Program Direction

Overview

Program direction provides federal staff responsible for the management and execution of IE's programs and activities, as well as the associated support contractors, rent, supplies, travel, and other related expenses. The staff is responsible for providing overall guidance and direction for DOE program offices on Tribal energy activities and initiatives necessary to achieve IE's mission and provides day-to-day management of financial assistance, technical assistance, and outreach and capacity building efforts. Program direction also provides managerial support for the reporting, compliance, and other statutory responsibilities.

The FY 2025 Budget anticipates 29 federal staff: 10 FTEs assigned to headquarters in Washington, D.C., 5 FTEs in Anchorage, Alaska, and 14 FTEs in Golden, Colorado and remote locations across the U.S. The headquarters staff includes executive leadership, operations, and policy analysis. The Anchorage, Alaska staff provide education and technical assistance for the nearly 230 Alaska Native villages, over 200 Alaska Native Village Corporations, and 13 Alaska Regional Corporations. The Golden, Colorado and across the U.S. provide management and oversight for approximately 85 existing financial assistance awards throughout the nation, while delivering technical assistance within the contiguous U.S. for nearly 340 Indian Tribes and dozens of Tribal and Intertribal organizations. Support service contractors support headquarters operations, initiatives, and execution of financial assistance, technical assistance, and education and outreach activities.

Program Direction Funding
($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Program Direction Summary					
Indian Energy Federal Salaries and Expenses					
Salaries and Benefits	4,856	5,036	5,276	420	8%
Travel	265	265	265	0	0%
Support Services	5,576	5,396	5,156	-420	-8%
Other Related Expenses	3,303	3,303	3,303	0	0%
Total, Washington Headquarters	14,000	14,000	14,000	0	0%
Federal FTEs	29	29	29	0	0%

Office of Indian Energy
Program Direction

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Program Direction $14,000,000	$14,000,000	$0
Salaries and Benefits $4,856,000	$5,276,000	$420,000
Provided salaries and benefits for 29 full-time equivalents (FTEs)	Provides salaries and benefits for 29 FTEs.	The increase is related to pay raises.
Travel $265,000	$265,000	$0
Provided for travel of Federal staff to support the 574 federally recognized Indian Tribes throughout the nation, many of which are located in remote and rural areas.	Provides for travel of Federal staff to support the 574 federally recognized Indian Tribes throughout the nation, many of which are located in remote and rural areas.	No change
Support Services $5,576,000	$5,156,000	-$420,000
Provided for management, administrative, and operations support to monitor grants, support execution of technical assistance, and outreach	Provides for management, administrative, and operations support to monitor grants, support execution of technical assistance, and outreach.	The reduction offsets the increase in federal salary and benefits.
Other Related Expenses $3,303,000	$3,303,000	$0
Computer hardware and software provided through the Office of Chief Information Officer (OCIO), Working Capital Fund, office space, registration fees, supplies, and small purchases through the micro-purchase credit card.	Computer hardware and software provided through the OCIO, Working Capital Fund, office space, registration fees, supplies, and small purchases through the micro-purchase credit card.	No change in support.

DEPARTMENT OF ENERGY

Funding by Site

TAS_0342 - Office of Indian Energy Policy and Programs - FY 2025

(Dollars in Thousands)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget
Undesignated LPI			
Indian Energy Policy & Programs	61,000	89,697	81,000
Program Direction - Indian Energy Program	14,000	20,353	14,000
Total Undesignated LPI	**75,000**	**110,050**	**95,000**
Total Funding by Site for TAS_0342 - Office of Indian Energy Policy and Programs	**75,000**	**110,050**	**95,000**

Loan Programs Office

Loan Programs Office

Loan Programs Office
Overview

Appropriation Summary by Program
($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 vs FY 2023 Enacted ($)	FY 2025 vs FY 2023 Enacted (%)
Advanced Technology Vehicles Manufacturing Loan Program	**9,800**	**9,800**	**27,508**	**+17,708**	**181%**
Title 17 Innovative Technology Loan Guarantee Program					
Administrative Expenses	66,206	66,206	55,000	-11,206	-17%
Title XVII Credit Subsidy	-150,000	0	0	+150,000	100%
Offsetting Collections	-19,061	-137,568	-239,558	-220,497	1157%
Total	**-102,855**	**-71,362**	**-184,558**	**-81,703**	79%
Tribal Energy Loan Guarantee Program	**4,000**	**4,000**	**6,300**	**2,300**	**58%**
Total, Loans Programs Office	**-89,055**	**-57,562**	**-150,750**	**-61,695**	**69%**

Proposed Appropriation Language

Mission

The Loan Programs Office (LPO) provides attractive debt financing for high-impact, large-scale energy and manufacturing infrastructure projects in the United States. LPO is helping the US to build the next generation of energy and manufacturing infrastructure by investing in new technologies to reduce carbon emissions and air pollution and meet the Administration's goals of net-zero emissions, economy-wide, by 2050. The LPO's mission is to be the premier public financing partner accelerating high-impact energy and manufacturing investments to advance America's economic future. LPO's mandate is to administer loan programs that:

- Provide a bridge to bankability for large-scale, high-impact clean energy and supply chain projects that help technologies deploy at scale and advance America's energy and economic future.
- Enable expansion of America's domestic manufacturing by meaningfully advancing projects that support, onshore, or re-shore clean energy and advanced vehicles supply chains; build a domestic energy workforce; and bolster American supply chain competitiveness.
- Make the clean energy transformation affordable and achievable for workers, consumers, and communities by creating quality jobs in domestic clean energy industries; promoting energy affordability; and ensuring all energy communities stand to benefit from the clean energy transformation.

Overview

LPO's FY 2025 Request is -$150,750,000, a decrease of $61,695,000 from the FY 2023 Enacted Level. This decrease is largely driven by increased collection of offsetting fees resulting from the ramp up in loan and loan guarantee origination. LPO's FY 2025 Budget Request helps meet the Administration's objectives of a carbon-pollution free electric sector by 2035 and net-zero emissions, economy-wide, by 2050, while helping to achieve the Administration's objectives for placed-based initiatives and Justice40 investments.

The programs administered by LPO have already accelerated the growth of utility-scale wind and solar and revived nuclear construction in the U.S. and now are being applied to catalyze other new and emerging energy technologies, such as hydrogen, energy storage, advanced vehicles, critical minerals, and virtual power plant technologies that can transform

existing energy infrastructure and expand domestic manufacturing of electric vehicles and components, improving the lives of all Americans and creating high quality jobs. LPO can provide access to debt not typically available in the commercial sector. Projects financed by LPO will build and upgrade American energy infrastructure and develop a clean energy economy that will spur well-paying, union jobs and equitable economic growth, accelerate clean technology innovation, commercialization, manufacturing, and deployment, bolster domestic supply chains, and promote globally competitive American clean energy exports.

Title 17 Innovative Technology Loan Guarantee (Title 17) Program – Through Title 17 Clean Energy Financing Program (Title 17), as authorized under Title XVII of the Energy Policy Act of 2005 (EPAct of 2005), as amended, DOE can finance projects in the United States that support clean energy deployment and energy infrastructure reinvestment to reduce greenhouse gas emissions and air pollution. There are four project categories within the Title 17 Program: 1) Innovative Energy, financing for projects that deploy New or Significantly Improved Technology that is technically proven but not yet widely commercialized in the United States; 2) Innovative Supply Chain, financing for projects that employ a new or significantly improved technology in the manufacturing process for a qualifying clean energy technology or for projects that manufacture a new or significantly improved technology; 3) State Energy Financing Institution (SEFI)-supported, financing for projects that support deployment of qualifying clean energy technology and receive meaningful financial support or credit enhancements from an entity within a state agency or financing authority; and 4) Energy Infrastructure Reinvestment (EIR), financing for projects that retool, repower, repurpose, or replace energy infrastructure that has ceased operations or upgrade operating energy infrastructure to avoid, reduce, utilize, or sequester air pollutants or greenhouse gas emissions. The program supports the Title 17 Section 1703 Program, and supports, but does not request new appropriations for, the Energy Infrastructure Reinvestment Program (Title 17 EIR or Section 1706).

Title 17 Section 1703 provides loan guarantees for innovative energy projects that include energy efficient and renewable energy systems, advanced nuclear facilities, advanced fossil and carbon capture, sequestration, utilization and storage systems, energy storage, virtual power plants, and various other types of clean energy projects. Through Title 17 Section 1703, LPO provides access to debt capital for high-impact and large-scale energy infrastructure projects and first-time commercial deployments in the United States. In addition, Title 17 Section 1703 provides loan guarantees to eligible supply chain projects, and to non-innovative projects provided financial support or credit enhancements by eligible State Energy Financing Institutions (SEFIs). Through Title 17 Section 1706, LPO can support up to $250 billion in loan guarantees for energy infrastructure-related projects that will reinvest in energy infrastructure that has ceased operations, or for projects proposing to make operating energy infrastructure more efficient.

In FY 2025, LPO will support a range of eligible projects through the Title 17 Section 1703 available loan guarantee authority of $73 billion as of February 2024. The Department expects to obligate approximately $19.1 billion of Title 17 Section 1703 loan authority in FY 2024 and approximately $8.8 billion in FY 2025. The FY 2025 Budget Request includes $55 million, wholly offset by an estimated $240 million in collected fees, for administrative expenses to continue originating loans for the Title 17 Clean Energy Financing Program, as well as to effectively monitor the existing portfolio. The request includes 17 additional Federal FTEs. Finally, the FY 2025 Request supports ongoing implementation of investments authorized under the IIJA and IRA, including projects to finance domestic critical minerals supply chain and state energy financing institution-backed projects through Title 17 Section 1703, as well as the Energy Infrastructure Reinvestment Program.

Advanced Technology Vehicles Manufacturing Program (ATVM) – Authorized by Section 136 of Energy Independence and Security Act of 2007, P.L. 110-140 as amended, the direct loan program supports reequipping, expanding, or establishing manufacturing facilities in the U.S. for fuel-efficient advanced technology vehicles or qualifying components, or for engineering integration performed in the U.S. for advanced technology vehicles or qualifying components. The FY 2025 Budget Request includes $27.508 million to support the origination and monitoring of ATVM direct loans.

The Infrastructure Investment and Jobs Act (IIJA) expanded the definition of advanced technology vehicle to include advanced medium- and heavy-duty vehicles, locomotives, maritime vessels, aircraft, and hyperloop technology. Prior to the passage of the IIJA, ATVM authorities were limited to supporting manufacturing of light-duty vehicles and components. The Inflation Reduction Act (IRA) provided appropriations to support new ATVM loans and unlocked the IIJA-expanded advanced technology vehicle modes. The Consolidated Appropriations Act, 2023, removed the prohibition on the use of existing authority and appropriated credit subsidy for the expanded eligibilities. LPO believes the expanded authorities provided through IIJA, can be leveraged by the ATVM program to reduce transportation emissions and create good paying jobs. In addition to providing appropriations, the IRA also removed the $25 billion loan authority cap established under Section 136(d)(1) of the Energy Independence and Security Act of 2007.

To date, projects that have been financed in part by ATVM loans have produced vehicles that are estimated to have saved over 19 billion gallons of gasoline, equivalent to a cumulative 26 million metric tons of carbon dioxide emissions, and created more than 43,000 direct jobs across eight states, LPO's ATVM loan program has played a key role in helping the American auto industry propel the resurgence of manufacturing in the United States.

Tribal Energy Loan Guarantee Program (TELGP) – The LPO Tribal Energy Loan Guarantee Program (TELGP) is authorized by Section 2602 of the Energy Policy Act of 1992, as amended by the Energy Policy Act of 2005. The FY 2025 Budget requests $6.3 million for administrative expenses to continue origination and anticipated monitoring related activities for TELGP to provide economic development opportunities and access to lower-cost energy in tribal communities through the development of energy projects.

In the Consolidated Appropriations Act, 2022, Congress enacted a change for that Fiscal Year, which was subsequently made permanent by the Inflation Reduction Act of 2022 (IRA), to broaden TELGP authority to allow applicants to apply for direct loans financed by the United States (U.S.) Treasury Federal Financing Bank and guaranteed by the Department, in addition to partial loan guarantees of other eligible lenders. The IRA also increased the aggregate amount of loans available at any time under TELGP from $2 billion to $20 billion and provided $75 million in appropriations to carry out the program. This change – in addition to other changes in FY 2022 to the TELGP solicitation to clarify ownership requirements, lending obligations, and fees – has increased interest in and accessibility to TELGP loans.

TELGP can provide loans to federally recognized Indian tribes and Alaska Native Corporations for a broad range of conventional and clean energy projects. The program is fully aligned with the Biden Administration’s goal that at least 40% of the overall benefits of federal climate investments flow to disadvantaged communities.

CIFIA

Section 40304 of the Infrastructure Investment and Jobs Act of 2021 established the Carbon Dioxide Transportation Infrastructure Finance and Innovation Account (CIFIA) program, consisting of direct loans, loan guarantees, and/or grants to establish a regional network of large scale, common carrier carbon dioxide transportation infrastructure in the U.S. In FY 2022, the Loan Programs Office (LPO), in coordination with the Office of Fossil Energy and Carbon Management (FECM), designed the implementation strategy for CIFIA, which is authorized to begin disbursing loans and grants beginning in FY 2023.

In FY 2023, LPO, in conjunction with FECM, has had discussions with over 20 potential applicants, and one application was officially submitted.

Organization

The Loan Programs Office (LPO) currently utilizes seven divisions to originate new loans and proactively monitor the portfolio: Outreach and Business Development Division, Origination Division, Portfolio Management Division, Risk Management Division, Technical and Environmental Division, Legal Division, and Management Operations Division.

The Outreach and Business Development Division is charged with identifying and establishing relationships with potential applicants and other external stakeholders deemed necessary to help meet LPO’s strategic objectives.

The Origination Division is responsible for coordinating the assessments of applications and leads the credit underwriting of truncations and the negotiating, closing and first disbursements of loans or loan guarantees.

The Portfolio Management Division (PMD) leads LPO’s monitoring functions by approving disbursements, repayments, operating budgets, and long-term forecasts. In the event of non-payment and/or default, PMD leads activities to maximize recoveries either through bankruptcy, note sale, or compromise of the claim.

The Risk Management Division conducts continuous risk assessments of potential new loans as well as the assets in the portfolio to comply with regulatory requirements such as OMB Circular No. A-129 of the Federal Credit Reform Action of 1990.

The Technical and Environmental Division (TED) evaluates the technical performance of assets and project management throughout the entire lifecycle of the loan to ensure that the technical requirements of the loan agreement are met. TED conducts site visits, provides expertise on project construction status and budget, and identifies potential technical risks that inhibit the borrower's ability to meet requirements and repay the loan. TED's Environmental Compliance (EC) team ensures that applicants' projects meet federal environmental regulatory standards by helping applicants navigate through required reviews and consultations prior to loan closing.

The Legal Division supports origination and underwriting of new transactions as well as all on-going monitoring activities, negotiations and documentations of waivers, consents, routine loan amendments, approvals and denials of transfer withdrawals, and legal aspects of any project developments. The division participates in business development and outreach activities and provides support to LPO on regulatory and administrative matters.

The Management and Operations Division is responsible for LPO employee resources, administrating and monitoring LPO administrative and working capital funds, providing enterprise architecture and information technology support, and providing contract administration to obtain services.

FY 2023 Key Accomplishments

- As of the end of December 2023, LPO has received 202 active applications across its programs, totaling $214.8 billion in requested financing. Notably, LPO received 11 applications under the Tribal Energy Financing Program, the first several applications under the Title 17 Section 1706 Program, and the first application under the CIFIA Program.
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- In FY 2023, LPO provided updated Title 17 Clean Energy Financing Program Guidance that includes updated program eligibility, application requirements, and evaluation criteria; consolidates several existing solicitations into one easy-to-read document; and incorporates new authorities established by the IIJA and the IRA, including Section 1706 and SEFI-supported projects. The Program Guidance also includes a new requirement for all Applicants to submit a Community Benefits Plan as part of their Part II Application. The Community Benefits Plan should discuss how the Applicant is engaging and will engage with stakeholders affected by the proposed project. The Program Guidance was released concurrently with an Interim Final Rule, amending the regulations implementing the loan guarantee provisions of Title 17 of the Energy Policy Act of 2005.

- In the Title 17 Section 1703 Program, LPO announced two conditional commitments and closed one loan guarantee:
    - In April 2023, LPO announced a conditional commitment to Sunnova Energy Corporation's Project Hestia for an up to $3 billion partial loan guarantee to make distributed energy resources, including rooftop solar, battery storage, and virtual power plant-ready software available to more American homeowners. The partial loan guarantee was closed in September 2023.
    - In August 2023, LPO announced a conditional commitment to Eos Energy Enterprises, Inc. (eos) for an up to $398.6 million loan guarantee for the construction of up to four state-of-the-art production lines to produce the "Eos Z3™," a next-generation utility- and industrial-scale zinc-bromine battery energy storage systems (BESS) in Turtle Creek, Pennsylvania.

- In the Advanced Technology Vehicles Manufacturing (ATVM) Program, LPO closed one direct loan and announced 6 conditional commitments:
    - In December 2022, LPO announced a $2.5 billion loan to Ultium Cells LLC to help finance the construction of new lithium-ion battery cell manufacturing facilities in Ohio, Tennessee, and Michigan to support the domestic EV industry.
    - In January 2023, LPO announced an up to $700 million conditional commitment to Ioneer Rhyolite Ridge to develop a domestic supply of lithium carbonate.
    - In February 2023, LPO announced a $2 billion conditional commitment to Redwood Materials for the construction and expansion of a battery components recycling and production facility.
    - Also in February 2023, LPO announced a $375 million conditional commitment to Li-Cycle for a first-of-its-kind lithium-ion battery resource recovery facility.

- In May 2023, LPO announced a $362 million conditional commitment to CelLink Corporation for the construction of a domestic manufacturing facility to develop lighter and more efficient flexible circuit wiring harnesses.
- In June 2023, LPO announced an $850 million conditional commitment to help finance the construction of an advanced battery cell manufacturing facility in Buckeye, Arizona, significantly increasing the nation's battery cell manufacturing capacity for energy storage systems (ESS) and electric vehicles (EVs).
- Also in June 2023, LPO announced an up to $9.2 billion conditional commitment for the construction of three manufacturing plants to produce batteries for Ford Motor Company's future Ford and Lincoln electric vehicles (EVs).
- .

INFLATION REDUCTION ACT (IRA/P.L. 117-169)
Activities

Loan Programs Office was appropriated funds through the Inflation Reduction Act of 2022 (IRA). Activities that Loan Programs Office will manage, including those appropriated to other organizations, are itemized below.

	FY 2022 IRA Funding	Managing Organization
Title 17 Innovative Technology Loan Guarantee Program – Sec. 50141		
Credit Subsidy	3,492,000,000	LPO
Administrative Expenses	108,000,000	LPO
Total, Title 17 Innovative Technology Loan Guarantee Program – Sec. 5014	3,600,000,000	
Energy Infrastructure Reinvestment Loan Guarantee Program – Sec. 50144		
Credit Subsidy	4,750,000,000	LPO
Administrative Expenses	250,000,000	LPO
Total, Energy Infrastructure Reinvestment Loan Guarantee Program – Sec. 50144	5,000,000,000	
Advanced Technology Vehicles Manufacturing Loan Program – Sec. 50142		
Credit Subsidy	2,975,000,000	LPO
Administrative Expenses	25,000,000	LPO
Total, Advanced Technology Vehicles Manufacturing Loan Program – Sec. 50142	3,000,000,000	
Tribal Energy Loan Guarantee Program – Sec. 50145		
Credit Subsidy	71,250,000	LPO
Administrative Expenses	3,750,000	LPO
Total, Tribal Energy Loan Guarantee Program – Sec. 50145	75,000,000	

Summary of Investment Goals and Planned FY 2025 IRA Activities

● Title 17 Innovative Technology Loan Guarantee Program – Section 1703 Credit Subsidy: The goal of this investment is to support issuance of new loan guarantees to projects that either were eligible under section 1703 of the Energy Policy Act of 2005 or become eligible due to the Infrastructure Investment and Jobs Act (IIJA) that expanded eligible activities to support projects involving critical minerals processing, manufacturing, and recycling. The IRA provided an additional $40 billion in loan guarantee authority and $3.5 billion to cover the cost of loans. In FY 2024, LPO expects to obligate 22 loan guarantees totaling $19 billion under this program, with an estimated combined credit subsidy cost of $510 million. In FY 2025, LPO expects to obligate 10 loan guarantees totaling $9 billion under this program, with an estimated combined credit subsidy cost of $1.6 billion.

● Title 17 Innovative Technology Loan Guarantee Program – Section 1706 Credit Subsidy: The goal of this investment is to support issuance of new loan guarantees under the Energy Infrastructure Reinvestment Program (section 1706) created by the IRA to help retool, repower, repurpose, or replace energy infrastructure that has ceased operations or to improve the efficiency of infrastructure that is currently operating. The IRA provided $5 billion to carry out the new program and up to $250 billion in loan guarantee authority. In FY 2024, LPO expects to issue one loan guarantee totaling $1 billion under this program, with an estimated combined credit subsidy cost of $44 million. In FY 2025, LPO expects to issue 23 loan guarantees totaling $28.6 billion under this program, with an estimated combined credit subsidy cost of $2.1 billion.

● Title 17 Innovative Technology Loan Guarantee Program – Administrative Expenses: The goal of this investment is to fund personnel and mission support costs to originate, administer, and monitor loan guarantees under this program. In FY 2025,

LPO plans to use $27 million of Section 1703 IRA administrative expenses funding to support 19 federal FTEs and $20 million of Section 1706 IRA administrative expense funding to support 36 federal FTEs. This combined $47 million will support costs including necessary outside consultants, contractors, information technology, and overhead expenses to continue to implement the Title 17 Innovative Technology Loan Guarantee Program and is in addition to the Budget request for $55 million in annual appropriations for Title 17 program direction.

● Advanced Technology Vehicles Manufacturing Loan Program Credit Subsidy: The goal of this investment is for the Secretary to issue loans for a range of advanced technology vehicles and their components, including newly authorized uses from the IIJA. Expanded uses include medium- and heavy-duty vehicles, locomotives, maritime vessels including offshore wind vessels, aviation, and hyperloop. The IRA removed the statutory limitation on direct loan authority and provided $3 billion of additional appropriations, including $2.975 billion in credit subsidy. In FY 2024, LPO expects to obligate approximately 11 direct loans totaling approximately $7 billion. FY 2025, LPO expects to obligate approximately 10 direct loans totaling approximately $11.7 billion. In FY 2025, LPO expects to obligate approximately $11.7 billion under this program, with an estimated combined credit subsidy cost of $1.2 billion.

● Advanced Technology Vehicles Manufacturing Loan Program Administrative Expenses: The goal of this investment is to fund personnel and mission support costs to originate, administer, and monitor loans under this program. In FY 2025, it is anticipated that all of the $25 million will have been expended by the end of FY 2024 thereby justifying the increase in annual appropriations requested for ATVM Program Direction in the FY 2025 Budget.

● Tribal Energy Loan Guarantee Program Credit Subsidy: The goal of this investment is to provide direct loans or partial loan guarantees to federally recognized tribes, including Alaska Native village or regional or village corporations; or a Tribal Energy Development Organization that is wholly or substantially owned by a federally recognized Indian tribe or Alaska Native Corporation. In addition to the access to existing partial loan guarantees, the IRA provided permanent access to eligible borrowers to direct loans through the U.S. Treasury's Federal Financing Bank (FFB). In FY 2024, LPO expects to obligate a $195 million direct loan with an estimated credit subsidy cost of $0.2 million. In FY 2025, LPO expects to obligate a total of 6 direct loans and loan guarantees totaling $2.2 billion with an estimated credit subsidy cost of $9.7 million.

● Tribal Energy Loan Guarantee Program Administrative Expenses: The goal of this investment is to fund personnel and mission support costs to originate, administer, and monitor loans and loan guarantees under this program. In FY 2025 LPO plans to use $750,000 to support 1 federal FTEs and support costs including necessary outside consultants, information technology, and overhead expenses to continue to implement investments authorized under the IRA and in previous legislation.

Carbon Dioxide Transportation Infrastructure Finance and Innovation
Infrastructure Investment and Jobs Act Investments

Office of Fossil Energy Carbon Management (FECM) was appropriated funds through the Infrastructure Investment and Jobs Act (IIJA) (P.L. 117-58). Not all IIJA activities will be managed by the organization to which funds were appropriated. The activity that Loan Programs Office will manage is itemized below.

($k)

Appropriated Funding Organization	FY 2022 IIJA Funding	FY 2023 IIJA Funding	FY 2024 IIJA Funding	FY 2025 IIJA Funding	Managing Organization
Fossil Energy Carbon Management					
CIFIA – Sec. 40304	2,994	2,092,806	0	0	FECM/LPO
Total, LPO IIJA Coordination	**2,994**	**2,092,806**	**0**	0	

Summary of Investment Goals and Planned FY 2025 Activities

- Section 40304 of the IIJA established the Carbon Dioxide Transportation Infrastructure Finance and Innovation (CIFIA) program, consisting of direct loans, loan guarantees, and/or grants to establish regional networks of large scale, common carrier carbon dioxide transportation infrastructure in the U.S. In FY 2022, FECM, in conjunction with LPO,

released guidance to applicants for how to apply for CIFIA loans, began accepting Letters of Interest for loans, and invited potential applicants to request a pre-application consultation. The FY 2025 Budget does not request new appropriations for the CIFIA program.

- The CIFIA program can provide large scale, common carrier carbon dioxide transportation projects, including pipelines, rail, shipping, and trucking, with access to equity and debt capital that the private sector cannot or will not provide. The LPO, which has developed a credible expertise resulting from more than a decade of experience administering several financing programs to support the deployment of large-scale energy infrastructure projects, is a committed partner in the early stages of development and throughout the lifetime of the project while monitoring the funds provided. Carbon dioxide transportation projects supported by CIFIA will contribute to the reduction of carbon emissions by enhancing access to high-purity carbon dioxide for utilization or permanent sequestration and create new job opportunities with a free and fair choice to join a union.

- The CIFIA program is authorized to provide long-term, low-interest rate debt capital to companies for development of large scale, common carrier carbon dioxide transportation infrastructure, as well as Future Growth Grants to cover a portion of the cost differential between the base case and an expansion case associated with predicted future increase in demand for carbon dioxide transportation by a pipeline. Utilizing a combination of both loans or loan guarantees and grants will allow the Administration to future-proof pipeline capacity and drastically reduce land-use requirements, costs, and the environmental and societal impact of the buildout of carbon dioxide transportation infrastructure.

Future Years Energy Program (FYEP)
($K)

Loan Program Office (LPO)	FY 2025 Request	FY 2026	FY 2027	FY 2028	FY 2029
Advanced Technology Vehicles Manufacturing Loan Program	**27,508**	**29,000**	**29,000**	**30,000**	**31,000**
Administrative Expenses - ATVM	27,508	29,000	29,000	30,000	31,000
Title 17 - Innovative Technology Loan Guarantee Program	**(184,558)**	**(188,000)**	**30,000**	**(20,000)**	**(35,000)**
Administrative Expenses - Title 17	55,000	56,000	57,000	59,000	60,000
Offsetting Collections - Title 17	(239,558)	(244,000)	(27,000)	(79,000)	(95,000)
Tribal Energy Loan Guarantee Program (TELGP)	**6,300**	**6,445**	**6,593**	**6,745**	**6,900**
Administrative Expenses - TELGP[1]	6,300	6,445	6,593	6,745	6,900
Grand Total LPO	**(150,750)**	**(152,555)**	**65,593**	**16,745**	**2,900**

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 2026 - FY 2029. The outyear funding levels use the growth rates in outyear account totals published in the FY 2025 President's Budget for both the 050 and non-050 accounts. Actual future budget request levels will be determined as part of the annual budget process.

LPO currently has 202 formally submitted active applications for loans. The cumulative dollar amount of LPO financing requested in these active applications is approximately $214 billion as of December 31, 2023, demonstrating strong interest in the LPO loan programs. The FYEP provides the resources for LPO to continue outreach and origination efforts, as well as to monitor and manage the existing and anticipated expansion of the office's loan portfolio.

Advanced Technology Vehicles Manufacturing Loan Program
($K)

FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 vs FY 2023 Enacted
$9,800	$9,800	$27,508	+$17,708

Proposed Appropriation Language
For Department of Energy administrative expenses necessary in carrying out the Advanced Technology Vehicles Manufacturing Loan Program, *$27,508,000*, to remain available until September 30, *2026*.
(Energy and Water Development and Related Agencies Appropriations Act, 2024.)

Explanation of Changes
The FY 2025 Budget requests $27,508 million to continue to support the increased loan origination and portfolio monitoring activities under the Advanced Technology Vehicles Manufacturing Loan Program (ATVM). The proposed language above shows changes from the Consolidated Appropriations Act, 2023.

Mission
ATVM provides loans for the cost of re-equipping, expanding, or establishing manufacturing facilities in the United States (U.S.) to produce advanced technology vehicles or qualified components and for associated engineering integration costs. ATVM's mandate includes providing a bridge to bankability for large-scale, high-impact advanced vehicle manufacturing and supply chain projects that help technologies deploy at scale and advance America's energy and economic future; as well as enabling the expansion of America's domestic manufacturing by meaningfully advancing supply chain projects that support, onshore, or re-shore supply chain projects, build a domestic workforce, and bolster American supply chain competitiveness.

Through ATVM, LPO can provide advanced technology vehicle and supply chain projects access to debt capital that private lenders cannot or will not provide. LPO is a committed partner in the early stages of development and throughout the lifetime of the project while monitoring the loans provided. The advanced technologies being proposed and developed will contribute to the reduction of carbon emissions and create new domestic manufacturing job opportunities.

Overview
The Budget proposes $27.508 million for administrative expenses associated with ATVM direct loan origination and continue the program's portfolio monitoring responsibilities. The FY 2025 Budget Request does not request new loan authority. Using existing authority, LPO anticipates obligating an estimated $7.1 billion in ATVM loans in FY 2024, and $11.7 billion in FY 2025. The proposed increase in administrative expenses in FY 2025 would support this increase in anticipated ATVM loan origination.

ATVM provides loans for the cost of re-equipping, expanding, or establishing manufacturing facilities in the United States (U.S.) to produce advanced technology vehicles or qualified components and for associated engineering integration costs. Through ATVM, LPO can provide advanced technology vehicle and supply chain projects access to debt capital that private lenders cannot or will not provide. LPO is a committed partner in the early stages of development and throughout the lifetime of the project while monitoring the loans provided. The advanced technologies being proposed and developed will contribute to the reduction of carbon emissions and create new domestic manufacturing job opportunities with a free and fair choice to join a union.

The program has been key in propelling the resurgence of the American auto manufacturing industry and accelerating U.S. electric vehicle (EV) manufacturing, and the budget requested will allow LPO to continue growing the portfolio of this crucial program. This Request allows LPO to help achieve the Administration's goal of reaching net-zero emissions, economy-wide, by 2050. This includes providing access to capital for domestic manufacturers revitalizing U.S.

manufacturing, creating good-quality jobs producing electric vehicles and components, securing domestic supply chains from raw materials to parts, and retooling factories to compete globally.

In FY 2023, DOE announced that the ATVM program is accepting and encouraging applications for automotive manufacturing conversion projects that retain high-quality jobs in communities that currently host manufacturing facilities—and that DOE is planning to provide up to $10 billion in loans for this purpose. In addition to other ATVM evaluation criteria, Automotive Manufacturing Conversion Project applications will be reviewed to maximize retention of existing workers, provide competitive wages and benefits, including workplace rights, or commitments such as keeping the existing facility open until a new facility is complete, in the case of facility replacement projects.

The Infrastructure Investment and Jobs Act (IIJA) expanded the definition of advanced technology vehicle to include advanced medium- and heavy-duty vehicles, locomotives, maritime vessels, aircraft, and hyperloop technology. Prior to the passage of the IIJA, ATVM authorities were limited to supporting manufacturing of light-duty vehicles and components. The Inflation Reduction Act (IRA) provided appropriations of $3 billion in credit subsidy[1] to support new ATVM loans and unlocked the IIJA-expanded advanced technology vehicle modes.

The FY 2025 Request also continues LPO's efforts to ensure that Federal funding no longer directly subsidizes fossil fuels, as required in Section 209 of Executive Order 14008, Tackling the Climate Crisis at Home and Abroad. LPO will ensure that ATVM is encouraging projects that support the transition to zero-emission vehicles and not directly subsidizing fossil fuels by excluding projects that manufacture gas-only light duty vehicles, and by including zero-emission or highly efficient fossil fueled medium- and heavy- duty vehicle manufacturing projects, as well as other clean transportation modes as authorized by IIJA.

Since FY 2022, the ATVM program has closed on a $2.5 billion commitment to Ultium Cells LLC and $98 million commitment to Syrah Technologies LLC and committed over $13 billion to seven additional borrowers including ABS, BlueOval SK, KORE Power, CelLink, Li-Cycle, Redwood Materials, and Rhyolite Ridge. Previous borrowers since the beginning of the ATVM program include such companies as Tesla, Nissan, and Ford. Together, these borrowers have repaid a collective $7 billion in principal, plus $1 billion in interest though January 2024. The ATVM portfolio has had two borrowers default which resulted in losses.

To date, projects that have been financed in part by ATVM loans have produced vehicles that are estimated to have saved over 19 billion gallons of gasoline, equivalent to a cumulative 26 million metric tons of carbon dioxide emissions. Projects supported by the program have supported 21.6 million low-emission vehicles since the program's inception, and have created and supported 43,000 permanent jobs across 8 states.

Portfolio Project Data	*ATVM – 12/31/2023**
Total Number of Conditional Commitments	7
Total Number of Active Projects	2
Number of Projects in Construction	1
Number of Projects in Partial or Full Operation	1
Production Capacity (Million vehicles/year)	0
Vehicles Produced (Millions, Cum.)	21.6
CO_2 Avoided (Mtons, Cum.)	26

** Most recent available data based on company reporting cycles*

The ATVM program provides long-term, low-interest rate debt capital to companies seeking to manufacture a range of advanced technology vehicles and associated components in the United States, including advanced medium- and heavy-duty vehicles, locomotives, maritime vessels, aircraft, and hyperloop technology.

[1] *Of $3 billion in credit subsidy appropriated, $2.975 billion is available after $25 million in administration expense.*

The FY 2025 Request will allow LPO to continue Outreach and Business Development activities, including developing marketing materials, engaging in stakeholder outreach, and ensuring that LPO's unique value proposition is widely known across the entire advanced technology vehicles manufacturing supply chain. LPO outreach efforts will focus on attracting quality applications into ATVM's applicant pipeline and moving those applications through conditional commitment to financial close.

As part of its business development activities, LPO provides guidance and feedback to potential applicants through in-house financial, technical, environmental, and legal staff on how to submit successful applications under the ATVM loan program. The FY 2025 Budget will allow LPO to continue providing this valuable function. Because of LPO Outreach and Business Development's efforts to cultivate a pipeline of quality applicants, as well as the Origination Division's efforts to evaluate and process applications in FY 2021 and FY 2022, LPO was able to offer its first conditional commitments under ATVM since 2011 in FY 2022.

ATVM Applications as of Dec. 31, 2023	
Total loan authority requested	$22.71 billion
Estimated Available loan authority[2]	$49.8 billion

Strong applicant interest in ATVM, as well as LPO's efforts to identify and evaluate new applicants and originate new loans, is expected to continue to use available credit subsidy in FY 2024 and FY 2025. Based on the current applicant pipeline, LPO anticipates obligating approximately $7.1 billion in loans in FY 2024 and $11.7 billion in FY 2025.

Finally, DOE remains an active participant in all stages of the project through completion. LPO has developed a strong and unique set of capabilities and expertise to manage the ATVM loan program, making it ideally positioned to bring advanced vehicle and component manufacturing projects to market and invigorate economic growth.

In FY 2025, LPO requests $27.508 million for administrative expenses associated with ATVM direct loan origination and to monitor the program's portfolio as more loans reach financial close. The increase in the request for Administrative Expenses relative to FY 2023 Enacted level supports the projected increase in origination activities in FY 2025. To support the increase in expected loan activity, 27 additional Federal full-time equivalent (FTE) positions are planned, raising the staffing at the end of FY 2025 to 55 FTEs from the FY 2023 Enacted level of 28 FTEs.

($K)

	FY 2023 Enacted	**FY 2024 Annualized CR**	**FY 2025 Request**	**FY 2025 vs FY 2023 Enacted ($)**	**FY 2025 vs FY 2023 Enacted (%)**
Advanced Technology Vehicles Manufacturing Loan Program					
Administrative Expenses	9,800	9,800	27,508	17,708	181%
Total, Advanced Technology Vehicles Manufacturing Loan Program	**9,800**	**9,800**	**27,508**	**+17,708**	**181%**

[2] The IRA removed the $25 billion loan authority cap established under Section 136(d)(1) of the Energy Independence and Security Act of 2007. This estimate is based on the amount of direct loans that would be supported by available credit subsidy assuming an average subsidy rate. Source Monthly Application Activity Report December 2023 https://www.energy.gov/lpo/monthly-application-activity-report

Explanation of Major Changes ($K)

	FY 2025 vs FY 2023 Enacted
Administrative Expenses:	**+17,708**
The request of $27.508 million is needed for administrative expenses associated with increased loan origination and monitoring the growing loan portfolio.	
Total, Advanced Technology Vehicles Manufacturing Loan Program	**+17,708**

Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 vs FY 2023 Enacted ($)	FY 2025 vs FY 2023 Enacted (%)
Administrative Expenses					
Salaries & Benefits	5,984	6,438	12,342	+ 6,358	106%
Travel	124	132	229	+ 105	85%
Support Services	2,788	2,630	12,157	+ 9,369	336%
Other Related Expenses	904	600	2,780	+ 1,876	208%
Total, Administrative Expenses	**9,800**	**9,800**	**27,508**	+ 17,708	181%
Federal FTEs	28	29	55	+ 27	96%
Support Services					
Management and Professional Support Services					
Mission Support	1,690	2,540	9,737	+ 8,047	476%
IT Support	1,098	90	2,420	+ 1,322	120%
Total, Management and Professional Support Services	2,788	2,630	12,157	+ 9,369	336%
Total, Support Services	2,788	2,630	12,157	+ 9,369	336%
Other Related Expenses					
Communication and Misc. Charges Related to IT	30	40	95	+ 65	217%
Other Services	0	0	0	0	NM
Working Capital Fund	404	440	798	+ 394	98%
Operation and Maintenance of Facilities	360	0	1,597	+ 1,237	344%
Supplies, Subscriptions and Publications	100	110	180	+ 80	80%
Equipment	10	10	110	+ 100	1000%
Total, Other Related Expenses	904	600	2,780	+ 1,876	208%

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Salaries & Benefits $5,984,000 • Provided salaries and benefits, including a 4.6% raise effective January 1, 2023, for 28 full-time equivalent employees across the Loans Programs Office.	**$12,342,000** • Provides for salaries and benefits of 55 full-time equivalent employees across the Loans Programs Office. Estimate includes the guidance of 2.1 % raise effective January 1, 2025. An increase of staff is necessary to continue origination activities and to monitor the growing ATVM portfolio.	**+$6,358,000** • Funds 27 additional full-time equivalent employees.
Travel $124,000 • Supports the travel of staff to attend meetings, conferences, and site visits if needed.	**$229,000** • Supports the travel of staff to attend meetings, conferences, and site visits if needed.	**+$105,000** • Increase is due to the travel of additional staff.
Support Services $2,788,000 • Supports a range of contract services including administrative support, training, subject matter experts, legal services, information technology, credit analysis, and market assessments. The total information technology cost for LPO is $10.036 million in FY23; $1.098 million is included within the ATVM budget.	**$12,157,000** • Supports a range of contract services including administrative support, training, subject matter experts, legal services, information technology, credit analysis, and market assessments. The total information technology cost for LPO is $8.36 million in FY25; $2.42 million is included within ATVM.	**+$9,369,000** • Increase is due to the increase in full-time federal staff, increase in loan origination activities and anticipated loan monitoring.
Other Related Expenses $904,000 • Supports DOE Working Capital Fund, software, equipment, other services including conferences attendance fees, and publications. The total LPO WCF estimate for FY 2023 is $3.109 million, $404,000 is funded through ATVM. Technical Support provided by DOE laboratories to LPO is $3.36 million, $360,000 is included within the ATVM budget.	**$2,780,000** • Supports DOE Working Capital Fund (WCF), software, equipment, other services including conferences attendance fees, and publications. The total LPO WCF estimate for FY 2025 is $2.864 million; $0.8 million is included within ATVM.	**+$1,876,000** • Increase is due to an increase in the FTE and the cost of overhead expenses.

Tribal Energy Loan Guarantee Program

($K)

FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 vs FY 2023 Enacted
$4,000	$4,000	$6,300	+$2,300

Proposed Appropriation Language

For Department of Energy administrative expenses necessary in carrying out the Tribal Energy Loan Guarantee Program, $*6,300,000*, to remain available until September 30, *2026.*
(Energy and Water Development and Related Agencies Appropriations Act, 2024.)

Mission
The Tribal Energy Finance Program1 is authorized by Section 2602 of the Energy Policy Act of 1992, as amended, to support energy development by Indian tribes, Alaska Native corporations, and other qualified entities. TELGP's mandate includes making the clean energy transformation affordable and achievable for workers, consumers, and communities by creating quality jobs in domestic clean energy industries, promoting energy affordability, and ensuring all energy communities stand to benefit from the clean energy transformation.

Overview
The FY 2025 Budget requests $6.3 million to continue origination and monitoring related activities for TELGP to invigorate economic opportunities in tribal communities through the development of energy projects.

The $6.3 million in funding will support achieving the Administration's objectives of a carbon-pollution free electric sector by 2035 and net-zero emissions, economy-wide, by 2050. It also supports place-based initiatives and Justice40 investments. Specifically, TELGP provides debt capital for energy projects that lead to economic development and reduction of energy costs in some of the Nation's most vulnerable communities.

In addition to providing tribal borrowers the ability to apply for direct loans from the FFB, the IRA increased the aggregate amount of loans available at any time under TELGP from $2 billion to $20 billion. It also provided $75 million in appropriations to carry out the program.

In FY 2023 LPO worked with tribal borrowers, developers, and other stakeholders to highlight and publicize important improvements to the program made in FY 2022, including access to direct loans via the U.S. Department of Treasury Federal Financing Bank (FFB), guaranteed by the Department of Energy (DOE), obviating the need for a partial guarantee of a commercial lender and updates to the TELGP solicitation to clarify ownership requirements, lending obligations, and fees. LPO will continue to work diligently to utilize the $20 billion in aggregate loan authority to ultimately deliver important energy and economic benefits to Indian tribes, consistent with the Administration's Justice40 objectives.

The FY 2025 Request will allow LPO to continue Outreach and Business Development Division activities started in FY 2018 with the release of the first TELGP solicitation. These activities have included active outreach to tribal leaders to make them aware of the program and the potential value to their tribes in developing energy projects as an economic development opportunity and solution to address issues of energy access and cost for tribal members. In addition, LPO engages with investors, project developers, and technology providers to encourage participation in tribal energy projects through the TELGP program. As part of its business development activities, LPO provides guidance and feedback to potential applicants through in-house financial, technical, environmental, and legal staff on how to submit successful applications under the TELGP loan program. This includes tribal advisors, attorneys, and accountants, to address project suitability, eligibility, ownership, and access to LPO financing.

In FY 2023, LPO held 843 (297 initial and 546 follow-ups) outreach meetings, including follow-up, structuring, and relationship development discussions, to disseminate information on the availability, benefits, and application process of TELGP to potential applicants and interested parties. In FY 2023, eleven applications were officially submitted.

[1] Also known as the Tribal Energy Finance Program

The request also supports LPO's ongoing close collaboration with the Department's Office of Indian Energy Policy and Programs (IE) and outreach to tribal members. This has included ongoing communication with tribal leaders to solicit feedback about the proposed design of TELGP, one-on-one meetings with tribal leaders, and participating in tribal energy annual summits and events. LPO will continue to solicit feedback as appropriate to better serve tribes' needs, consistent with LPO's authority.

In FY 2025, LPO requests $6.3 million to continue outreach, origination, and monitoring activities for TELGP to invigorate economic opportunities in tribal communities through the development of energy projects. An increase of 11 Federal FTEs is included in the request. Finally, the FY 2025 Request allows LPO to monitor loans anticipated from TELGP applications that have entered the due diligence phase of the application process in FY 2023 and 2024 and continue to evaluate applications.

($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 vs FY 2023 Enacted ($)	FY 2025 vs FY 2023 Enacted (%)
Tribal Energy Loan Guarantee Program					
Administrative Expenses	2,000	2,000	6,300	+4,300	215%
Tribal Energy Loan Guarantee Credit Subsidy	2,000	2,000	0	-2,000	-100%
Total, Tribal Energy Loan Guarantee Program	**4,000**	**4,000**	**6,300**	**+2,300**	**58%**

FY 2023 Key Accomplishments

Active applications of $4.57B and expected loan requests of $0.2B.

Explanation of Major Changes ($K)

	FY 2025 vs FY 2023 Enacted
Administrative Expenses	
The request of $6.3 million is needed to support increased loan origination and related administrative expenses.	+4,300
Tribal Energy Loan Guarantee Credit Subsidy	
No additional appropriated credit subsidy is requested in FY 2025 due to the funding provided by the Inflation Reduction Act in FY 2022 and the Consolidated Appropriations Act, 2023.	-2,000
Total, Tribal Energy Loan Guarantee Program	**+2,300**

Administrative Expenses
Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 vs FY 2023 Enacted ($)	FY 2025 vs FY 2023 Enacted (%)
Administrative Expenses					
Salaries & Benefits	1,069	1,332	3,590	+ 2,521	236%
Travel	19	26	67	+ 48	253%
Support Services	680	502	2,287	+ 1,607	236%
Other Related Expenses	232	140	356	+ 124	53%
Total, Administrative Expenses	**2,000**	**2,000**	**6,300**	+ 4,300	215%
Federal FTEs	5	6	16	+ 11	220%
Support Services					
Management and Professional Support Services					
Mission Support	440	262	1,949	+ 1,509	343%
IT Support	240	240	338	+ 98	41%
Total, Management and Professional Support Services	680	502	2,287	+ 1,607	236%
Total, Support Services	680	502	2,287	+ 1,607	236%
Other Related Expenses					
Communication and Misc. Charges Related to IT	50	0	72	+ 22	44%
Other Services	40	0	0	- 40	-100%
Working Capital Fund	62	140	234	+ 172	277%
Printing Supplies and Materials	40	0	30	- 10	-25%
Equipment	40	0	20	- 20	-50%
Total, Other Related Expenses	232	140	356	+ 124	53%

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request Level vs FY 2023 Enacted
Salaries & Benefits $1,069,000 · Provided for salaries and benefits, including a 4.6% raise effective January 1, 2023, of 5 full-time equivalent employees in support of the TELGP program across all LPO divisions.	**$3,590,000** · Provides for salaries and benefits of 16 full-time equivalent employees in support of the TELGP program across the Loans Programs Office. Estimate includes the guidance of 2.1 % raise effective January 1, 2025.	**+$2,521,000** · Increase reflects an increase of 11 full-time equivalent employees.
Travel $19,000 · Supports the travel of staff to attend meetings, conferences, and site visits if needed.	**$67,000** · Supports the travel of staff to attend meetings, conferences, and site visits if needed.	**+$48,000** · Increase is due to the travel of additional staff.
Support Services $680,000 · Supports a range of contract services including administrative support, training, subject matter experts, legal services, information technology, credit analysis, and market assessments. The total information technology cost for LPO is $10,036,000 in FY23; $240,000 is included within TELGP.	**$2,287,000** · Supports a range of contract services including administrative support, training, subject matter experts, legal services, information technology, credit analysis, and market assessments. The total information technology cost for LPO is $8,360,000 in FY25; $338,000 is included within TELGP.	**+$1,607,000** · Increase is due to the increase in full-time federal staff, increase in loan origination activities and anticipated loan monitoring.
Other Related Expenses $232,000 · Supports DOE Working Capital Fund (WCF), software, equipment, other services including conferences attendance fees, and publications. The total LPO WCF estimate for FY 2023 is $3,109,000; $62,000 is included within TELGP.	**$356,000** · Supports DOE Working Capital Fund (WCF), software, equipment, other services including conferences attendance fees, and publications. The total LPO WCF estimate for FY 2025 is $2,864,000; $234,000 is included within TELGP.	**+$124,000** · Increase is due to an increase in the FTE and the cost of overhead expenses.

Title 17 Innovative Technology Loan Guarantee Program
($K)

FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 vs FY 2023 Enacted
-$102,855	-$71,362	-$184,558	-$81,703

Proposed Appropriation Language

Such sums as are derived from amounts received from borrowers pursuant to section 1702(b) of the Energy Policy Act of 2005 under this heading in prior Acts, shall be collected in accordance with section 502(7) of the Congressional Budget Act of 1974: Provided, That for necessary administrative expenses of the Title 17 Innovative Technology Loan Guarantee Program, as authorized, *$55,000,000* is appropriated, to remain available until September 30, *2026* Provided further, That up to *$55,000,000* of fees collected in fiscal year *2025* pursuant to section 1702(h) of the Energy Policy Act of 2005 shall be credited as offsetting collections under this heading and used for necessary administrative expenses in this appropriation and shall remain available until September 30, *2026*: Provided further, That to the extent that fees collected in fiscal year *2025* exceed *$55,000,000*, those excess amounts shall be credited as offsetting collections under this heading and available in future fiscal years only to the extent provided in advance in appropriations Acts: Provided further, That the sum herein appropriated from the general fund shall be reduced (1) as such fees are received during fiscal year *2025* (estimated at *$239,558,000*) and (2) to the extent that any remaining general fund appropriations can be derived from fees collected in previous fiscal years that are not otherwise appropriated, so as to result in a final fiscal year *2025* appropriation from the general fund estimated at $0: Provided further, That the Department of Energy shall not subordinate any loan obligation to other financing in violation of section 1702 of the Energy Policy Act of 2005 or subordinate any Guaranteed Obligation to any loan or other debt obligations in violation of section 609.8 of title 10, Code of Federal Regulations.

Energy and Water Development and Related Agencies Appropriations Act, 2024)

Explanation of Changes

The FY 2025 Budget Request includes $55 million, wholly offset by an estimated $240 million in collected fees, for administrative expenses to continue originating loans for the Title 17 Innovative Technology Loan Guarantee Program, as well as to effectively monitor the existing portfolio. A correction to the Code of Federal Regulations reference is also included.

Mission

Title 17 Section 1703 supports efforts to address the climate crisis and achieve a net-zero carbon emission economy by no later than 2050 by 1) providing a bridge to bankability for large-scale, high-impact clean energy and supply chain projects that help energy technologies deploy at scale and advance America's energy and economic future; 2) enabling the expansion of America's domestic energy manufacturing by meaningfully advancing energy and supply chain projects that support, onshore, or re-shore supply chain projects, build a domestic energy workforce, and bolster American supply chain competitiveness; and 3) making the clean energy transformation affordable and achievable for workers, consumers, and communities by creating quality jobs in domestic clean energy industries, promoting energy affordability, and ensuring all energy communities stand to benefit from the clean energy transformation. Title 17 Section 1703 provides loan guarantees for energy projects that include energy efficient and renewable energy systems, advanced nuclear facilities, advanced fossil and carbon capture, sequestration, utilization and storage systems, energy storage, virtual power plants, and various other types of projects. Through Title 17 Section 1703, LPO provides access to debt capital for high-impact and large-scale innovative energy infrastructure projects and first-time commercial deployments in the United States. These projects must avoid, reduce, or sequester air pollutants or anthropogenic emissions of greenhouse gases; employ new or significantly improved technologies compared to commercial technologies in service in the United States at the time the guarantee is issued; and offer a reasonable prospect of repayment of the principal and interest on the guaranteed obligation. In addition, Title 17 Section 1703 provides loan guarantees to eligible supply chain projects, and to non-innovative projects provided financial support or credit enhancements by eligible State Energy Financing Institutions (SEFIs).

Overview

The Budget Request for the Loan Programs Office (LPO) Title 17 Innovative Technology Loan Guarantee Program (Title 17) supports the Title 17 Clean Energy Financing Program, Innovative Energy, Innovative Supply Chain and State Energy Financing Institution Supported Projects (Title 17 Section 1703), and supports, but does not request new appropriations for, the Energy Infrastructure Reinvestment Program (Title 17 Section 1706) created by the Inflation Reduction Act (IRA).

The Title 17 Clean Energy Financing Program is central to LPO's mission to serve as a "Bridge to Bankability" for clean energy projects that are critical to achieving the decarbonization of the energy sector and enhancing the domestic clean energy supply chain. Repeat deployments that prove market adoption enable 'bankability,' unlocking commercial debt markets. The Title 17 program can support technologies at each deployment milestone—first-of-a-kind deployments that solve applied engineering challenges; follow-on deployments that establish engineering, procurement, and construction excellence and lower total project costs; substantial scaling of deployment and manufacturing capacity to drive advancement along the learning curve; and education of commercial debt markets to enable broadly available debt financing.

The Energy Infrastructure Reinvestment (Section 1706) authority created under the IRA expands LPO's mission under Title 17 to include retooling, repowering, repurposing, or replacing American energy infrastructure that has ceased operations, and enabling operating energy infrastructure to avoid, reduce, utilize, or sequester air pollutants, including anthropogenic greenhouse gas emissions. This Request does not support new appropriations for Section 1706.

As of the end of December 2023, the Department had over $138 billion in requested applications under Title 17 Section 1703 across eligible technologies, with another $21 billion in loan applications expected to enter the application pipeline by the first quarter of 2024. In the Consolidated Appropriations Act, 2023, Congress converted $150 million in existing Title 17 Section 1703 credit subsidy appropriations to $15 billion in additional Title 17 Section 1703 loan guarantee authority, open to a range of eligible technologies. Inclusive of loan authority provided for Title 17 Section 1703 by the IRA, LPO has a total of approximately $72 billion in Title 17 Section 1703 loan authority available. The Department expects to obligate approximately $19 billion of Title 17 Section 1703 loan authority in FY 2024 and approximately $9 billion of this authority in FY 2025. The Department will continue to ensure that Congress is informed of the amount and timing of the anticipated application pipeline as LPO works to obligate available resources.

The Budget requests $55 million, wholly offset by an estimated $240 million in collected fees, for administrative expenses to allow LPO to continue originating loans for the Title 17 Loan Guarantee Program, as well as to effectively monitor the existing portfolio, assist applicants in achieving project milestones and overcoming issues that may arise, and provide guidance and risk mitigation for the long-term success of projects.

In addition, the FY 2025 Request for Title 17 supports the ongoing implementation of the expanded authority under the Infrastructure Investment and Jobs Act (IIJA). This includes supporting eligible projects that bolster the domestic critical minerals supply chain, in line with addressing critical supply chain vulnerabilities as identified in Executive Order 14017, America's Supply Chains, and the subsequent 100-Day Reviews. The Request also supports IIJA's expansion of Title 17 to eligible projects supported by SEFIs, including State, Tribal, and Alaska Native corporation-backed energy projects. This new authority would allow for smaller, distributed energy resource (DER) projects to access LPO financing more readily through aggregation, such as through state Green Bank or equivalent programs, including projects that employ already commercially available technologies that meet air pollutant and emissions requirements, as well as other Title 17 criteria.

In FY 2023, LPO provided updated Title 17 Clean Energy Financing Program Guidance that includes updated program eligibility, application requirements, and evaluation criteria; consolidates several existing solicitations into one easy-to-read document; and incorporates new authorities established by the IIJA and the IRA, including Section 1706 and SEFI-supported projects. The Program Guidance also includes a new requirement for all Applicants to submit a Community Benefits Plan as part of their Part II Application. The Community Benefits Plan should discuss how the Applicant is engaging and will engage with stakeholders affected by the proposed project. The Program Guidance was released concurrently with an Interim Final Rule, amending the regulations implementing the loan guarantee provisions of Title 17 of the Energy Policy Act of 2005.

While the FY 2025 Budget does not request new appropriations for the Energy Infrastructure Reinvestment program created by the IRA, LPO will continue implementing EIR in FY 2025. This builds on early implementation of EIR, including Program Guidance released publicly in FY 2023. As of the end of December 2023, the Department had over $49 billion in requested applications under Title 17 Section 1706 across eligible technologies, with another $24 billion in loan applications expected to enter the application pipeline by the first quarter of 2024. The Department expects to obligate approximately $1 billion of Title 17 Section 1706 loan authority in FY 2024 and approximately $28 billion of this authority in FY 2025

The FY 2025 Request continues to ensure that Federal funding no longer directly subsidizes fossil fuels, as required in Section 209 of Executive Order 14008, Tackling the Climate Crisis at Home and Abroad. The Loan Programs Office will ensure that the Title 17 program is only encouraging projects that help achieve a carbon-pollution free electric sector by 2035 and net-zero emissions, economy-wide, by 2050.

Over the past decade, LPO has issued 38 Title 17 loan guarantees totaling more than $31.1 billion at initial closing, with $25.2 billion disbursed. This includes 31 loan guarantees issued with appropriations via the American Recovery and Reinvestment Act of 2009 included under Section 1705 of Title 17, a temporary program for rapid deployment of renewable energy and electric power transmission projects; loan guarantees to 5 borrowers in support of the construction of Vogtle Units 3 & 4 project; 1 loan guarantee to finance the Advanced Clean Energy Storage facility in Delta, Utah currently under construction; and 1 loan guarantee to Sunnova Energy Corporation's Project Hestia virtual power plant project. In aggregate, the remaining Title 17 portfolio currently comprises 22 loan guarantees supporting 15 projects (note that a project may support multiple loan borrowers) as well as three Conditional Commitments to prospective projects.

To date, Title 17 borrowers have repaid over $7 billion in principal and nearly $4 billion in interest. Meanwhile, the program has recorded nearly $1 billion in losses due to default, or 3% of funds disbursed. By providing access to debt capital and flexible financing that private lenders cannot or will not provide, the Title 17 program has allowed the U.S. to keep pace with other nations' clean energy sector growth. More information on LPO's portfolio can be found at https://www.energy.gov/lpo/portfolio.

Together, Title 17 projects have supported tens of thousands of good-paying jobs across 11 states, collectively avoided almost 40 million tonnes of carbon emissions to- date and will bolster clean power generation and industrial processes for decades to come. These are figures that steadily increase annually and with each new loan guarantee that is finalized.

Portfolio Project Data	*Title 17 01/01/2024*
Conditional Commitments	3
Total Number of Active Projects	15[1]
Number of Projects in Construction	1
Number of Projects in Partial or Full Operation	14
Generation Capacity (MW)	5,065
Electricity Generated (GWh, Cum.)	>109,000
CO_2 Avoided (Mtons, Cum.)	>48

This FY 2025 Request will allow LPO to continue Outreach and Business Development activities, including developing marketing materials, engaging in stakeholder outreach, and ensuring that LPO's unique value proposition is widely known in the innovative energy technology market. LPO outreach efforts will focus on attracting quality applications into the Title 17 applicant pipeline and moving these applications through conditional commitment to financial close.

As part of its business development activities, LPO provides guidance and feedback to potential applicants through in-house financial, technical, environmental, and legal staff on how to submit successful Title 17 applications. This Budget will allow LPO to continue providing this valuable function.

[1] The number of loan guarantees and projects are different because multiple loan guarantees may be issued for a project.

Strong applicant interest in Title 17 Section 1703, as well as LPO's efforts to identify and evaluate new applicants and originate new loans, is expected to continue to impact available loan authority in FY 2024 and beyond. Based on the current applicant pipeline, LPO anticipates obligating approximately $19 billion of Title 17 Section 1703 loan authority in FY 2024 and approximately $9 billion of loan authority in FY 2025.

In FY 2025, LPO will support a range of eligible projects through the Title 17 Section 1703 available loan authority of $72M billion as of January 2024. The FY 2025 Budget Request includes $55 million, wholly offset by an estimated $240 million in collected fees, for administrative expenses to continue originating loans for the Title 17 Loan Guarantee Program, as well as to effectively monitor the existing portfolio. In FY 2024, LPO will use approximately $10 million in available balances carried forward from prior-year appropriations to cover administrative expenses associated with loan origination and loan portfolio monitoring activity. An increase of 17 Federal FTEs is included in the request. Finally, the FY 2025 Request supports ongoing implementation of investments authorized under the IIJA and IRA, including projects to finance domestic critical minerals supply chain and state energy financing institution-backed projects through Title 17 Section 1703, as well as the Energy Infrastructure Reinvestment Program.

Title 17 Innovative Technology Loan Guarantee Program

($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 vs FY 2023 Enacted ($)	FY 2025 vs FY 2023 Enacted (%)
Title 17 Innovative Technology Loan Guarantee Program					
Administrative Expenses	66,206	66,206	55,000	-11,206	-17%
Offsetting Collections	-19,061	-137,568	-239,558	-220,497	1157%
Rescission of Prior Year Balances	-150,000	0	0	+150,000	100%
Total	**-102,855**	**-71,362**	**-184,558**	**-81,703**	**79%**

Explanation of Major Changes ($K)

	FY 2025 vs FY 2023 Enacted
Administrative Expenses:	**-11,206**
Decreased funding for Support Services will accommodate this reduction.	
Offsetting Collections:	**-220,497**
LPO anticipates receiving $15 million in maintenance fees from the current portfolio and $225 million in fees associated with the use of $37 billion guaranteed loan authority FY 2025. As required by the Energy Act of 2020, fees are now collected at the financial close of a loan guarantee. Previously, LPO charged and collected certain fees prior to financial close.	
Rescission of Prior Year Balances	**+150,000**
A recission of prior year balances is not requested for FY 2025.	
Total, Title 17 Innovative Technology Loan Guarantee Program	**-83,383**

Administrative Expenses
$K

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 vs FY 2023 Enacted ($)	FY 2025 vs FY 2023 Enacted (%)
Administrative Expenses					
Salaries & Benefits	21,797	26,418	26,704	+ 4,907	23%
Travel	439	481	495	+ 56	13%
Support Services	36,377	30,867	20,703	- 15,674	-43%
Other Related Expenses	7,593	8,440	7,098	- 495	-7%
Total, Administrative Expenses	**66,206**	**66,206**	**55,000**	- 11,206	-17%
Federal FTEs					
LPO	100	115	115	+ 15	15%
Office of the General Counsel	1	1	1	0	0%
Office of Management	1	3	3	+ 2	200%
Total, Federal FTEs	102	119	119	+ 17	17%
Support Services					
Management and Professional Support Services					
Mission Support	27,679	22,106	15,467	- 12,212	-44%
IT Support	8,698	8,761	5,236	- 3,462	-40%
Total, Management and Professional Support Services	36,377	30,867	20,703	- 15,674	-43%
Total, Support Services	36,377	30,867	20,703	- 15,674	-43%
Other Related Expenses					
Communication and Misc. Charges Related to IT	280	340	400	+ 120	43%
Other Services	850	890	941	+ 91	11%
Working Capital Fund	2,643	3,240	1,728	- 915	-35%
Operation and Maintenance of Facilities	3,000	3,000	3,229	+ 229	8%
Supplies, Subscriptions and Publications	590	600	500	- 90	-15%
Equipment	230	370	300	+ 70	30%
Total, Other Related Expenses	7,593	8,440	7,098	- 495	-7%

Administrative Expenses

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request Level vs FY 2023 Enacted
Salaries & Benefits $21,797,000 • Provided salaries and benefits expenses, including a 4.6% raise effective January 1, 2023, for 102 full-time equivalent employees in support of the Title 17 program across the Loans Programs Office.	**$26,704,000** • Provides salaries and benefits expenses for 119 full-time equivalent employees in support of the Title 17 program across the Loans Programs Office. Estimate includes the guidance of 2.1 % raise effective January 1, 2025.	**+$4,907,000** • Increase reflects an addition of 17 full-time equivalent employees, focused on actively monitoring LPO's expanded portfolio of Title 17 projects.
Travel $439,000 • Supported the travel of staff to attend meetings, conferences, and site visits if needed.	**$495,000** • Supports the travel of staff to attend meetings, conferences, and site visits if needed.	**+$56,000** • Increase is due to the travel of additional staff.
Support Services $36,377,000 • Supported a range of contract services including administrative support, training, subject matter experts, legal services, information technology, credit analysis, and market assessments. The total information technology cost for LPO is $10,036,000 in FY23; $8,698,000 is included within Title 17.	**$20,703,000** • Supports a range of contract services including administrative support, training, subject matter experts, legal services, information technology, credit analysis, and market assessments. The total information technology cost for LPO is $8,360,000 in FY25; $5,236,000 is included within Title 17.	**-$15,674,000** • A reduction in contractor-provided support is planned as federal staff is increased.
Other Related Expenses $7,593,000 • Supports DOE Working Capital Fund, software expenses, equipment, other services including conferences attendance fees, and publications. The total LPO WCF estimate for FY 2023 is $3,109,000, $2,643,000 is included within Title 17.	**$7,098,000** • Supports DOE Working Capital Fund (WCF), software, equipment, other services including conferences attendance fees, and publications. The total LPO WCF estimate for FY 2025 is $2,864,000; $1,728,000 is included within Title 17.	**-$495,000** • Decrease in WCF is reflected.

DEPARTMENT OF ENERGY

Funding by Site

TAS_0322 - Advanced Technology Vehicles Manufacturing Loan Program Account - FY 2025

(Dollars in Thousands)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget
Argonne National Laboratory			
Advanced Technology Vehicle Manufacturing Loan Program	0	0	2,040
Total Argonne National Laboratory	**0**	**0**	**2,040**
National Renewable Energy Laboratory			
Advanced Technology Vehicle Manufacturing Loan Program	95	95	97
Total National Renewable Energy Laboratory	**95**	**95**	**97**
Oak Ridge National Laboratory			
Advanced Technology Vehicle Manufacturing Loan Program	0	0	100
Total Oak Ridge National Laboratory	**0**	**0**	**100**
Washington Headquarters			
Advanced Technology Vehicle Manufacturing Loan Program	9,705	9,705	25,271
Total Washington Headquarters	**9,705**	**9,705**	**25,271**
Total Funding by Site for TAS_0322 - Advanced Technology Vehicles Manufacturing Loan Program Account	**9,800**	**9,800**	**27,508**

DEPARTMENT OF ENERGY

Funding by Site

TAS_0208 - Title 17 Innovative Technology Loan Guarantee Program - FY 2025

(Dollars in Thousands)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget
National Energy Technology Lab			
Loan Guarantee Program	322	1,000	1,000
Total National Energy Technology Lab	**322**	**1,000**	**1,000**
National Renewable Energy Laboratory			
Loan Guarantee Program	378	1,800	1,980
Total National Renewable Energy Laboratory	**378**	**1,800**	**1,980**
Oak Ridge National Laboratory Site Office			
Loan Guarantee Program	116	200	250
Total Oak Ridge National Laboratory Site Office	**116**	**200**	**250**
Washington Headquarters			
Loan Guarantee Program	65,390	63,206	51,770
Total Washington Headquarters	**65,390**	**63,206**	**51,770**
Total Funding by Site for TAS_0208 - Title 17 Innovative Technology Loan Guarantee Program	**66,206**	**66,206**	**55,000**

DEPARTMENT OF ENERGY

Funding by Site

TAS_0350 - Tribal Energy Loan Guarantee Program Fund - FY 2025

(Dollars in Thousands)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget
Oak Ridge National Laboratory			
Administrative Expenses - Tribal Energy Loan Guarantee Program	10	10	10
Total Oak Ridge National Laboratory	**10**	**10**	**10**
Washington Headquarters			
Administrative Expenses - Tribal Energy Loan Guarantee Program	1,990	1,990	6,290
Tribal Energy Loan Guarantee Credit Subsidy	2,000	2,000	0
Total Washington Headquarters	**3,990**	**3,990**	**6,290**
Total Funding by Site for TAS_0350 - Tribal Energy Loan Guarantee Program Fund	**4,000**	**4,000**	**6,300**

Power Marketing Administrations

Power Marketing Administrations

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted
Gross	100,960	100,960	98,943	-2,017
Offsets	-100,960	-100,960	-98,943	2,017
Net BA	**0**	**0**	**0**	**0**

Proposed Appropriation Language

For expenses necessary for operation and maintenance of power transmission facilities and for marketing electric power and energy, including transmission wheeling and ancillary services, pursuant to section 5 of the Flood Control Act of 1944 (16 U.S.C. 825s), as applied to the southeastern power area, $9,127,000, including official reception and representation expenses in an amount not to exceed $1,500, to remain available until expended: Provided, That notwithstanding 31 U.S.C. 3302 and section 5 of the Flood Control Act of 1944, up to $9,127,000, collected by the Southeastern Power Administration from the sale of power and related services shall be credited to this account as discretionary offsetting collections, to remain available until expended for the sole purpose of funding the annual expenses of the Southeastern Power Administration: Provided further, That the sum herein appropriated for annual expenses shall be reduced as collections are received during the fiscal year so as to result in a final fiscal year 2025 appropriation estimated at not more than $0: Provided further, That, notwithstanding 31 U.S.C. 3302, up to $75,778,000 collected by the Southeastern Power Administration pursuant to the Flood Control Act of 1944 to recover purchase power and wheeling expenses shall be credited to this account as offsetting collections, to remain available until expended for the sole purpose of making purchase power and wheeling expenditures: Provided further, That for purposes of this appropriation, annual expenses means expenditures that are generally recovered in the same year that they are incurred (excluding purchase power and wheeling expenses).

Mission

Southeastern Power Administration (Southeastern or SEPA) markets and delivers Federal hydroelectric power at the lowest possible cost, consistent with sound business principles, to public bodies and cooperatives in accordance with Section 5 of the Flood Control Act of 1944 (16 U.S.C. 825s).

Overview

Southeastern strives to carry out the functions assigned by the Flood Control Act of 1944 in the southeastern United States in a professional, innovative, customer-oriented manner, while continuing to meet the challenges of an ever-changing electric utility environment through continuous improvement. Southeastern provides 472 public power customers with 3,392 megawatts of hydroelectric capacity from 22 Federal multipurpose projects, operated by the U.S. Army Corps of Engineers (Corps) at cost-based rates.

Annually, Southeastern produces an average of 7,717 gigawatt-hours of clean renewable hydroelectric energy. Southeastern maintains and upgrades its energy infrastructure to ensure reliable and efficient delivery of Federal power. Southeastern promotes energy efficiency, renewable energy, and sound management of the dispatch and distribution of Federal hydroelectric power resources in the southeastern United States while also meeting national utility performance standards and balancing the diverse interests of other water resource stakeholders. Federal hydropower supports the Nation’s grid and complements other generation to create stability as the industry faces energy production changes, organized market evolution and increased threats to the grid. Hydroelectric power is a domestic energy source that helps America achieve clean energy security. This budget submission enables Southeastern to promote the effective management of hydroelectric resources.

FY 2023 Key Accomplishments

- Jim Woodruff Power Marketing Policy
    - Formal marketing policy developed for a single project system in Florida occasioned by the termination of the 1957 legacy arrangement

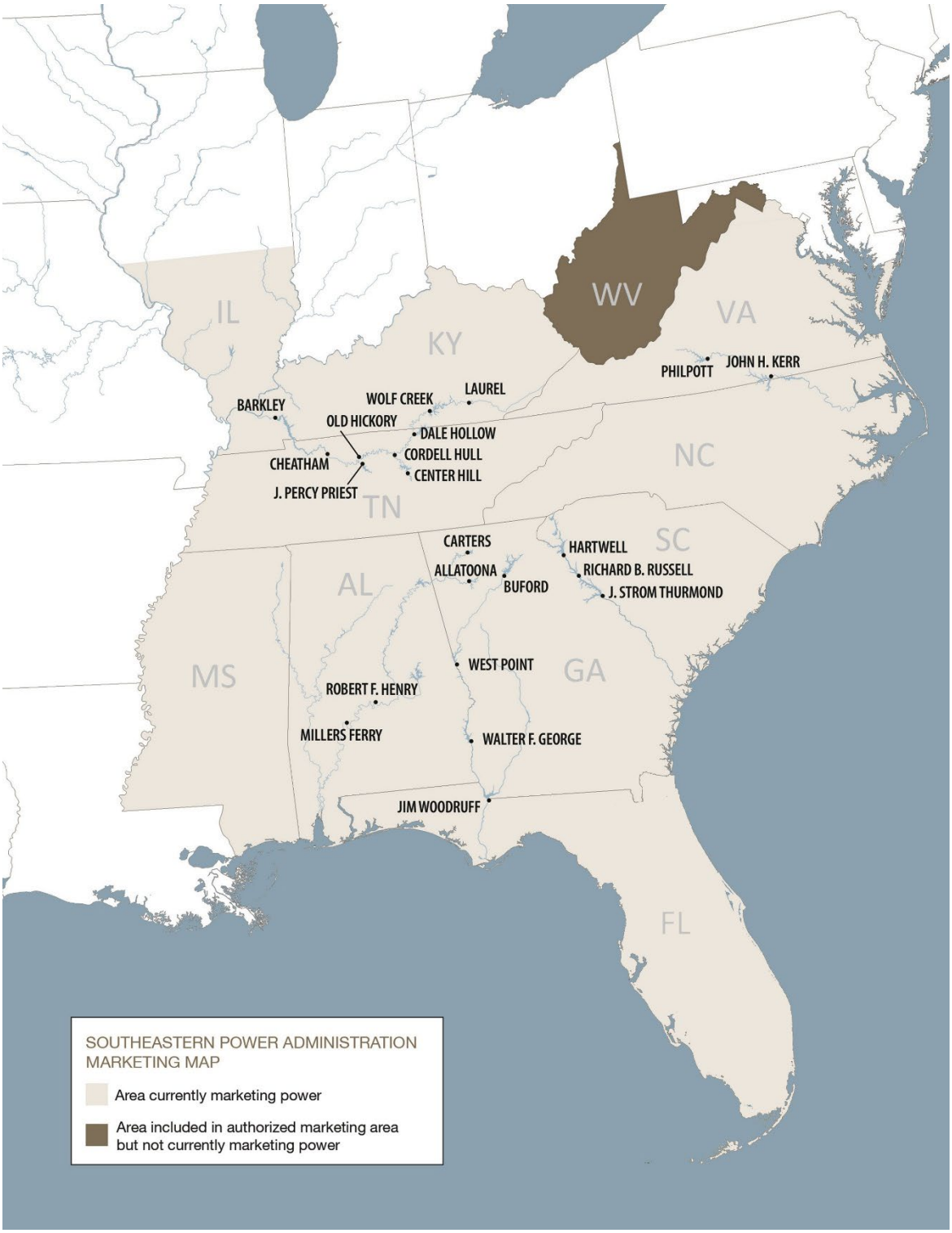
- Renewable Energy Certificate Program (REC)
    - Kerr-Philpott System and GA-AL-SC customers currently receiving RECs
    - Cumberland and Jim Woodruff systems customers soon to follow

- Section 212 Customer Funding
    - Continued success with over $800M provided for Hydropower infrastructure investment since inception in 2004

- Maintenance and contract adjustments occasioned by building purchase

- Registration in the Southeastern Energy Exchange Market (SEEM)
    - Southeastern regularly purchases pumping and replacement energy using a staff-intensive, manual request/bid process;
    - SEEM platform facilitates sub-hourly, bilateral energy purchases utilizing unreserved transmission resources using an automated on-line market to match sellers with buyers of non-firm energy in near real-time.

Service Area Map



Southeastern Power Administration
Funding by Congressional Control
($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Southeastern Power Administration					
Purchase Power and Wheeling (PPW)	92,687	92,687	89,816	-2,871	-3%
Program Direction (PD)	8,273	8,273	9,127	854	10%
Subtotal, Southeastern Power Administration	**100,960**	**100,960**	**98,943**	**-2,017**	**-2%**
Offsetting Collections, PPW	-78,696	-78,696	-75,778	2,918	-4%
Alternative Financing, PPW	-13,991	-13,991	-14,038	-47	0%
Offsetting Collections, Annual Expenses, PD	-8,173	-8,173	-9,127	-954	12%
Alternative Financing, PD	-100	-100	0	100	-100%
Total, Southeastern Power Administration	**0**	**0**	**0**	**0**	**0%**
Federal FTEs	**44**	**44**	**44**	0	0%

Future Years Energy Program (FYEP)

	FY 2025 Request	FY 2026	FY 2027	FY 2028	FY 2029
Gross	98,943	101,574	104,352	107,262	110,311
Offsets	-98,943	-101,574	-104,352	-107,262	-110,311
Net BA	0	0	0	0	0

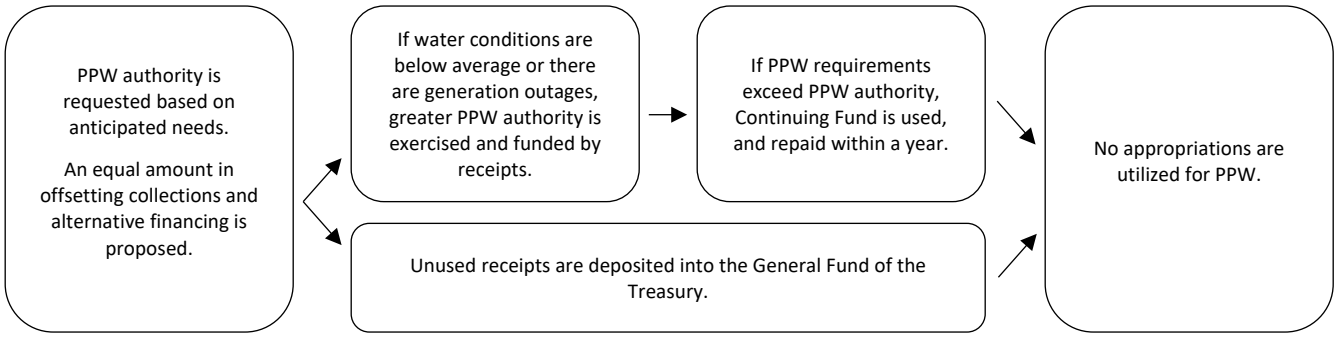
Purchase Power and Wheeling

Overview

The mission of Purchase Power and Wheeling (PPW) is to provide funding for acquisition of transmission services, ancillary services for the system, pumping energy for the Richard B. Russell and Carters Pumped Storage units, and support of the Jim Woodruff Project. Southeastern must purchase power on the open market when its Federal generating assets cannot provide enough power to fulfill its contracts with its customers.

Additionally, because Southeastern does not own or operate any transmission infrastructure, transmission expenses are based on contracts with area transmission providers to deliver specified amounts of Federal power from the hydropower projects to Federal power customers. Southeastern has access to a continuing fund for emergency expenses necessary to ensure continuity of service. Southeastern has implemented a plan to repay any Purchase Power and Wheeling expenditures made through the Continuing Fund within one year.

The FY 2025 request uses customer receipts and net billing to pay for purchase power and wheeling expenses at no cost to the Federal Treasury. Some customers, acting independently or in partnerships, acquire replacement power and transmission services directly from suppliers. Southeastern will continue to assist its customers by arranging funding for these activities through alternative financing instruments, as needed.



Highlights of the FY 2025 Budget Request

The PPW subprogram supports Southeastern's mission to market and deliver reliable, cost-based hydroelectric power and related services. PPW enables Southeastern to wheel Federal power to preference customers, purchase replacement power, and acquire pumping energy to maximize the efficiency and benefits of Southeastern's hydropower resources. Power and services are marketed at rates designed to provide recovery of expenses and Federal investment, as established by law. Compared to FY 2023 enacted levels, the FY 2025 request decreases PPW (-$2.871M), reflecting changes in transmission and rainfall estimates, along with changes to the Jim Woodruff System.

Purchase Power & Wheeling
Funding
($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Purchase Power					
Replacement Power	7,447	7,447	442	-7,005	-94%
Russell Project pumping power	12,017	12,017	13,467	1,450	12%
Carters Project pumping power	13,244	13,244	12,225	-1,019	-8%
Jim Woodruff Project support	2,000	2,000	0	-2,000	-100%
Total, Purchase Power	34,708	34,708	26,134	-8,574	-25%
Wheeling					
Wheeling service charges	53,239	53,239	58,582	5,343	10%
Ancillary Services	4,740	4,740	5,100	360	8%
Total, Wheeling	57,979	57,979	63,682	5,703	10%
Total, Purchase Power and Wheeling	**92,687**	**92,687**	**89,816**	**-2,871**	**-3%**
Alternative Financing					
Net Billing	-13,991	-13,991	-14,038	-47	0%
Subtotal, Purchase Power and Wheeling	78,696	78,696	75,778	-2,918	-4%
Offsetting Collections Realized	-78,696	-78,696	-75,778	2,918	-4%
Total, Purchase Power and Wheeling Budget Authority	0	0	0	0	0%

Southeastern Power Administration
Purchase Power and Wheeling
($K)

Activities, Milestones, and Explanation of Changes ($K)

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Purchase Power and Wheeling $92,687	**$89,816**	**-$2,871**
Purchase Power $34,708	**$26,134**	**-$8,574**
• On-Peak Replacement Power purchased to meet contract minimum service in drought conditions. • Off-Peak Pumping Power purchased to supplement stream flow energy demand. • Jim Woodruff System Generating Support required for high river flows at low head plant.	• Funding supports ongoing activities.	• Reflects anticipated needs based on projected market prices, rainfall estimates and changes in Jim Woodruff System Generating support.
Wheeling $57,979	**$63,682**	**+$5,703**
• Transmission expenses based on contracts with area transmission providers to deliver specified amounts of Federal power from the hydropower projects to Federal power customers.	• Funding supports ongoing activities.	• Reflects variations in transmission rates.

Program Direction

Overview

Program Direction (PD) provides the Federal staffing resources and associated costs required to provide overall direction and execution of Southeastern. Provision is made for negotiation and administration of transmission and power contracts, collections of revenues, accounting and budget activities, development of wholesale power rates, amortization of the Federal power investment, energy efficiency and competitiveness programs, investigation and planning of proposed water resources projects, scheduling and dispatch of power generation, scheduling storage and release of water, administration of contractual operation requirements, and determination of methods of operating generating plants individually and in coordination with others to obtain maximum allowable utilization of resources.

Highlights of the FY 2025 Budget Request

The FY 2025 Budget Request provides for the continuation of Southeastern's activities related to PD at the level necessary to meet mission requirements. Compared to FY 2023 enacted levels, the FY 2025 increases PD (+$.854M) based on more accurate cost estimates.

Program Direction Funding
($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Program Direction Summary					
Southeastern Power Administration					
Salaries and Benefits	5,800	5,800	6,200	400	7%
Travel	50	50	130	80	160%
Support Services	0	0	70	70	100%
Other Related Expenses	2,423	2,423	2,727	304	13%
Subtotal, Southeastern Power Administration	**8,273**	**8,273**	**9,127**	**854**	**10%**
Offsetting Collections (annual expenses)	-8,173	-8,173	-9,127	-954	12%
Alternative Financing, PD	-100	-100	0	100	-100%
Total, Program Direction	0	0	0	0	0%
Federal FTEs	44	44	44	0	0%
Support Services and Other Related Expenses					
Support Services					
Management and Professional Support Services	0	0	70	70	100%
Total, Support Services	**0**	**0**	**70**	70	0%
Other Related Expenses					
Training	35	35	40	5	14%
Communications, Utilities, Misc.	285	285	277	-8	-3%
Equipment	426	426	385	-41	-10%
Maintenance Agreements	570	570	746	176	31%
Tuition	75	75	76	1	1%
Contract Services	552	552	755	203	37%
Audit of Financial Statements	320	320	265	-55	-17%
Supplies and Materials	85	85	97	12	14%
Working Capital Fund	65	65	80	15	23%
Printing and Reproduction	10	10	6	-4	-40%
Total, Other Related Expenses	2,423	2,423	2,727	304	13%

Activities, Milestones, and Explanation of Changes ($K)

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Program Direction $8,273	**$9,127**	**+$854**
Salaries and Benefits $5,800	**$6,200**	**+$400**
The funding supports Federal salaries and benefits for 44 FTEs who market Federal hydropower, promote energy efficiency and renewable energy, administrative support, and workloads in cyber-security and operational reliability. These estimates are derived from the current year budgeted salaries, plus cost-of-living adjustments, promotions, within-grade increases, overtime, DOE-cascading performance awards, retirement payouts for unused leave, and newly hired FTEs.	Continue funding support for Federal salaries and benefits for 44 FTEs.	Reflects 2/3 of request due to the effects of staff retirement, recruitment and administratively determined (AD) pay adjustments and increased locality pay.
Travel $50	**$130**	**+$80**
Funding supports transportation and per diem expenses incurred for preference customer meetings, relocation expenses for new FTEs, contract negotiations, rate forums, Congressional hearings, site visits, and operations meetings with industry organizations.	Funding supports ongoing activities.	Continue funding support for transportation and per diem expenses incurred for various meetings and site visits.
Support Services $0	**$70**	**+$70**
No funding requested for FY 2023	Contract support services for sustainability reporting requirements.	Contract support services for sustainability reporting requirements.
Other Related Expenses $2,423	**$2,727**	**+$304**
Funding provides administrative support for headquarters office, emergency control center, communications, maintenance, utilities, contract services, supplies, materials, training, equipment and support for cyber and physical security. Training expenses for power operator certification and support for installation of electronic hardware and software for the operations center which provides maintenance to integrate real-time data from the control area and provides the data to other transmission operators and NERC.	Continue funding support for headquarters office and emergency control center, along with services of the Power Marketing Liaison Office, and the Human Resources Shared Service Center (HRSSC).	Reflects required hardware purchases and software service agreements and updates along with training, tuition, and communications costs. Costs are based on the historical usage and actual cost of similar items as well as inflationary increases.

Additional Tables

Revenue and Receipts ($K)

	FY 2023 Actual	FY 2024 Estimate	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate	FY 2029 Estimate
Gross Revenues	289,225	320,109	344,509	346,964	349,544	352,250	355,092
Net Billing (Credited as an Offsetting Receipt)	-13,545	-14,169	-14,038	-14,232	-14,435	-14,648	-14,871
Total Cash Receipts	275,680	305,940	330,471	332,732	335,109	337,602	340,221
Use of Offsetting Collections to fund PPW	-78,696	-71,850	-75,778	-78,040	-80,416	-82,910	-85,529
Use of Offsetting Collections to fund Annual Expenses	-8,273	-8,449	-9,127	-9,302	-9,501	-9,704	-9,911
Total Receipts, net use of Offsetting Collections	188,711	225,641	245,566	245,390	245,192	244,988	244,781
Cumberland Rehabilitation	-43,344	-50,000	-50,000	-50,000	-50,000	-50,000	-50,000
GA-AL-SC Rehabilitation	-14,400	-15,000	-15,000	-15,000	-15,000	-15,000	-15,000
Kerr-Philpott Rehabilitation	0	-5,000	-5,000	-5,000	-5,000	-5,000	-5,000
Jim Woodruff	0	-1,000	-1,000	-1,000	-1,000	-1,000	-1,000
Accts Rec Yearly Difference	0	0	0	0	0	0	0
Total Proprietary Receipts	130,967	154,641	174,566	174,390	174,192	173,988	173,781
Percent of Sales to Preference Customers	99%	99%	100%	100%	100%	100%	100%
Energy Sales and Power Marketed (megawatt-hours)	6,338,116	5,587,740	5,587,740	5,587,740	5,587,740	5,587,740	5,587,740

Alternative Financing 2023	Transmission	Purchase Power	Offsetting Collections	Net Billing	Appropriated Funds
Jim Woodruff System	355	1,483	-1,148	-690	0
Kerr-Philpott System	10,652	0	-10,652	0	0
GA-AL-SC System	54,481	15,658	-66,716	-3,423	0
Cumberland System	9,612	0	-180	-9,432	0
	75,100	17,141	-78,696	-13,545	0

2024	Transmission	Purchase Power	Offsetting Collections	Net Billing	Appropriated Funds
Jim Woodruff System	348	2,000	-1,648	-700	0
Kerr-Philpott System	19,461	0	-19,461	0	0
GA-AL-SC System	30,568	23,823	-50,658	-3,733	0
Cumberland System	9,819	0	-83	-9,736	0
	60,196	25,823	-71,850	-14,169	0

2025	Transmission	Purchase Power	Offsetting Collections	Net Billing	Appropriated Funds
Jim Woodruff System	0	0	700	-700	0
Kerr-Philpott System	19,973	0	-19,973	0	0
GA-AL-SC System	34,153	26,134	-56,422	-3,865	0
Cumberland System	9,556	0	-83	-9,473	0
	63,682	26,134	-75,778	-14,038	0

Power Marketed, Wheeled, or Exchanged by Project

Project	State	Plants	Installed Capacity (KW)	FY 2023 Estimated Power (GWH)	FY 2024 Estimated Power (GWH)	FY 2025 Estimated Power (GWH)
Kerr-Philpott System				293	293	293
John H. Kerr	VA-NC	1	291,000			
Philpott	VA	1	15,000			
Georgia-Alabama-South Carolina System				2,508	2,508	2,508
Allatoona	GA	1	82,000			
Buford	GA	1	127,000			
Carters	GA	1	600,000			
J. Strom Thurmond	GA-SC	1	364,000			
Walter F. George	GA-AL	1	160,000			
Hartwell	GA-SC	1	424,000			
R. F. Henry	AL	1	82,000			
Millers Ferry	AL	1	90,000			
West Point	GA-AL	1	87,000			
Richard B. Russell	GA-SC	1	656,000			
Jim Woodruff Project	FL-GA	1	43,500	148	148	194
Cumberland System				2,481	2,481	2,481
Barkley	KY	1	130,000			
Center Hill	TN	1	135,000			
Cheatham	TN	1	36,000			
Cordell Hull	TN	1	99,900			
Dale Hollow	TN	1	54,000			
Old Hickory	TN	1	103,752			
J. Percy Priest	TN	1	28,000			
Wolf Creek	TN	1	270,000			
Laurel	TN	1	61,000			
Total Power Marketed		22	3,939,152	5,430	5,430	5,430

System Statistics

	FY 2023 Actual	FY 2024 Estimate	FY 2025 Estimate
Generating Capacity:			
Nameplate Capacity (KW)	3,939,152	3,939,152	3,939,152
Peak Capacity (KW) [a]	4,330,000	4,330,000	4,330,000
Generating Stations			
Generating Projects (Number)	22	22	22
Available Energy			
Energy from Stream-flow (MWH)	5,892,664	4,685,000	4,685,000
Energy generated from Pumping (MWH)	390,800	745,100	745,100
Energy Purchased for Replacement (MWH)	54,652	157,640	157,640
Total, Energy available for marketing [b] (MWH)	6,338,116	5,587,740	5,587,740

[a] Southeastern markets capacity based on nameplate plus an overload factor. NERC requires that Southeastern keep a portion of the capacity in reserve for emergency purposes and to cover losses.

[b] Gross amount. Transmission losses are deducted from this amount to estimate the amount of energy marketed.

Southwestern Power Administration
Proposed Appropriation Language

For expenses necessary for operation and maintenance of power transmission facilities and for marketing electric power and energy, for construction and acquisition of transmission lines, substations and appurtenant facilities, and for administrative expenses, including official reception and representation expenses in an amount not to exceed $1,500 in carrying out section 5 of the Flood Control Act of 1944 (16 U.S.C. 825s), as applied to the Southwestern Power Administration, $55,070,000 to remain available until expended: Provided, That notwithstanding 31 U.S.C. 3302 and section 5 of the Flood Control Act of 1944 (16 U.S.C. 825s), up to $43,630,000 collected by the Southwestern Power Administration from the sale of power and related services shall be credited to this account as discretionary offsetting collections, to remain available until expended, for the sole purpose of funding the annual expenses of the Southwestern Power Administration: Provided further, That the sum herein appropriated for annual expenses shall be reduced as collections are received during the fiscal year so as to result in a final fiscal year 2023 appropriation estimated at not more than $11,440,000: Provided further, That, notwithstanding 31 U.S.C. 3302, up to $80,000,000 collected by the Southwestern Power Administration pursuant to the Flood Control Act of 1944 to recover purchase power and wheeling expenses shall be credited to this account as offsetting collections, to remain available until expended for the sole purpose of making purchase power and wheeling expenditures: Provided further, That for purposes of this appropriation, annual expenses means expenditures that are generally recovered in the same year that they are incurred (excluding purchase power and wheeling expenses).

Explanation of Changes

No changes.

Southwestern Power Administration
Overview
($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted
Gross	162,802	162,802	182,891	+20,089
Offsets	-152,194	-152,194	-171,451	-19,257
Net BA	10,608	10,608	11,440	+832

Overview

Southwestern Power Administration's (Southwestern) mission is to market and reliably deliver Federal hydroelectric power, with preference to public bodies and cooperatives. This is accomplished by maximizing the use of Federal assets to repay the Federal investment, participating with other water resource users to balance diverse interests with power needs within broad parameters set by the U.S. Army Corps of Engineers (Corps), and implementing public policy.

Southwestern markets and delivers power at wholesale rates to 78 municipal utilities, 21 rural electric cooperatives, and 3 military installations in the six states of Arkansas, Kansas, Louisiana, Missouri, Oklahoma, and Texas[1]. In turn, these customers distribute that power to approximately 10 million end users in the six-state area. To integrate the operation of the Federal hydroelectric generating plants and to transmit power from 24 multi-purpose Corps dams to customers, Southwestern operates and maintains 1,381 miles of high-voltage transmission lines, 26 substations/switchyards, and 51 microwave and very high frequency (VHF) radio sites. Southwestern is headquartered in Tulsa, Oklahoma, and has maintenance facilities in Gore, Oklahoma; Jonesboro, Arkansas; and Springfield, Missouri. In addition, around-the-clock power scheduling and dispatching are conducted by staff in Southwestern's Operations Center located in southwest Missouri.

Southwestern participates in the Southwest Power Pool (SPP) Regional Transmission Organization (RTO) and the Midcontinent Independent System Operator (MISO) RTO, which reinforces Southwestern's role as part of the Nation's interconnected generation and transmission system. In participation with the RTOs, Southwestern works on regional and interregional transmission policy initiatives in response to the evolution of the electric utility industry. Furthermore, Southwestern coordinates its varied utility activities in conjunction with a broader group of stakeholders. As the demand for the transmission of power increases across regional and interregional footprints, maintaining and improving the Nation's energy infrastructure through improvements, replacements, interconnections, and coordination with the RTOs in Southwestern's marketing area has become more critical than ever. Southwestern assures the efficient and reliable delivery of Federal hydropower, thus fulfilling clean energy security for the present as well as for future generations.

Southwestern's marketing services and delivery capability provide for recovery of all annual operating costs, including the Corps' hydropower related costs, and for repayment of taxpayer investment in all assets and facilities that support the Federal hydropower program. Hydropower is not only an important part of the Nation's clean energy portfolio due to clean generation capabilities, but it also provides support for other renewable resources. Federal hydropower supports the Nation's grid and complements other generation to create stability as the industry faces energy production changes, organized market evolution and increased threats to the grid. Hydroelectric power is a domestic energy source that helps America achieve clean energy security. Southwestern markets an average of 5,570 gigawatt-hours of clean renewable hydroelectric energy annually.

Southwestern will use the following strategies to fulfill its mission:

[1] Southwestern's system map can be found at https://www.energy.gov/sites/default/files/2022-08/SWPA_System_Map.pdf.

- Market and deliver, at the lowest possible cost, all available Federal hydropower generated at the Corps multipurpose projects and work with the Corps, States, cooperatives, and municipalities to meet its statutory requirements while balancing the interests of other water users.
- Maintain infrastructure and modernize systems to increase the resilience, reliability, efficiency, and use of Federal assets. This will be accomplished using appropriations; Federal power receipts; and alternative financing arrangements, which include net billing and/or reimbursable authority (customer advances).[2]
- Conduct annual power repayment studies to ensure power rates are sufficient to repay all annual operating costs and the Federal investment with interest.
- Meet Southwestern's 1200-hour peaking power contractual obligations with necessary purchase power and wheeling using Federal power receipts; alternative financing arrangements, and the Continuing Fund as necessary in periods of below-average hydropower generation.
- Operate the transmission system efficiently to support the Nation's integrated power grid and engage in transmission policy initiatives within the RTOs in Southwestern's marketing area to respond effectively to the evolution of the electric utility industry.
- Meet requirements for Southwestern's compliance with the latest North American Electric Reliability Corporation (NERC) standards.
- Bolster Southwestern's grid resilience and cyber and physical security postures using best-available technologies and in cooperation with Department of Energy (DOE) and industry partners to protect the Federal transmission system and the Nation's power grid. Ongoing assessments, realigning vacant positions, investments in the cyber and physical security programs, and infrastructure protection improvements enable Southwestern to continue to provide a safe and reliable product. Southwestern will continue to emphasize security, both cyber and physical, as an agency priority.

External factors that present potential impacts to the overall achievement of the programs' strategic goals include weather, natural disasters, NERC reliability standards, industry market developments, physical and cybersecurity, changing electric industry organizational structure, interconnections, open access, the uncertainty of sustainable funding resources, competing uses' demand for the limited water resource, and other unforeseen requirements. More specifically:

- The bulk of Southwestern's transmission infrastructure is approximately 60 years old and requires ongoing maintenance and replacement while concurrently balancing changing and increasing demands for availability.
- Industry efforts to improve the reliability of the Nation's power grid are placing more requirements on Southwestern's workforce to implement mandatory reliability standards.
- The potential for malicious physical and cyber-attacks on Southwestern's assets remains a primary concern. These attacks, cyber and physical, on a utility's operation would threaten electric system reliability and potentially result in large scale power outages.
- As more of Southwestern's employees retire or leave Federal service, Southwestern must compete with the rest of the electric utility industry to attract and retain the quality workforce needed to provide a reliable power supply and transmission service.
- Southwestern is increasingly challenged by more complex transmission policy developments including intricate energy and capacity markets, transmission planning processes, and technical rate structures; the deployment of new technologies such as renewables and distributed generation; and heightening emissions and environmental restrictions.
- The Corps water resources projects from which Southwestern markets the hydropower are all multi-purpose. As the demand for water for other purposes increases, energy generation and operating capacity of the hydropower units can be impacted by loss of water storage and availability as well as required operational changes.
- Extreme regional weather events have demonstrated increased price volatility for potential replacement energy purchases necessary to meet contractual power delivery obligations.
- Greater support for climate resilience, regional grid reliability, infrastructure investment, and rate stability as regional utility customers make decisions to transition to cleaner energy resources.

Highlights of the FY 2025 Budget Request

[2] Southwestern's authority to use net billing is inherent in the authority provided by the Flood Control Act of 1944 and has been affirmed by the Comptroller General to the Honorable Secretary of the Interior B-125127 (February 14, 1956).

Southwestern requests a net appropriation of $11.44 million for FY 2025. Southwestern's appropriation consists of four subprograms: Operations and Maintenance, Construction, Purchase Power and Wheeling, and Program Direction. Southwestern utilizes a variety of financing methods including appropriations, Federal power receipts, and alternative financing arrangements, which include net billing and/or reimbursable authority (customer advances).

Southwestern Power Administration
Funding by Congressional Control ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted	
				$	%
Operation and Maintenance					
Operations and Maintenance (O&M)	15,517	15,517	16,910	+ 1,393	+ 9%
Construction (CN)	16,035	16,035	3,681	- 12,354	- 77%
Purchase Power and Wheeling (PPW)	93,000	93,000	120,000	+ 27,000	+ 29%
Program Direction (PD)	38,250	38,250	42,300	+ 4,050	+ 11%
Subtotal, Operation and Maintenance	**162,802**	**162,802**	**182,891**	**+ 20,089**	**+ 12%**
Offsetting Collections, O&M	- 7,998	- 7,998	- 9,637	- 1,639	- 20%
Offsetting Collections, PD	- 34,882	- 34,882	- 33,993	+889	+ 3%
Offsetting Collections, PPW	- 70,000	- 70,000	- 80,000	- 10,000	- 14%
Alternative Financing, O&M	- 5,279	- 5,279	- 3,858	+ 1,421	+ 27%
Alternative Financing, CN	- 11,035	- 11,035	- 0	+ 11,035	+ 100%
Alternative Financing, PD	-0	-0	- 3,963	- 3,963	- 100%
Alternative Financing, PPW	- 23,000	- 23,000	- 40,000	- 17,000	- 74%
Net Budget Authority, Operation and Maintenance	**10,608**	**10,608**	**11,440**	**+ 832**	**+ 8%**
Federal FTEs	194	194	194	0	0%

Operation and Maintenance
Explanation of Major Changes ($K)

	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Operations and Maintenance: The change reflects an increase in IT related support services, and an overall increase in equipment and material costs that have doubled, in some cases tripled, in the years since Covid.	**+ 1,393**
Construction: Due to delays in awarding prior year contracts, Southwestern will not schedule any new Transmission Line Replacement/Upgrade projects for FY 2025 and will resume in FY 2026.	**- 12,354**
Purchase Power and Wheeling: The request reflects the anticipated needs for periods of severe drought or low water conditions, that can develop rapidly in Southwestern's region, based on projected market prices. It is important for Southwestern to maintain access to funding via spending authority from offsetting collections and alternative financing, at a level that provides Southwestern PPW funding options to best plan for and respond to varied hydrologic conditions, as well as operational impacts, such as hydropower unit outages for major rehabilitation.	**+ 27,000**
Program Direction: The increase in the program direction subprogram reflects aggressive recruiting to fill several technical hard to fill positions, back-filling retirees, cost of living increases for craft workers and power system dispatchers, and filling succession planning positions for knowledge transfer. Also, increase in support services for projected contractual cost of living adjustments.	**+ 4,050**
Total, Southwestern, Operation and Maintenance	**+ 20,089**

Operations and Maintenance
Funding ($K)

	FY 2023 Enacted	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted
Operations and Maintenance			
Power Marketing	200	200	0
Operations	9,888	9,011	- 877
Maintenance	2,930	5,221	+ 2,291
Capitalized Moveable Equipment	2,499	2,478	- 21
Subtotal, Operations and Maintenance	**15,517**	**16,910**	**+ 1,393**
Offsetting Collections (annual expenses)	- 7,998	- 9,637	- 1,639
Alternative Financing	- 5,279	- 3,858	+ 1,421
Total, Operations and Maintenance	**2,240**	**3,415**	**+ 1,175**

Southwestern Power Administration
Operations and Maintenance

Description

The activities of the Operations and Maintenance (O&M) subprogram are critical components in maintaining the reliability of the Federal power system, which is part of the Nation's interconnected generation and transmission system. By marketing and delivering hydroelectric energy, Southwestern makes a meaningful contribution of clean, safe, reliable, affordable, and secure renewable hydroelectric energy to our Nation. The Energy Policy Act (EPACT) and the DOE and Administration's policies emphasize its significant contribution to the Nation's past, current, and future energy supply; and identify Southwestern's important role in meeting electricity demand by supplying hydroelectric energy to its customers. These laws and policies emphasize the need to repair, maintain, and improve transmission and generation facilities to ensure safety, security, resilience, and reliability of the Nation's energy infrastructure. Southwestern continuously assesses changing climate forecast data to improve climate resilience, including efforts to support the value and stability of the Southwestern Federal hydropower products and to ensure response and recovery from climate and extreme weather events. Southwestern continues to participate in the DOE Climate Adaptation and Resilience Plan implementation, and as part of that effort Southwestern developed an initial Vulnerability Assessment and Resilience Plan that will be reassessed periodically at a minimum every four years.

Southwestern's planned O&M projects are subject to change due to unanticipated equipment failure, customer needs, and weather conditions. The realities of maintaining a complex interconnected electric power system periodically require unforeseen reprioritizations of planned projects. All projects share the commonality of maintaining, repairing, and improving the aging infrastructure to ensure the resilience and reliability of the Federal power system.

Power Marketing

The Power Marketing activity funds technical and economic studies to support Southwestern's transmission planning, water resources management, and communication functions. Technical and economic studies provide data to analyze and evaluate the impacts of proposed operational changes and decision-making based on cost-benefit analysis. Funding is also required for Southwestern's coordination with the RTOs and to provide regional power restoration assistance to other non-hydropower generation sources during electric power grid emergencies. The National Electric Transmission Congestion Study identified constraints in the Nation's interconnected electrical grid which could impede power flows. Studies to identify any constraints on Southwestern's system will continue to be conducted. These studies show how the marketing and delivery of power is operationally impacted. The funding level for this activity is derived from Southwestern's engineering plan, negotiated architect/engineering contracts, and the number of studies required per year.

Operations

The Operations activity funds communication functions associated with the dispatch and delivery of power; environmental, safety, and health activities; and other transmission activity costs such as physical security, cybersecurity, and day-to-day power dispatch functions. The Operations activity includes three subactivities:

Communications

This subactivity funds telemetering improvements, technical support to protect cyber infrastructure, an e-tagging system that electronically schedules power for customers, load forecasting, digital test equipment, the radio frequency spectrum fee, and supplies and materials. The telemetering improvements include replacement of obsolete power and energy accounting equipment and modification of existing remote terminal units that improve the reliability of the power system, specifically in the areas of monitoring and control. Funding is required for upgrades that enable Southwestern to meet the goals of the EPACT and NERC by replacing aging infrastructure while assuring reliability and continuing to coordinate with the RTOs in its marketing area.

Southwestern will continue to strengthen cyber and physical security postures using strong and proven technologies that are part of the Continuous Diagnostics and mitigation (CDM) program. In addition to CDM, Southwestern continues to look for other technologies that can be leveraged to ensure compliance with applicable laws and standards to protect the Federal transmission system and the Nation's power grid.

Environmental, Safety, and Health

This subactivity funds environmental activities including waste disposal and clean-up of transformers, grounding and drainage, cultural resource reviews, and environmental assessments for threatened and endangered species such as the American Burying Beetle, various endangered bats, the Leopard Darter, and Interior Least Tern. Additionally, Southwestern may have environmental activities it performs as a Consulting Agency or participating agency resulting from a Biological Opinion or Biological Assessment, or as a participant on an interagency committee or working group. This subactivity also funds property transfers, wetland assessments, environmental library access, Toxic Substance Control Act and Resource Conservation Recovery Act compliance, contractor services, and requirements of the Environmental Protection Program as identified in DOE Order 450.1. The Safety and Health Program activities require funding for aviation safety, industrial hygiene, medical examinations, medical officer, wellness program, safety equipment, and first aid equipment and supplies.

Other Transmission

This subactivity funds physical security, field utility costs, and day-to-day power expenses of the dispatch center and the Alternate Control Center.

Maintenance

The Maintenance activity funds routine repair, maintenance, and improvement of Southwestern's substations/switchyards and high-voltage transmission lines and ensures delivery of reliable, efficient, and clean power to its customers. Southwestern's initial facilities, which were built approximately 60 years ago, are constantly evaluated. Internal and external factors that impact Southwestern's maintenance activities and the asset replacement plan include obsolescence of technology and unavailability of replacement parts. By replacing aging equipment and removing constraints that impede power flows, Southwestern ensures the provision of a reliable Federal transmission system. The maintenance activity includes two subactivities:

Substation Maintenance

This subactivity funds power circuit breakers, disconnect switches, instrument transformers, protective relays and related equipment, computer aided drafting and design, revenue meters, vehicle maintenance, fuel, and other equipment to reliably perform general maintenance projects.

Transmission Line Maintenance

This subactivity funds the purchase and maintenance of wood and steel structures, crossarms and braces, right-of-way (ROW) clearing, herbicide application, aerial patrol of the transmission system to identify maintenance needs, routine vehicle repair and maintenance, tractors, equipment, and fuel. The number of steel or wood poles and crossarms and high-voltage insulators replaced is derived from internal maintenance information system criteria. Emphasis has been placed on ROW clearing since NERC identified improper/insufficient ROW clearing as a major factor in potential blackouts. The funding level is appropriate for the number of structures and components to be replaced and the miles of ROW to be cleared as set forth by Southwestern's maintenance plan for meeting the goals of the EPACT and NERC to maintain a reliable transmission system.

Capitalized Moveable Equipment

This activity funds the replacement of vehicles, tractor-trailers, and heavy equipment used for the maintenance and repair of the transmission system and facilities. These vehicles and equipment have exceeded their useful lives and require high levels of maintenance. The vehicle cost estimates are derived from General Services Administration (GSA) pricing schedules.

Operations and Maintenance

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Operations and Maintenance $15,517,000	**$16,910,000**	**+ $1,393,000**
Power Marketing $200,000	**$200,000**	**$0**
• The Power Marketing activity funds the technical and economic studies to support transmission planning.	• The Power Marketing activity funds the technical and economic studies to support transmission planning.	• Funding request remains the same.
Operations $9,888,000	**$9,011,000**	**-$877,000**
Communications ($6,466,000) • This subactivity funds telemetering improvements, technical support to protect cyber infrastructure, SCADA/EMS system maintenance, load forecasting, and digital testing equipment.	*Communications ($7,194,000)* • This subactivity funds telemetering improvements, technical support to protect cyber infrastructure, SCADA/EMS system maintenance, load forecasting, and digital testing equipment.	*Communications (+ $728,000)* • The increase reflects required hardware and software, and support services.

Environmental, Safety, and Health ($2,161,000) • The subactivity funds environmental, safety, and health services.	*Environmental, Safety, and Health ($921,000)* • The subactivity funds environmental, safety, and health services.	*Environmental, Safety, and Health (- $1,240,000)* • The decrease reflects the use of FY 2023 retained funds during renegotiation of the cultural resources archeological survey on Southwestern's transmission lines for future contracts.
Other Transmission ($1,261,000) • The subactivity funds physical security, field utility costs, and day to day expenses of the dispatch center. Headquarters (HQ) utility costs were included in O&M for FY 2023.	*Other Transmission ($896,000)* • The subactivity funds physical security, field utility costs, and day to day expenses of the dispatch center.	*Other Transmission (- $365,000)* • HQ utility costs were included in O&M in FY 2023 and moved to Program Direction in FY 2024 and out years.
Maintenance $2,930,000	**$ 5,221,000**	**+ $2,291,000**
Substation ($1,462,000) • This subactivity funds all equipment, parts, and materials for the operation of high voltage substations.	*Substation ($2,678,000)* • This subactivity funds all equipment, parts, and materials for the operation of high voltage substations.	*Substation (+ $1,216,000)* • The increase reflects parking lot refurbishment at 2 locations and increasing costs related to equipment purchases.
Transmission Line Maintenance ($1,468,000) • This subactivity funds all equipment, parts, and materials for the operation of the high voltage transmission system. Also, vegetation management contracts.	*Transmission Line Maintenance ($2,543,000)* • This subactivity funds all equipment, parts, and materials for the operation of the high voltage transmission system. Also, vegetation management contracts.	*Transmission Line Maintenance (+ $1,075,000)* • The change reflects increasing costs of materials.
Capitalized Moveable Equipment $2,499,000	**$2,478,000**	**- $21,000**
• This activity funds the replacement of vehicles, tractor-trailers, and heavy equipment used for the maintenance and repair of the transmission system and facilities.	• This activity funds the replacement of vehicles, tractor-trailers, and heavy equipment used for the maintenance and repair of the transmission system and facilities.	• The change reflects an increase in cost of replacement vehicles and equipment, coupled with slightly fewer estimated replacements.

Construction
Funding ($K)

	FY 2023 Enacted	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted
Construction			
Transmission System			
Substation Upgrades	567	701	+ 134
Communication Upgrades	4,122	2,980	- 1,142
Transmission Upgrades	11,346	0	- 11,346
Subtotal, Construction	**16,035**	**3,681**	**- 12,354**
Alternative Financing	- 11,035	- 0	+ 11,035
Total, Construction	**5,000**	**3,681**	- **1,319**

Southwestern Power Administration
Construction

Description
The activities of the Construction subprogram enable Southwestern to market and deliver Federal hydropower in the most reliable, safe, efficient, and cost-effective manner to meet the operational criteria required by the North American Electric Reliability Corporation while avoiding transmission infrastructure deterioration. Southwestern's planned construction projects are subject to change based on unanticipated equipment failure, customer needs, and weather conditions. The realities of maintaining a complex interconnected power system include unforeseen priority projects which arise periodically, causing a reprioritization of planned projects. All projects share the commonality of replacing aging infrastructure necessary to maintain the resilience and reliability of the Federal power system. Southwestern supports climate resilience through improved response and recovery controls aimed to reduce the impact of various potential natural disaster risks to the transmission system.

Transmission System
This activity funds current construction projects that require expansion of, or additions to, existing facilities. Southwestern ensures system reliability and resiliency by replacing aging equipment and removing constraints that limit power flows. The projects outlined below address Southwestern's efforts to reduce the risk of extended service outages, avoid more costly replacements in the future, and support the increased transmission system usage. The funding level for this activity is derived from internal and external management decisions and field crew observations. System age, risk of equipment failure, life-cycles, obsolescence of technology and unavailability of spare parts, cost, and demand for more capacity are also considered in these budgeting decisions. These variables are assessed and incorporated into Southwestern's ten-year construction plan. The transmission activity includes three subactivities:

Substation Upgrades
This subactivity funds the construction and upgrade of the substations and the components necessary to provide improved system reliability and reduce future maintenance and equipment costs. Southwestern owns and operates 26 substation/switching stations. Many of these facilities were designed and constructed over 60 years ago. The equipment which will be replaced or upgraded includes power transformers, circuit breakers, and control equipment, as well as the structural components necessary to sustain reliable power delivery and support a stable, flexible interconnected power grid.

Communication Upgrades

This subactivity funds all communication equipment planned to provide improved system reliability and reduce future maintenance and equipment costs. This subactivity also provides funding for microwave radios and microwave tower additions, replacements, and modifications that will increase the reliability of communications with generating plants and substations. The communication system provides for the transfer of voice and data traffic to allow monitoring and control of power system generation and transmission assets.

Transmission Upgrades

This subactivity funds transmission system upgrades. Much of the conductor, optical ground wire (OPGW), and static wire on Southwestern's transmission lines has reached the end of its original assumed service life. With this assumed service life, approximately 20 to 30 miles of transmission line, including the conductor, OPGW, static wire, and structures, will need to be replaced each year. As Southwestern replaces the conductor, Southwestern will use the opportunity to increase line capacity where practical to accommodate increased loads in the region.

Spectrum Relocation

The Commercial Spectrum Enhancement Act of 2004 (CSEA, Title II of P.L. 108-494) created the Spectrum Relocation Fund (SRF) to streamline the relocation of Federal systems from existing spectrum bands and accommodate commercial use by facilitating reimbursement of relocation costs to affected agencies. Southwestern has received $46.8 million in spectrum relocation funds, as approved by the Office of Management and Budget, and as reported to the Congress. Southwestern has completed 100 percent of the tower installation project and anticipates completing antenna and radio installation and obtaining comparable capability by December 31, 2024. These mandatory funds will remain available until expended, and Southwestern will return any amounts received in excess of actual relocation costs to the SRF. Spectrum relocation activities were funded from spectrum auction proceeds; thus, no funding is requested in this subactivity.

Construction

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Construction $16,035,000	**$3,681,000**	**- $12,354,000**
Transmission System $16,035,000	**$3,681,000**	**- $12,354,000**
Substation Upgrades ($567,000) • This subactivity funds all substation equipment replacements.	*Substation Upgrades ($701,000)* • This subactivity funds all substation equipment replacements.	*Substation Upgrades (+ $134,000)* • The increase reflects additional costs for the Brown substation security fence replacement.
Communication Upgrades ($4,122,000) • This subactivity funds all communication equipment additions and upgrades. Projects include microwave equipment, fiber terminal equipment upgrades, and microwave tower at Bull Shoals.	*Communication Upgrades ($2,980,000)* • This subactivity funds all communication equipment additions and upgrades.	*Communication Upgrades (-$1,142,000)* • The decrease reflects the cost differential between the Nixa/Hercules Tower projects in FY 2023 and the Radio Equipment replacements in FY 2025.
Transmission Upgrades ($11,346,000) • This subactivity funds transmission system upgrades such as structure rebuilds, reconductoring, etc..	*Transmission Upgrades ($0)* • This subactivity funds transmission system upgrades such as structure rebuilds, reconductoring, etc..	*Transmission Upgrades (-$11,346,000)* • No new transmission upgrades scheduled in FY 2025 due to delay in prior year contract awards.

Purchase Power and Wheeling
Funding ($K)

	FY 2023 Enacted	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted
Purchase Power and Wheeling			
System Support	89,500	111,800	+ 22,300
Other Contractual Services	3,500	8,200	+ 4,700
Subtotal, Purchase Power and Wheeling	**93,000**	**120,000**	**+ 27,000**
Offsetting Collections (PPW)	- 70,000	- 80,000	- 10,000
Alternative Financing	- 23,000	- 40,000	- 17,000
Total, Purchase Power and Wheeling	**0**	**0**	**0**

Southwestern Power Administration
Purchase Power and Wheeling

Description

The Purchase Power and Wheeling (PPW) subprogram provides for the purchase of energy to meet peaking power contractual obligations and the delivery of Federal power. Except for contractual arrangements pertaining to a few electrically-isolated hydropower projects, Southwestern's power sales contracts provide for 1200-hours of peaking power per year delivered from its interconnected system of hydropower projects. At times, due to below average water conditions or hydropower unit outages, Southwestern must purchase power when the hydropower projects cannot produce enough to fulfill its 1200-hour contract obligations. Blending purchased power with the Federal hydropower provides a reliable product while ensuring contract fulfillment occurs. Extreme regional weather events in recent years have demonstrated increased price volatility for potential replacement energy purchases. Availability of requested PPW funding levels supports rate stability. Rate stability is increasingly important as regional utility customers make decisions regarding Federal hydropower and other clean energy resources as part of their evolving energy portfolios.

Southwestern assesses its purchase power needs based on hydrologic conditions and anticipated hydropower unit outages. Hydrologic conditions can vary widely and change rapidly, such that purchase power needs are assessed at least seasonally and can change daily. Unit outages for major rehab and replacement work are known years in advance so that purchase power needs can be planned; however, forced outages or delays in units returning to service can cause sudden changes to anticipated purchase power needs. Power purchases are typically made through contractual arrangements but may also be made on the spot market when conditions are more severe than anticipated or otherwise unexpected. Delivery of purchase power to Southwestern's system is made via the SPP RTO or Southwestern's own transmission system.

In prior years, inadequate funding for PPW and hydrological fluctuations required multiple requests to access the Continuing Fund to ensure sufficient funding was available to fulfill Southwestern's 1200-hour peaking power contractual obligations. Today, requirements associated with utilizing the Continuing Fund for PPW needs could spike power rates for customers and limits the usefulness of this tool for replacement energy needs. In FY 2001, Southwestern requested, and Congress enacted, authority to use Federal power receipts that recover purchase power and wheeling expenses (offsetting collections) to fund its PPW program (up to a specified limit). Until the approved full request level in FY 2023, enacted PPW authority has been significantly below the requested levels. The use of requested offsetting collections will be largely dependent upon the hydrological conditions realized during the fiscal year. Under average conditions, less than half of the limit requested will be collected and used.

Southwestern's budget request for the PPW subprogram reflects the maximum anticipated need to ensure adequate funding to fulfill its 1,200-hour peaking power contractual obligations considering volatile market prices, unknown forced generation outages, and all but the most severe hydrological conditions. Southwestern will continue to use offsetting collections and alternative financing arrangements, which include net billing and/or reimbursable authority (customer advances), to fund this subprogram. When hydropower generation falls significantly below normal due to severe drought conditions or major outages, Southwestern will utilize the Continuing Fund for emergency PPW expenses.

Southwestern employs a risk mitigation strategy to ensure continuous operations during periods of significant drought. The strategy involves maintaining an unobligated reserve balance of funds from receipts credited as offsetting collection for PPW, in order to respond to rapid-developing severe drought conditions. Any receipts retained are available until expended and are available only for PPW expenses. As of the end of FY 2023, Southwestern's PPW reserve balance was $120 million. Customers will provide other power resources and/or purchases for the remainder of their firm loads.

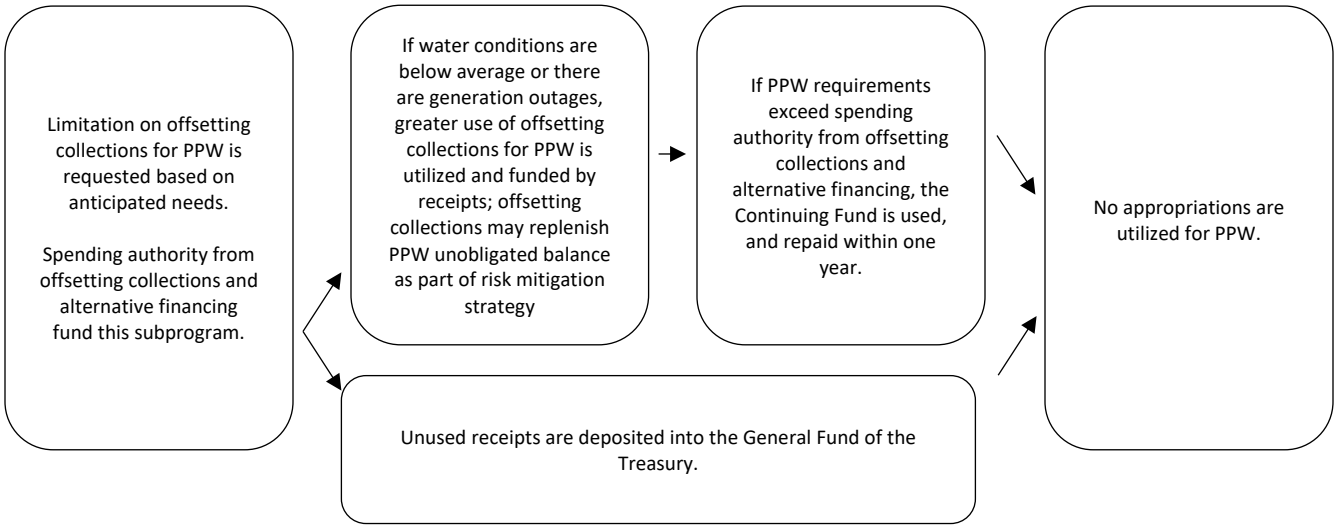
The activities of the PPW subprogram provide for the purchase of power that helps fulfill limited peaking power contractual obligations, thereby ensuring the marketability of the Federal hydropower resource and repayment of the Federal investment. This subprogram also provides for wheeling services that deliver Federal power to optimize the operation of the hydropower facilities marketed by Southwestern. This subprogram enhances the reliability of the electrical transmission grid. PPW includes two activities:

System Support

This activity funds Southwestern's purchase power requirements needed to fulfill all 1200-hour contractual peaking power obligations with customers. System support requirements depend on the conditions of the interconnected system of hydropower projects which is affected by weather, unit operational condition, power market prices (which can be volatile), and limited availability of energy banks. Since the rates Southwestern charges its customers are based on full cost recovery, Southwestern has a built-in incentive to minimize expenditures for purchase power.

Other Contractual Services

This activity funds other contractual services that provide for wheeling associated with the purchase of transmission service to meet limited peaking power obligations and for the integration of projects for the delivery of Federal power. The funding level is derived from contractual wheeling requirements. The FY 2025 funding request reflects the projected cost for wheeling services based on contractual pricing and delivery terms.



Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Purchase Power and Wheeling $93,000,000	**$ 120,000,000**	**+ $27,000,000**
System Support ($89,500,000)	*($111,800,000)*	*(+ $22,300,000)*
• This activity funds purchase power requirement needed to fulfill all 1200-hour contractual peaking power obligations with customers.	• This activity funds purchase power requirement needed to fulfill all 1200-hour contractual peaking power obligations with customers.	• The overall increase in system support reflects maximum anticipated needs based on projected market prices and severe drought hydrologic conditions. Droughts in Southwestern's region can develop in a matter of months, such that adequate PPW funding must be available for proactive planning and rapid response.
Other Contractual Services ($3,500,000)	*($8,200,000)*	*(+ $4,700,000)*
• Contractual services for wheeling associated with the purchase of transmission service.	• Contractual services for wheeling associated with the purchase of transmission service.	• The overall increase in contractual services reflects anticipated increase in transmission service expense in MISO to wheel power from two Federal projects to Southwestern's system and utilize the transmission for replacement energy purchases when needed.

Program Direction
Funding ($K)

	FY 2023 Enacted	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted
Southwestern Power Administration			
Salaries and Benefits	28,528	31,907	+ 3,379
Travel	1,654	1,988	+ 334
Support Services	4,387	4,058	- 329
Other Related Expenses	3,681	4,347	+ 666
Subtotal, Southwestern Power Administration	**38,250**	**42,300**	**+ 4,050**
Offsetting Collections (annual expenses)	-34,882	- 33,993	+ 889
Alternative Financing	-0	- 3,963	- 3,963
Total, Program Direction	**3,368**	**4,344**	**+ 976**
Federal FTEs	194	194	0
Support Services			
Management Support			
Engineering and Technical Services	0	0	0
Technical Support			
Management and Professional Support Services	4,387	4,058	- 329
Total Support Services	4,387	4,058	- 329
Total, Support Services	**4,387**	**4,058**	**- 329**
Other Related Expenses			
Rent to Others	0	0	0
Communication, Utilities, Misc.	882	908	+ 26
EITS	50	40	- 10
Printing and Reproduction	45	45	0
Other Services	766	1,080	+ 314
Training	197	368	+ 171
Power Marketing Liaison	104	358	+ 254
Financial Audit	450	526	+ 76
Supplies and Materials	150	138	- 12
Equipment	473	513	+ 40
Working Capital Fund	564	371	- 193
Total, Other Related Expenses	**3,681**	**4,347**	**+ 666**

Program Direction

Overview

Southwestern's Program Direction subprogram ensures continued reliability of the Federal power system by utilizing Federal staffing resources and associated funds required to provide overall direction and execution of Southwestern's Operation and Maintenance Program.

The Program Direction subprogram supports DOE's and Southwestern's missions by providing compensation and all related expenses for its workforce, including those employees that operate and maintain Southwestern's high-voltage interconnected transmission system and associated facilities; those that plan, design, and supervise the construction of replacements, upgrades, and additions (capital investments) to the transmission facilities; those that market the power and energy produced to repay annual expenses and capital investment; those that perform cyber and physical security roles; and those that administratively support these functions.

Southwestern will use available programs and develop new strategies to hire and train the next generation of engineers, cyber and physical security specialists, power system dispatchers, high voltage electricians, and linemen. These initiatives will address the shortage of these valuable resources because of retirement trends, and the ever-expanding demands on the electric utility industry, such as compliance with NERC and FISMA standards.

Southwestern trains all employees on a continuing basis in occupational safety and health regulations, policies, and procedures to keep the safety culture strong. Accidents are always reviewed to ensure lessons are learned and proper work protocol is in place.

Program Direction is mainly funded from offsetting collections. Other funding utilized for Program Direction is appropriations and if necessary alternative financing arrangements.

Program Direction

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Program Direction $38,250,000	**$42,300,000**	**+ $4,050,000**
Salaries and Benefits ($28,528,000)	*($31,907,000)*	*(+ $3,379,000)*
• The FY 2023 level supports 194 Federal employees: 54 percent of the employees are GS; salaries of the remaining 46 percent (craft workers and power system dispatchers) are determined through union negotiations and wage surveys. This activity also includes overtime, awards, relocation, workers' compensation, recruitment bonuses, retention pay, and advanced in-hire rates. By the end of FY 2023, approximately 27 percent of Southwestern's staff will be eligible for optional retirement. Southwestern will continue to invest in its employees, emphasizing strong development programs, completing skills gap analyses, and pursuing aggressive recruitment and retention efforts.	• The FY 2025 level supports 194 Federal employees: 54 percent of the employees are GS; salaries of the remaining 46 percent (craft workers and power system dispatchers) are determined through union negotiations and wage surveys. This activity also includes overtime, awards, relocation, workers' compensation, recruitment bonuses, retention pay, and advanced in-hire rates. By the end of FY 2024, approximately 25 percent of Southwestern's staff will be eligible for optional retirement. Southwestern will continue to invest in its employees, emphasizing strong development programs, completing skills gap analyses, and pursuing aggressive recruitment and retention efforts.	• The increase in Salaries and Benefits reflects aggressive recruiting to fill several technical hard to fill positions, back-filling retirees, and filling succession planning positions for knowledge transfer.
Travel ($1,654,000)	*($1,988,000)*	*(+ $334,000)*

Program Direction

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
• This activity funds all related travel and per diem expenses for mission-related travel to maintain the integrity and reliability of Southwestern's geographically dispersed power system. The funding level for this activity is primarily derived from the daily requirement of the field maintenance personnel to maintain 1,381 miles of transmission lines, 26 substations/switchyards, 51 microwave/radio sites, communication equipment, and the Supervisory Control and Data Acquisition network. Travel for the performance of general and administrative functions is also included.	• This activity funds all related travel and per diem expenses for mission-related travel to maintain the integrity and reliability of Southwestern's geographically dispersed power system. The funding level for this activity is primarily derived from the daily requirement of the field maintenance personnel to maintain 1,381 miles of transmission lines, 26 substations/switchyards, 51 microwave/radio sites, communication equipment, and the Supervisory Control and Data Acquisition network. Travel for the performance of general and administrative functions is also included.	• The increase in travel reflects estimated transmission policy related efforts, water resource activities, and field maintenance crew travel.
Support Services ($4,387,000)	*($4,058,000)*	*(- $329,000)*
• This activity funds contracted management support services including information technology, E-government, and administrative/records management support. The funding level for this activity is derived from the most recent negotiated contract for support services essential to achieve Southwestern's mission.	• This activity funds contracted management support services including information technology, E-Government, and administrative/records management support. The funding level for this activity is derived from the most recent negotiated contract for support services essential to achieve Southwestern's mission.	• Decrease for a change in allocation of service contract costs between HQ and field.
Other Related Expenses ($3,681,000)	*($4,347,000)*	*(+ $666,000)*
• This activity funds rental space, facility security, the financial audit, services of the Power Marketing Liaison Office, the Human Resources Shared Service Center (HRSSC), the working capital fund, technology refresh in the areas of personal computers, hardware and software, printing and reproduction, and training and tuition fees in support of workforce planning and required training to meet the NERC emergency operations requirement. Rental space costs assume the GSA inflation factor. Other costs are based on the historical usage and actual cost of similar items.	• This activity funds facility security, the financial audit, services of the Power Marketing Liaison Office, the Human Resources Shared Service Center (HRSSC), the working capital fund, technology refresh in the areas of personal computers, hardware and software, printing and reproduction, and training and tuition fees in support of workforce planning and required training to meet the NERC emergency operations requirement. Costs are based on the historical usage and actual cost of similar items.	• Change reflects increase in software updates and on-site security costs required for FY 2025.

Southwestern Power Administration
Revenues and Receipts
Funding ($K)

	FY 2022 Actual	FY 2023 Actual	FY 2024 Estimate	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate	FY 2029 Estimate
Gross Revenues								
Sale and Transmission of Electric Energy	211,577	204,802	198,610	198,610	198,610	198,610	198,610	198,610
Alternative Financing Credited as an Offsetting Receipt (O&M, CN, PD, PPW), Net Billing	-38,438	-33,911	-57,411	-47,821	-59,387	-63,643	-61,533	-63,065
Alternative Financing Credited as an Offsetting Receipt (Section 212), Net Billing[3]	-60,365	-78,431	-5,000	-10,000	-5,000	-5,000	-5,000	-5,000
Offsetting Collections, Annual Expenses (Net Zero)	-37,924	-42,880	-40,886	-43,630	-44,103	-45,390	-46,686	-48,740
Offsetting Collections, Purchase Power and Wheeling ('up to' ceiling)[4]	-39,000	-21,000	-80,000	-80,000	-80,000	-80,000	-80,000	-80,000
Total Proprietary Receipts	35,850	28,580	15,313	17,159	10,120	4,577	5,391	1,805
Percent of Sales to Preference Customers	100%	100%	100%	100%	100%	100%	100%	100%
Energy Sales from Power Marketed (billions of kilowatt hours)	6.5	4.6	5.4	5.3	5.4	5.4	5.4	5.4

Southwestern Power Administration

[3] Actual Alternative Financing in estimated years may be more than estimated to provide funding to the WRDA 2000 Section 212 Customer Funding Program, as authorized, dependent upon available receipts based on actual revenues from the sale and transmission of electric energy and utilization of PPW offsetting collections and/or Alternative Financing for PPW in each FY.

[4] For FY 2024 through FY 2029, the estimated amount of offsetting collections for PPW is equivalent to the "up to" amount enacted (FY 2023), requested (FY 2024 and FY 2025), or anticipated to be requested (FY 2026-2029) in the budget. The PPW offsetting collections limit requested (when matched with PPW receipts), along with alternative financing used for PPW, could potentially fund a drought for one year or replenish unobligated balances after a drought has occurred. This will also allow funding to be collected in case the drought persists for more than a year.

Estimate of Offsetting Collections for Reimbursable Work and Work for Others[5]

	Funding ($K)		
	FY 2023	FY 2024	FY 2025
Offsetting Collections for Reimbursable Work [6]			
Alternative Financing			
Operations and Maintenance	5,279	4,388	3,858
Construction	11,035	8,806	0
Purchase Power and Wheeling	23,000	40,000	40,000
Program Direction	0	4,217	3,963
Subtotal, Alternative Financing	**39,314**	**57,411**	**47,821**
Offsetting Collections not anticipated for obligation in budget year	0	0	0
Subtotal, Offsetting Collections for Reimbursable Work	**39,314**	**57,411**	**47,821**
Offsetting Collections for Reimbursable Work-for-Others [7]			
Non-Federal	12,686	12,589	13,179
Federal	6,000	6,000	6,000
Total, Offsetting Collections for Reimbursable	**58,000**	**76,000**	**67,000**

[5]Southwestern received permanent non-Federal reimbursable authority pursuant to 16 USC 825s-4. Table is shown for transparency purposes.

[6]Southwestern relies significantly on alternative financing arrangements with customers to finance much of its direct mission work on a reimbursable basis.

[7] Southwestern utilizes various forms of Federal and non-Federal reimbursable agreements. Work-for-Others agreements include interconnection requests, system upgrades for reliability, relocation of structures for State and Federal highways and work for other Federal agencies.

Southwestern Power Administration
System Statistics

	FY 2022 Actual	FY 2023 Actual	FY 2024 Estimate	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate	FY 2029 Estimate
Generating Capacity (kilowatts)								
Installed Capacity	2,213,500	2,242,500	2,242,500	2,242,500	2,242,500	2,242,500	2,242,500	2,242,500
Marketed Capacity	2,058,500	2,068,338	2,068,338	2,068,338	2,068,338	2,068,338	2,068,338	2,068,338
Generating Stations								
Generating Projects (Number)	24	24	24	24	24	24	24	24
Substations/Switchyards (Number)	26	26	26	26	26	26	26	26
Substations/Switchyards (kVA Capacity)	1,026,900	1,026,900	1,026,900	1,026,900	1,026,900	1,026,900	1,026,900	1,026,900
Available Energy[8] (megawatt-hours)								
Energy Generated	4,818,706	3,904,621	4,824,600	4,909,100	4,890,900	4,899,300	4,899,300	4,899,300
Energy Received	138,427	341,379	247h400	254,300	255,600	255,600	255,600	255,600
Total, Energy Available for Marketing	4,957,133	4,246,000	5,072,000	5,163,400	5,146,500	5,154,900	5,154,900	5,154,900
Transmission Lines (circuit miles)								
161-KV	1,118	1,118	1,118	1,118	1,118	1,118	1,118	1,118
138-KV	164	164	164	164	164	164	164	164
69-KV	99	99	99	99	99	99	99	99
Total, Transmission Lines	1,381	1,381	1,381	1,381	1,381	1,381	1,381	1,381

[8] Available Energy: actual available energy data is net of losses and other non-marketed energy; estimated data comes from Southwestern's 2023 power repayment studies.

Power Marketed, Wheeled, or Exchanged by Project

	State	Number of Plants	Installed Capacity (kW)	Marketed Capacity (kW)	FY 2022 Actual Energy (GWh)	FY 2023 Actual Energy (GWh	FY 2024 Estimated Energy (GWh)	FY 2025 Estimated Energy (GWh)	FY 2026 Estimated Energy (GWh)	FY 2027 Estimated Energy (GWh)	FY 2028 Estimated Energy (GWh)	FY 2029 Estimated Energy (GWh)
Power Marketed												
Integrated System:												
	Missouri	4	470,000	675,700	1,705	1,438	1,621	1,651	1,646	1,649	1,649	1,649
	Arkansas	9	1,058,050	376,000	954	801	963	980	977	979	979	979
	Oklahoma	7	514,100	408,488	1,034	874	1,195	1,217	1,213	1,215	1,215	1,215
	Texas	2	141,000	251,000	458	398	362	368	367	368	368	368
	Louisiana	0	0	144,000	359	288	414	422	420	421	421	421
	Kansas	0	0	153,800	365	332	366	373	372	373	373	373
Subtotals		22	2,183,150	2,008,988	4,874	4,131	4,921	5,012	4,995	5,000	5,003	5,003
Isolated: (Sam Rayburn and Robert D. Willis Projects)												
	Texas	2	59,350	56,660	79	106	145	145	145	145	145	145
	Louisiana	0	0	2,690	31	9	7	7	7	7	7	7
Subtotals		2	59,350	59,350	111	115	152	152	152	152	152	152
Total, Power Marketed[9]		24	2,242,500	2,068,338	4,985	4.246	5,072	5,163	5,147	5,155	5,155	5,155
Power Wheeled (MW)					611	373.4	373.4	373.4	373.4	373	373	373

[9] Total, Power Marketed: actual energy data is the energy delivered and therefore net of losses and other non-marketed energy; estimated data comes from Southwestern's 2023 power repayment studies.

Construction, Rehabilitation, Operation and Maintenance
Western Area Power Administration
Proposed Appropriation Language

For carrying out the functions authorized by title III, section 302(a)(1)(E) of the Act of August 4, 1977 (42 U.S.C. 7152), and other related activities including conservation and renewable resources programs as authorized, $341,983,000, including official reception and representation expenses in an amount not to exceed $1,500, to remain available until expended, of which $340,983,000 shall be derived from the Department of the Interior Reclamation Fund: Provided, That notwithstanding 31 U.S.C. 3302, section 5 of the Flood Control Act of 1944 (16 U.S.C. 825s), and section 1 of the Interior Department Appropriation Act, 1939 (43 U.S.C. 392a), up to $241,111,000 collected by the Western Area Power Administration from the sale of power and related services shall be credited to this account as discretionary offsetting collections, to remain available until expended, for the sole purpose of funding the annual expenses of the Western Area Power Administration: Provided further, That the sum herein appropriated for annual expenses shall be reduced as collections are received during the fiscal year so as to result in a final fiscal year 2025 appropriation estimated at not more than $100,872,000 of which $99,872,000 is derived from the Reclamation Fund: Provided further, That notwithstanding 31 U.S.C. 3302, up to $525,000,000 collected by the Western Area Power Administration pursuant to the Flood Control Act of 1944 and the Reclamation Project Act of 1939 to recover purchase power and wheeling expenses shall be credited to this account as offsetting collections, to remain available until expended for the sole purpose of making purchase power and wheeling expenditures: Provided further, That for purposes of this appropriation, annual expenses means expenditures that are generally recovered in the same year that they are incurred (excluding purchase power and wheeling expenses): Provided further, That of the amounts made available under this heading, $1,000,000 shall be for supporting the administrative activities authorized in section 301 of the Hoover Power Plant Act of 1984 (Public Law 98-381), as amended, in addition to any other appropriated amounts available for such purposes: Provided further, That the amounts described in the previous proviso shall be non-reimbursable: Provided further, That the remaining unobligated balances from amounts described in the fifth proviso under this heading in Public Law 111-85 are hereby permanently cancelled. (Note.—A full-year 2024 appropriation for this account was not enacted at the time the Budget was prepared; therefore, the Budget assumes this account is operating under the Continuing Appropriations Act, 2024 and Other Extensions Act (Division A of Public Law 118-15, as amended). The amounts included for 2024 reflect the annualized level provided by the continuing resolution.)

Explanation of Changes

The appropriation language includes rescission of $16,757.26 unobligated balances remaining available from the funding provided for environmental remediation activities at the Basic Substation site located in Henderson, Nevada. The appropriation language also includes non-reimbursable appropriation to support the administrative activities required for WAPA's Transmission Infrastructure Program (TIP). The American Recovery and Reinvestment Act of 2009 provided $3.25 billion in borrowing authority for the constructing, financing, facilitating, planning, operating, maintaining, or studying construction of new or upgraded electric power transmission lines and related facilities. The Act also provided $10 million in non-reimbursable appropriations for the administrative costs of implementing that borrowing authority. The non-reimbursable appropriation in the 2025 Budget funds TIP programmatic staffing and other administrative expenses for this program.

Falcon and Amistad Operating and Maintenance Fund
Western Area Power Administration
Proposed Appropriation Language

For operation, maintenance, and emergency costs for the hydroelectric facilities at the Falcon and Amistad Dams, $6,525,000 to remain available until expended, and to be derived from the Falcon and Amistad Operating and Maintenance Fund of the Western Area Power Administration, as provided in section 2 of the Act of June 18, 1954 (68 Stat. 255): Provided, That notwithstanding the provisions of that Act and of 31 U.S.C. 3302, up to $6,297,000 collected by the Western Area Power Administration from the sale of power and related services from the Falcon and Amistad Dams shall be credited to this account as discretionary offsetting collections, to remain available until expended for the sole purpose of funding the annual expenses of the hydroelectric facilities of these Dams and associated Western Area Power Administration activities: Provided further, That the sum herein appropriated for annual expenses shall be reduced as collections are received during the fiscal year so as to result in a final fiscal year 2025 appropriation estimated at not more than $228,000: Provided further, That for purposes of this appropriation, annual expenses means expenditures that are generally recovered in the same year that they are incurred: Provided further, That for fiscal year 2025, the Administrator of the Western Area Power Administration may accept up to $1,685,000 in funds contributed by United States power customers of the Falcon and Amistad Dams for deposit into the Falcon and Amistad Operating and Maintenance Fund, and such funds shall be available for the purpose for which contributed in like manner as if said sums had been specifically appropriated for such purpose: Provided further, That any such funds shall be available without further appropriation and without fiscal year limitation for use by the Commissioner of the United States Section of the International Boundary and Water Commission for the sole purpose of operating, maintaining, repairing, rehabilitating, replacing, or upgrading the hydroelectric facilities at these Dams in accordance with agreements reached between the Administrator, Commissioner, and the power customers. (Note.—A full-year 2024 appropriation for this account was not enacted at the time the Budget was prepared; therefore, the Budget assumes this account is operating under the Continuing Appropriations Act, 2024 and Other Extensions Act (Division A of Public Law 118-15, as amended). The amounts included for 2024 reflect the annualized level provided by the continuing resolution.)

Explanation of Changes

There is no change in the appropriation language.

Western Area Power Administration
Funding ($K)

	FY 2023 Enacted	FY 2025 Request
Gross	1,398,523	1,778,047
Offsets	-1,299,563	-1,676,964
Net BA	**98,960**	**101,083**

Infrastructure Investments and Jobs Act Appropriation ($K)

FY 2022 IIJA Appropriation	FY 2023 IIJA Appropriation	FY 2024 IIJA Appropriation	FY 2025 IIJA Appropriation
499,000	0	0	0

Disaster Relief Supplemental Act (DRSA) Appropriation ($K)

FY 2022 DRSA Appropriation	FY 2023 DRSA Appropriation	FY 2024 DRSA Appropriation	FY 2025 DRSA Appropriation
0	520,000	0	0

Overview

Western Area Power Administration (WAPA) continues to support the Department of Energy (DOE) priorities for a resilient, reliable, and secure North American electricity system.

WAPA's mission is to market and reliably deliver cost-based Federal hydroelectric power. WAPA markets power in 15 central and western states from Federally owned power plants operated primarily by the U.S. Army Corps of Engineers, U.S. Bureau of Reclamation and the Department of State's International Boundary and Water Commission. WAPA operates and maintains a high-voltage, integrated transmission system, including approximately 17,000 circuit-miles of high-voltage transmission lines, more than 300 substations/switchyards and associated power system controls, and communication and electrical facilities.

WAPA serves a diverse group of nearly 700 wholesale customers, including more than two dozen military installations, DOE National labs, municipalities, rural electric cooperatives, public utility and irrigation districts, Federal and state agencies, and Native American tribes. In turn, WAPA's customers provide service to 40 million Americans, including many disadvantaged and energy communities.

WAPA's base program is funded through three appropriation accounts: 1) the Construction, Rehabilitation, Operation and Maintenance Account (CROM); 2) Falcon and Amistad Operating and Maintenance Fund; and 3) Colorado River Basins Power Marketing Fund (CRBPMF). Within these three accounts, there are seven subprograms: four in the CROM Account, one in the Falcon and Amistad Operating and Maintenance Fund and two in CRBPMF.

WAPA's request has been formulated to meet its power marketing and contractual power delivery obligations with continued high marks for reliability. The request prioritizes grid modernization through data-driven investment decisions designed to improve resiliency and reliability of WAPA's transmission system.

FY 2023 Key Accomplishments

In support of strengthening the nation's energy security, resiliency, affordability, and reliability, WAPA has:

- Cyber - WAPA continues to mature its cybersecurity capabilities through greater understanding and visibility into each system, adopted EO 14028 strategies, increased supply chain risk management efforts, and deployed

approved hardware, software, and advanced data analytics tools, enabling an overall reduction in risk to the energy infrastructure.

- Purchase Power and Wheeling (PPW) - WAPA refreshed its PPW reserve strategy targets to account for the increasing impacts of drought. Supported by more than $1B supplemental PPW funding provided in IIJA in FY 2022 and DRSA in FY 2023, WAPA was able to fulfill its power delivery commitments under its long-term power marketing contracts and make progress toward its PPW reserve targets.
- Energy Markets - WAPA continued further study, collaboration, expansion, and integration into energy markets providing WAPA greater access to cost effective energy resources and increased resilience to adverse impacts from hydro-generation constraints and transmission system anomalies.

In promoting equity and energy justice, WAPA :

- Serves Disadvantaged Communities - WAPA provided wholesale Federal hydropower to preference power customers in the west as provided by law, including rural electric cooperatives, public utility districts, irrigation districts, cities and towns, Native American Tribes, and other non-profit utilities. These preference power customers in turn serve millions of Americans in the west for which many fall within economically disadvantaged counties as determined by the Commerce Department.
- Provides Cost- Based Services - WAPA provides low at-cost wholesale power, transmission, and ancillary services.
- Displaces C02 emissions – In the regions WAPA serves, the hydropower generation that WAPA markets displaces nearly ½ metric ton of CO2 emissions for each megawatt hour of hydropower generation marketed.

Western Area Power Administration
Funding by Congressional Control ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Construction, Rehabilitation, Operation and Maintenance (CROM)					
Operation and Maintenance	85,229	126,131	170,617	+85,388	+100%
Construction and Rehabilitation	47,189	0	0	-47,189	-100%
Purchase Power and Wheeling	715,824	715,824	688,345	-27,479	-4%
Program Direction	277,287	285,323	319,946	+42,659	+15%
Subtotal, CROM Program	**1,125,529**	**1,127,278**	**1,178,908**	**+53,379**	**+5%**
Alternative Financing					
Operation and Maintenance	-7,641	-42,276	-79,848	-72,207	+945%
Construction and Rehabilitation	-38,219	0	0	+38,219	-100%
Purchase Power and Wheeling	-240,824	-240,824	-163,345	+77,479	-32%
Program Direction	-54,868	-60,084	-57,657	-2,789	+5%
Subtotal, Alternative Financing	**-341,552**	**-343,184**	**-300,850**	**+40,702**	**-12%**
Offsetting Collections from Colorado River Dam Fund					
Operation and Maintenance	-1,449	-1,530	-1,756	-307	+21%
Program Direction	-7,955	-7,991	-9,319	-1,364	+17%
Subtotal, Offsetting Collections from Colorado River Dam Fund	**-9,404**	**-9,521**	**-11,075**	**-1,671**	**+18%**
Offsetting Collections, annual Operation and Maintenance and Program Direction					
Operation and Maintenance	-29,180	-29,180	-30,917	-1,737	+6%
Program Direction	-171,661	-171,661	-210,194	-38,533	+22%
Subtotal, Offsetting Collections, annual Operation and Maintenance and Program Direction	**-200,841**	**-200,841**	**-241,111**	**-40,270**	**+20%**
Offsetting Collections, Purchase Power and Wheeling	-475,000	-475,000	-525,000	-50,000	+11%
Use of Prior Year Balances					
Annual Operation and Maintenance	0	0	0	0	0%
Annual Program Direction	0	0	0	0	0%
Subtotal, Use of Prior Year Balances	**0**	**0**	**0**	**0**	**0%**
Subtotal, CROM	**98,732**	**98,732**	**100,872**	**+2,140**	**+2%**
Rescission of Prior Year Balances	0	0	-17	-17	na

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Total, CROM	**98,732**	**98,732**	**100,855**	**+2,123**	**+2%**
Federal FTEs	**1,201**	**1,200**	**1,215**	**+14**	**+1%**
Falcon and Amistad Operating and Maintenance Fund	7,928	7,928	8,210	+282	+4%
Offsetting Collections, annual Operation and Maintenance	-6,102	-6,102	-6,297	-195	+3%
Use of Prior Year Balances	0	0	0	0	0%
Alternative Financing	-1,598	-1,598	-1,685	-87	+5%
Total, Falcon and Amistad	**228**	**228**	**228**	**0**	**0%**
Federal FTEs	**0**	**0**	**0**	**0**	**0%**
Colorado River Basins Power Marketing Fund (CRBPMF)	258,466	535,238	584,231	+325,765	+126%
Offsetting Collections	-258,466	-535,238	-584,231	-325,765	+126%
Total, CRBPMF	**0**	**0**	**0**	**0**	**0%**
Federal FTEs	**308**	**311**	**302**	**-6**	**-2%**
Transmission Infrastructure Program Fund (TIP)					
Mandatory					
New Borrowing Authority	0	0	0	0	0%
Repayment of Borrowing Authority	0	0	0	0	0%
Subtotal, Borrowing Authority	**0**	**0**	**0**	**0**	**0%**
Operating & Debt Service	8,400	8,400	9,730	+1,330	+16%
Collections from Projects	-8,400	-8,400	-9,730	-1,330	+16%
Subtotal, Operating & Debt Service	**0**	**0**	**0**	**0**	**0%**
Total, Mandatory	**0**	**0**	**0**	**0**	**0%**
Discretionary					
Equipment, Contracts and Related Expenses	4	86	74	+70	+1,750%
Program Direction	6,596	6,514	6,624	+28	+0%
Subtotal, Discretionary	**6,600**	**6,600**	**6,698**	**+98**	**+1%**
Offsetting Collections	-6,600	-6,600	-6,698	-98	+1%
Total, Discretionary	**0**	**0**	**0**	**0**	**0%**

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Total, TIP	**0**	**0**	**0**	**0**	**0%**
Federal FTEs	**12**	**10**	**4**	**-8**	**-67%**
Total, Western Area Power Administration	**98,960**	**98,960**	**101,083**	**+2,123**	**+2%**
Federal FTEs	**1,521**	**1,521**	**1,521**	**0**	**0%**

Construction, Rehabilitation, Operation and Maintenance
Western Area Power Administration
Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request
Gross	1,125,529	1,127,278	1,178,908
Offsets	-1,026,797	-1,028,546	-1,078,036
Subtotal	**98,732**	**98,732**	**100,872**
Rescission of prior year balances	0	0	-17
Net BA	**98,732**	**98,732**	**100,855**

Overview

WAPA markets and delivers reliable, cost-based Federal hydroelectric power and related services. WAPA's marketing efforts and delivery capability provide for recovery of annual operational costs, including the generating agencies' hydropower related costs, and repayment of taxpayer investment in the Federal hydropower program. WAPA repays the Federal investment for which it is responsible within the timeframes established by law and regulations.

WAPA's Construction, Rehabilitation, Operation and Maintenance Account (CROM) is comprised of four subprograms:

- Operation and Maintenance (O&M)
- Construction and Rehabilitation (C&R)
- Purchase Power and Wheeling (PPW)
- Program Direction (PD)

WAPA's subprograms are funded using a variety of financing methods including appropriations, alternative financing (primarily customer advances), and use of receipt authorities.

Highlights of the FY 2025 Budget Request

WAPA's request has been formulated to meet its power marketing and contractual power delivery obligations. The request prioritizes grid modernization through data-driven investment decisions designed to improve resiliency and reliability of WAPA's transmission system.

For FY 2025 and outyears, WAPA is adhering more strictly to common capital program definitions to improve consistency and transparency of budgeted activities in the O&M and C&R programs across WAPA's separate regions and power systems. There is no change in WAPA's overall capital program requirement.

- O&M Replacements, Additions & Upgrades will include all capital replacement activity, including minor related upgrades and additions. The C&R program will no longer include replacement and additions. Over the years, replacement activity (a maintenance activity) has migrated to the C&R program as the build-out of WAPA transmission system has effectively completed.
- C&R will include capital investments greater than $30M in total anticipated costs that meet the following criteria:
    - Construction of new facilities that provide service to new customers, expand service to existing customers or provide cost-effective benefits for WAPA customers.
    - Major rehabilitation of existing infrastructure intended to restore assets to acceptable operating or environmental conditions.

Outyear Funding
($K)

	FY 2025 Request	FY 2026	FY 2027	FY 2028	FY 2029
CROM Net BA	**100,855**	**103,176**	**105,547**	**107,974**	**110,460**

Major Outyear Priorities and Assumptions
Outyear funding levels for WAPA CROM total $427,157,000 for FY 2026 through FY 2029. The CROM appropriation priorities include:

- Operation and maintenance requirements for reliable and resilient transmission system.
- Capital investments in grid modernization and safeguards.
- Purchase power and wheeling to meet reserves and contractual power delivery obligations.

Operation and Maintenance
Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Operation and Maintenance					
Regular Operation and Maintenance	38,490	36,105	41,457	+2,967	+8%
Replacements, Additions & Upgrades	46,739	90,026	129,160	+82,421	+176%
Total, Operation and Maintenance	**85,229**	**126,131**	**170,617**	**+85,388**	**+100%**
Alternative Financing	-7,641	-42,276	-79,848	-72,207	+945%
Use of Receipts from Colorado River Dam Fund	-1,449	-1,530	-1,756	-307	+21%
Offsetting Collections	-29,180	-29,180	-30,917	-1,737	+6%
Use of Prior Year Balances	0	0	0	0	0%
Total, Operation and Maintenance (Budget Authority)	**46,959**	**53,145**	**58,096**	**+11,137**	**+24%**
Replacements, Additions & Upgrades					
Aviation	450	450	650	+200	+44%
Communication	4,753	6,738	5,721	+968	+20%
Information Technology	5,488	5,228	5,674	+186	+3%
Miscellaneous	4,005	2,687	7,935	+3,930	+98%
Movable Equipment	10,057	11,935	12,477	+2,420	+24%
Substations	16,881	33,616	35,393	+18,521	+110%
Transmission Lines	5,105	29,372	61,310	+56,205	+1,101%
Total, Replacements, Additions & Upgrades	**46,739**	**90,026**	**129,160**	**+82,421**	**+176%**

Description
The Operation and Maintenance (O&M) subprogram provides the supplies, materials, equipment, and infrastructure necessary for WAPA to continue to deliver on its mission of providing reliable, resilient domestic energy to 40 million Americans across its 15-state footprint.

Regular Operation and Maintenance
Supplies and materials necessary to respond to routine and emergency situations across WAPA's 17,000 miles of high voltage interconnected transmission system will be purchased. This includes miscellaneous equipment and software used for power billing, transmission planning, e-tagging, and energy scheduling, as well as supplies and materials such as wood poles (individual pole replacement only; excludes whole line replacements), instrument transformers, meters, relays, etc. Additionally, cyber and physical security audits and monitoring as well as grid operations and monitoring are provided through this activity, funded primarily through offsetting collections and alternative customer financing.

Replacements, Additions & Upgrades
Equipment and infrastructure investments necessary to maintain required service levels across WAPA's footprint. Planned replacements, additions & upgrades activity is based on cyber and physical security audits, assessments of condition and criticality of equipment, maintenance, and frequency of problems on individual items of equipment, availability of replacement parts, safety of the public and WAPA's personnel, environmental concerns, and an orderly work plan. Cost estimates are based on analysis of system operation and maintenance requirements, customer-coordinated work plans, actual costs of recent similar projects, and bottom-up budgeting techniques. Planned activity is detailed by category below.

Aviation
Helicopter and helicopter equipment investments that add value to, or extend the service life of the helicopter fleet, such as engines, rotor blades, avionics, airframes, and other major components.

Communication
Investments supporting telephone, mobile radio, microwave, and fiber optics communication systems.

Information Technology
Hardware and software investments supporting cyber security, network, infrastructure, supervisory control, and data acquisition (SCADA), enterprise applications, power management and marketing, and operations and maintenance.

Miscellaneous
Investments that support the bulk electric system, such as maintenance facilities, access roads, water systems, physical security enhancements, and facility decommissioning and removal costs.

Movable Equipment
Equipment that supports the bulk electric system such as specialized vehicles (e.g., bucket trucks, graders, bulldozers, excavators, forklifts, trailers, mobile transformers) and test equipment (e.g., meter and relay test sets, pentameters, Ohm testers, oil dielectric testers, battery load testers, and communication and environmental control test equipment).

Substations
Substation infrastructure and related components, such as circuit breakers, transformers, relays, batteries and chargers, reactors, meters, buses, surge arresters, capacitor banks, and disconnect switches.

Transmission Lines
Transmission line infrastructure and related components, such as transmission line structures, hardware, conductor, and static wires.

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Operation and Maintenance $85,229,000	**$170,617,000**	**+85,388,000**
Regular O&M ($38,490,000) The continuing maintenance of WAPA's transmission system at or above industry standards supports DOE and WAPA missions by minimizing sudden failure, unplanned outages, and possible regional power system disruptions. The request is based on projected work plans for activities funded from this account. Estimates are based on historical data of actual supplies needed to operate and maintain the transmission system and recent procurement of similar items. This request also includes approximately $220,000 for appropriated O&M annual expenses that are required to fund WAPA's Salinity and Levee non-reimbursable power systems. The request includes approximately $1,449,000 for activities in the Boulder Canyon Project, funded through receipts from the Colorado River Dam Fund.	*Regular O&M ($41,457,000)* The continuing maintenance of WAPA's transmission system at or above industry standards supports DOE and WAPA missions by minimizing sudden failure, unplanned outages, and possible regional power system disruptions. The request is based on projected work plans for activities funded from this account. Estimates are based on historical data of actual supplies needed to operate and maintain the transmission system and recent procurement of similar items. This request also includes approximately $248,000 for appropriated O&M annual expenses that are required to fund WAPA's Salinity and Levee non-reimbursable power systems. The request includes approximately $1,530,000 for activities in the Boulder Canyon Project, funded through receipts from the Colorado River Dam Fund.	*Regular O&M (+$2,967,000)* Regular O&M increases are largely driven by transmission line maintenance requirements.
Replacements, Additions and Upgrades ($46,739,000) Replacement needs are based on age, reliability, and safety of equipment, customer-coordinated review, cost analysis of rebuild versus replacement, availability of replacement parts, and obsolescence of diagnostic maintenance tools. Estimates are determined using actual costs of similar items.	*Replacements, Additions and Upgrades ($129,160,000)* Replacement needs are based on age, reliability, and safety of equipment, customer-coordinated review, cost analysis of rebuild versus replacement, availability of replacement parts, and obsolescence of diagnostic maintenance tools. Estimates are determined using actual costs of similar items.	*Replacements, Additions and Upgrades (+82,421,000)* Replacements, Additions and Upgrades increases reflect a shift in activities previously included in the Construction and Rehabilitation subprogram. The combination of this activity and the C&R subprogram actually represents an increase of $37,994,000 over FY 2023. The increase is attributed to the natural fluctuation of replacements schedules and will rely on alternative financing.

Construction and Rehabilitation
Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Construction and Rehabilitation					
Nogales to Saguaro Transmission Line	0	0	0	0	0%
Transmission Lines and Terminal Facilities	15,027	0	0	-15,027	-100%
Substations	22,801	0	0	-22,801	-100%
Other	9,361	0	0	-9,361	-100%
Subtotal, Construction and Rehabilitation	**47,189**	**0**	**0**	**-47,189**	-100%
Alternative Financing	-38,219	0	0	+38,219	-100%
Total, Construction and Rehabilitation (Budget Authority)	**8,970**	**0**	**0**	**-8,970**	-100%

Description

The Construction and Rehabilitation (C&R) subprogram supports WAPA's mission to deliver reliable, clean Federal hydroelectric power by emphasizing the construction of new facilities that provide service to new customers, expand service to existing customers, or provide cost-effective benefits across the customer base intended to provide continued reliability, improved connectivity, and increased resilience, flexibility and capability to the power grid; or major rehabilitation of existing infrastructure intended to restore assets to acceptable operating or environmental conditions.

Financing of the C&R subprogram is expected to rely primarily on voluntary stakeholder participation in alternative methods for capital financing except where specific infrastructure appropriations are made available. Stakeholder financing may be provided as either advances that are re-paid to the stakeholder through bill credits or as direct work for others financing resulting in contributed assets to WAPA without repayment to the stakeholder. The latter will be reflected in the Activities and Explanation of Changes at $0, with reimbursable authority included within the work for others request.

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Construction and Rehabilitation $47,189,000	**$0**	**-$47,189,000**

	Nogales to Saguaro Transmission Line ($0)
	• Public/private partnership:
	  ○ Customer will advance funds to WAPA for all project costs (no repayment by WAPA)
	  ○ WAPA will design, procure, and construct the project at no cost to ratepayers
	• Construction of the following facilities:
	  ○ Rebuild/upgrade 64-mile 115-kV single circuit transmission line (wood H-frame structures) located on existing WAPA rights-of-way between Nogales (AZ) and Saguaro (AZ) substations to 230-kV double circuit transmission line (steel monopole structures)
	  ○ New 230-kV connections to three existing customer substations
	• Ownership:
	  ○ WAPA and customer will each own a 230-kV circuit with WAPA's operated at 115-kV
	• Benefit to WAPA customers:
	  ○ Rebuild of existing transmission system infrastructure with no impact on WAPA rates
		Nogales to Saguaro Transmission Line (+$0)
		Funding for this project is being provided through the work for others program at no cost to WAPA. This is a continuing project from FY 2024.

Transmission and Terminal Facilities ($15,027,000) • Continue rehabilitation and construction required on WAPA's transmission lines and terminal facilities to cost-effectively market and deliver clean Federal hydropower and promote a strong record of reliability and safety. • Address additional system reliability risk and operational problems.		*Transmission and Terminal Facilities (-$15,027,000)* The decrease represents increased adherence to the definitions for replacements, additions, and upgrades. Most projects recently reflected in the C&R subprogram were primarily larger scale replacements, additions, and upgrades, which are now more appropriately reflected within the Operations and Maintenance subprogram.

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Appropriations ($2,220,000) were requested for the following projects in FY 2023: ○ Trinity-Weaverville-Lewiston (CA) upgrade rights-of-way for existing 17-mile segment of transmission line to reduce the risk of wildfires and increase reliability and safety of the surrounding community. • Alternative financing ($12,807,000) sought for the following projects in FY 2023: ○ Parker-Bouse (AZ) construct 15-mile segment of 230-kV double circuit transmission line and upgrade equipment at Bouse substation to improve reliability of service, improve safety, and reduce ongoing maintenance costs. ○ Bouse-Kofa 161kV (AZ) rebuild of 75.6 miles of 161-kV transmission line to comply with NERC standards, increase reliability and reduce maintenance costs. ○ Parker-Blythe 161-kV #2 Rebuild (AZ/CA) rebuild of 63.9 miles of 161-kV transmission line structure to increase reliability and reduce maintenance costs. ○ Blythe-Knob (CA) replacement of failed and deteriorating wood transmission line structures to increase reliability and reduce maintenance costs.		
Substations ($22,801,000) • Continue construction, modification, and rehabilitation of WAPA's substations to ensure power system reliability and stability. • Address additional system reliability risk and operational problems.		*Substations (-$22,801,000)* The decrease represents increased adherence to the definitions for replacements, additions, and upgrades. Most projects recently reflected in the C&R subprogram were primarily larger scale replacements, additions, and upgrades, which are

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Appropriations ($4,100,000) are requested for the following projects in FY 2023: ○ Yellowtail Substation (MT) replacement of entire protection and control system, including control building, to increase reliability. Alternative financing ($18,701,000) sought for the following projects in FY 2023: ○ Eagle Butte Substation (SD) replacement of existing single bus configuration with 115 kV ring bus to increase reliability and simplify maintenance procedures. ○ Groton Substation (SD) transformer (40+ years) and control building replacement to reduce the risk of catastrophic failure and increase reliability and safety. ○ Philip Substation (SD) transformer replacement due to age (50+ years) and other asset management factors which could result in catastrophic failure, reliability, and customer outages. ○ Sand Creek Switching Station (CO) installation of 3 breaker ring bus (power circuit breakers and control panels) to sectionalize the Erie-Hoyt-Willoby 115-kV transmission lines and to increase reliability and safety. ○ Stegall Substation (NE) replacement of existing main and transfer bus configuration with breaker and a half arrangement to increase reliability and reduce maintenance requirements.		now more appropriately reflected within the Operations and Maintenance subprogram.

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted

Other ($9,361,000)
• Appropriations ($2,650,000) were requested for the following projects in FY 2023:
  o Mead Substation (NV) roadway improvements to increase accessibility and safety.
  o Mead Substation (NV) domestic water system improvements to increase reliability and safety.
 	
• Alternative financing ($6,711,000) sought for the following projects in FY 2023:
  o Cottonwood Substation (CA) control building replacement (age and excessive maintenance requirements) to increase service reliability and reduce maintenance costs.
  o Folsom Substation (CA) station service equipment upgrades to mitigate safety hazards and increase reliability.
  o Rapid City Substation (SD) maintenance building replacement (40+ years old) will accommodate crew quarters, shop areas, house vehicles, and provide equipment storage and enable WAPA to be more efficient in maintenance and response to emergencies.
  o Yuma (AZ) retrofit and equip newly acquired maintenance building critical to supporting aged and deteriorating transmission system infrastructure and increasing reliability for key preference customers.
		Other (-$9,361,000)
		The decrease represents increased adherence to the definitions for replacements, additions, and upgrades. Most projects recently reflected in the C&R subprogram were primarily larger scale replacements, additions, and upgrades, which are now more appropriately reflected within the Operations and Maintenance subprogram.

Purchase Power and Wheeling
Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Purchase Power and Wheeling					
Central Valley	348,414	348,414	277,168	-71,246	-20%
Pick-Sloan Missouri Basin and other Programs	367,410	367,410	411,177	+43,767	+12%
Subtotal, Purchase Power and Wheeling	**715,824**	**715,824**	**688,345**	**-27,479**	**-4%**
Alternative Financing Needed	-240,824	-240,824	-163,345	+77,479	-32%
Offsetting Collections	-475,000	-475,000	-525,000	-50,000	+11%
Total, Purchase Power and Wheeling (Budget Authority)	**0**	**0**	**0**	**0**	**0%**

Construction, Rehabilitation, Operation & Mainenance
Purchase Power and Wheeling

Description

The Purchase Power and Wheeling (PPW) subprogram continues to support WAPA's marketing efforts and delivery capability which spans a 1.3 million square mile area serving a diverse group of several hundred wholesale customers, including municipalities, cooperatives, public utility and irrigation districts, Federal and state agencies, and Native American tribes. No appropriated budget authority is necessary.

For a historical perspective, WAPAs PPW subprogram is highly variable; it is affected by reservoir storage levels, annual and long-term drought conditions, downstream flow concerns due to icing, flooding, environmental, health and safety, recreation, irrigation, and navigation requirements. In recent years, PPW costs for WAPA Construction, Rehabilitation, Operation and Maintenance (CROM) account using PPW receipt authority and emergency appropriations have increased significantly, from $147 million in FY 2020, to $361 million in FY 2021, $418 million in FY 2022, and enacted at $475 million for FY 2023. The year-over-year increase is +146%, +16%, and +14% for FY 2021, FY 2022, and FY 2023 respectively. WAPA's budget request reflects anticipated requirements utilizing current information on hydro conditions, generation, contractual commitments, and power pricing.

WAPA has implemented a PPW risk mitigation strategy to ensure continuous operations during periods of significant drought. The strategy was developed consistent with existing authorities, and with the participation and support of WAPA power customers. Under this approach, WAPA retains receipts from the recovery of purchase power and wheeling expenses within the 'up to' amount specified by Congress. The receipts retained are available until expended and are available only for purchase power and wheeling expenses.

WAPA received a $500 million emergency appropriation through the Infrastructure Investment and Jobs Acts, providing near-term relief for immediate concerns regarding the reduced level of PPW reserves. Those funds were fully allocated and expended by the end of FY 2023.

WAPA received an additional $520 million appropriation for PPW through the Disaster Relief Supplemental Act of 2023 (DRSA). Up to $100 million can be transferred from WAPA's CROM account to the Colorado River Basins Power Marketing Fund (CRBPMF) account as WAPA's Administrator determines is needed for purchase of power and transmission services per statute. The allocation of the DRSA funding will be prioritized in a manner that facilitates the restoration of PPW reserves in both the CROM and CRBPMF accounts. The majority of DRSA funding was executed in FY 2023, and the balance will be executed by the end of FY 2024.

Since WAPA's inception, the full cost of the PPW program has been included in the rate setting process. Through this process, and utilizing interim rate adjusting capabilities, all PPW costs are fully recovered through WAPA's rates.

Central Valley Project

WAPA continues to deliver on its contractual power commitments to customers under the Central Valley Project's Post 2004 Marketing Plan. The budget request assumes current full load service customers will continue to choose service from WAPA through "Custom Product" contractual agreements. WAPA also purchases power to support variable resource customers on a pass-thru basis. If project net generation is not sufficient, WAPA may also purchase to support project use load, First Preference Customer load, and sub-control area reserve requirements. As part of the Order 741, FERC promulgated guidance requiring RTO/ISOs to take physical title/ownership to the energy bought/sold in their respective markets, making it necessary for WAPA to acknowledge that customers receive the financial, and not the physical benefit of their federal power allocations. In order to provide service in the state, WAPA is voluntarily participating in the California greenhouse gas cap-and-trade program which became effective January 1, 2013.

Pick-Sloan Missouri Basin and Other Programs

The budget request continues to support long-term firm power commitments to customers of the eastern and western divisions of the Pick-Sloan Missouri Basin Program, the Fryingpan-Arkansas Project, and the Parker-Davis Project commensurate with the levels of average firm hydroelectric energy marketed by WAPA. The request also provides transmission support for the Pacific Northwest-Southwest Intertie Project. The total program estimates shown are based primarily on market pricing of short-term firm energy, negotiated transmission rates, and WAPA and generating agency's forecasts.

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Central Valley Project		
Program Requirements ($348,414,000) The Purchase Power and Wheeling subprogram continues to support WAPA's power marketing effort by providing for power purchases to firm the variable hydropower resource and securing transmission services as necessary to meet its contractual power delivery.	*Program Requirements ($277,168,000)* The Purchase Power and Wheeling subprogram continues to support WAPA's power marketing effort by providing for power purchases to firm the variable hydropower resource and securing transmission services as necessary to meet its contractual power delivery.	*Program Requirements (-$71,246,000)* Program amounts are financed through offsetting collections (from WAPA receipts) and alternative financing (to include net billing, bill crediting, energy exchanges and direct customer funding); the reduction reflects alignment with financial statement presentation where pass-thru net billed amounts have been excluded offset by increased market conditions; no direct appropriations are requested for this activity.
Pick-Sloan Missouri Basin		
Program Requirements ($367,410,000) The Purchase Power and Wheeling subprogram continues to support WAPA's power marketing effort by providing for power purchases to firm the variable hydropower resource and securing transmission services as necessary to meet its contractual power delivery.	*Program Requirements ($411,177,000)* The Purchase Power and Wheeling subprogram continues to support WAPA's power marketing effort by providing for power purchases to firm the variable hydropower resource and securing transmission services as necessary to meet its contractual power delivery.	*Program Requirements (+$43,767,000)* Program amounts are financed through offsetting collections (from WAPA receipts) and alternative financing (to include net billing, bill crediting, energy exchanges and direct customer funding); the increase reflects market conditions; no direct appropriations are requested for this activity.

Construction, Rehabilitation, Operation & Maintenance
Program Direction

Overview

WAPA's Program Direction subprogram provides compensation and all related expenses for its workforce, including those employees that operate and maintain WAPA's high-voltage interconnected transmission system and associated facilities; those that plan, design, and supervise the construction of replacements, upgrades and additions (capital investments) to the transmission facilities; those that market the power and energy produced to repay annual expenses and capital investment; and those that administratively support these functions.

The Program Direction subprogram supports DOE's and WAPA's mission of operating and maintaining a resilient and secure energy grid by attaining and developing a critical highly skilled workforce of engineers, dispatchers, linemen, power system operators, and high voltage electricians. The Program Direction subprogram also includes the administrative staff, including those positions that monitor, detect, and deter physical and cyber-attacks on WAPA's infrastructure.

WAPA trains its employees on a continuing basis in occupational safety and health regulations, policies, and procedures, and conducts safety meetings at employee, supervisory and management levels to keep the safety culture strong. Accidents are reviewed to ensure lessons are learned and proper work protocol is in place.

In consultation with its customers, WAPA reviews required replacements and upgrades to its existing infrastructure to sustain reliable power delivery to its customers and to contain annual maintenance expenses. The timing and scope of these replacements and upgrades are critical to assure that WAPA's facilities remain a reliable and resilient component of the nations interconnected power grid. WAPA pursues opportunities to join with neighboring utilities to jointly finance activities, which avoid redundant facilities and result in realized cost savings and/or increased efficiencies for all participants.

Program Direction
Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Program Direction					
Salaries and Benefits	191,911	196,155	224,397	+32,486	+17%
Travel	10,610	10,336	9,971	-639	-6%
Support Services	36,958	35,737	36,566	-392	-1%
Other Related Expenses	37,808	43,095	49,012	+11,204	+30%
Total, Program Direction	**277,287**	**285,323**	**319,946**	**+42,659**	**+15%**
Use of Alternative Financing	-54,868	-60,084	-57,657	-2,789	+5%
Use of Receipts from Colorado River Dam Fund	-7,955	-7,991	-9,319	-1,364	+17%
Offsetting Collections, Other Expenses	-171,661	-171,661	-210,194	-38,533	+22%
Use of Prior Year Balances	0	0	0	0	0%
Total, Program Direction (Budget Authority)	**42,803**	**45,587**	**42,776**	**-27**	**-0%**
Federal FTEs	**1,201**	**1,200**	**1,215**	**+14**	**+1%**
Support Services					
Technical Support					
Economic and Environmental Analysis	15,995	15,777	15,808	-187	-1%
Total, Technical Support	**15,995**	**15,777**	**15,808**	**-187**	**-1%**
Management Support					
Automated Data Processing	11,645	11,525	12,295	+650	+6%
Training and Education	3,313	3,000	2,688	-625	-19%
Reports and Analysis, Management and General Administrative Support	6,005	5,435	5,775	-230	-4%
Total Management Support	**20,963**	**19,960**	**20,758**	**-205**	**-1%**
Total, Support Services	**36,958**	**35,737**	**36,566**	**-392**	**-1%**
Other Related Expenses					
Rent to GSA	2,200	2,423	3,290	+1,090	+50%
Communication, Utilities, Misc.	6,969	7,140	6,146	-823	-12%
Printing and Reproduction	81	65	58	-23	-28%

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Other Services	12,189	17,874	20,383	+8,194	+67%
Training	2	0	0	-2	-100%
Purchases from Gov. Accounts	1,285	924	957	-328	-26%
Operation and Maintenance of Equipment	6,784	7,273	9,515	+2,731	+40%
Supplies and Materials	2,285	2,076	2,479	+194	+8%
Equipment	3,205	2,603	3,354	+149	+5%
Working Capital Fund	2,808	2,717	2,830	+22	+1%
Total, Other Related Expenses	**37,808**	**43,095**	**49,012**	**+11,204**	**+30%**

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Program Direction $277,287,000	**$319,946,000**	**+$42,659,000**
Salaries and Benefits $191,911,000	**$224,397,000**	**+$32,486,000**
Salary and benefits provide for Federal employees who construct and replace, operate and maintain and secure, on a continuing basis, WAPA's high voltage interconnected transmission system. Salary and benefits fund those FTEs assigned to this account, including those salaries determined through negotiations.	Salary and benefits funding is for Federal employees who construct, replace, operate, maintain, and secure, on a continuing basis, WAPA's high voltage interconnected transmission system, as well as supporting on a non-reimbursable basis the administrative activities of the WAPA Transmission Infrastructure Program.	The salary and benefits reflect known and anticipated increases for General Schedule, Wage Board and Administratively Determined employees. In addition, the change reflects a shift of 8 FTE from the WAPA TIP program, and a routine shift of an additional 6 FTE from the WAPA CRBPMF account to align with planned O&M and capital workload.
Travel $10,610,000	**$9,971,000**	**-$639,000**
This activity funds all travel, and related expenses associated with WAPA's mission-related operation and maintenance activities, and those functions that support them.	Request funds all travel, and related expenses associated with WAPA's mission-related operation and maintenance activities, and those functions that support them.	Request reflects variabilities in scope and location associated with mission related operation and maintenance travel, and travel for cross-functional collaboration among various internal and external programs.
Support Services $36,958,000	**$36,566,000**	**-$392,000**
Support Services funded in this category include information technology, job related training and education, engineering, miscellaneous advisory and reporting services, and general administrative support.	Request funds information technology, job related training and education, engineering, miscellaneous advisory and reporting services, and general administrative support services.	Request reflects slight decrease in overall engineering and general administrative support, and training, offset by slight increase for information technology services.

Other Related Expenses $37,808,000	$49,012,000	+$11,204,000
Other related expenses include rental space, utilities, supplies and materials, telecommunications, information technology modernization (data/network), printing and reproduction, training tuition, and DOE's Working Capital Fund distribution. Rental space costs assume the General Services Administration's (GSA) inflation factor. Other costs are based on historical usage and actual cost of similar items.	Request funds rental space, utilities, supplies and materials, telecommunications, information technology modernization (data/network), printing and reproduction, training tuition, and DOE's Working Capital Fund distribution. Rental space costs assume the General Services Administration's (GSA) inflation factor. Other costs are based on historical usage and actual cost of similar items.	The primary increase is attributable to infrastructure related services for substation and transmission facilities and equipment maintenance and operations along with increases in facility rent.

Falcon and Amistad Operating and Maintenance Fund
Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request
Gross	7,928	7,928	8,210
Offsets	-7,700	-7,700	-7,982
Net BA	**228**	**228**	**228**

Overview

The Falcon and Amistad Operating and Maintenance fund (Maintenance Fund) was established in the Treasury of the United States as directed by the Foreign Relations Authorization Act, FYs 1994 and 1995. The Maintenance Fund is administered by WAPA's Administrator for use by the Commissioner of the U. S. Section of the International Boundary and Water Commission (IBWC) to defray administrative, O&M, replacement, and emergency costs for the hydroelectric facilities at the Falcon and Amistad Dams. IBWC owns and operates the U.S. portion of the projects, and Federal staff funded under this program continues to be allocated to the U.S. Section of IBWC by the Department of State. The Falcon and Amistad project supports WAPA's program goals by providing power to rural electric cooperatives through WAPA. With the exception of monies received from the Government of Mexico, all revenues collected from the sale of electric power generated at the Falcon and Amistad Dams are credited to the Maintenance Fund. Monies received from the Government of Mexico are credited to the General Fund of the U.S. Treasury. Revenues collected in excess of operating expenses are used to repay, with interest, the cost of replacements and original investments. Full funding will support 24-hour/day operation and maintenance of the two power plants to ensure response to ever-changing water conditions, customer demand, and continual coordination with operating personnel of the Government of Mexico.

Highlights of the FY 2025 Budget Request

WAPA's request has been formulated to meet its power marketing and contractual power delivery obligations. Revenue collected from customers to recover the costs of the Federal Power Program will be sufficient to provide for planned expenses for the facilities operated by the IBWC. Also included is the continuation of WAPA's request to allow for U.S. customer(s) of the Falcon and Amistad Dams to contribute funds for use by the IBWC in fulfilling their duties in accordance with agreements between WAPA, IBWC, and the power customers. The contributed funds are planned to predominantly assist in capitalized replacement projects.

Outyear Funding
($K)

	FY 2025 Request	FY 2026	FY 2027	FY 2028	FY 2029
Falcon and Amistad Operating and Maintenance Fund Net BA	**228**	**233**	**239**	**244**	**250**

Major Outyear Priorities and Assumptions

Outyear funding levels for the Maintenance Fund total $966,000 for FY 2026 through FY 2029. Maintenance Fund priorities include the following:

- Annual operations and maintenance expenses will be offset by revenues collected from the customer
- The annual appropriation, along with customer advances, are necessary for capitalized replacement projects

Falcon and Amistad Operating and Maintenance Fund
Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Western Area Power Administration					
Falcon and Amistad Operating and Maintenance Fund	7,928	7,928	8,210	+282	+4%
Subtotal, Falcon and Amistad Operating and Maintenance Fund	**7,928**	**7,928**	**8,210**	**+282**	**+4%**
Offsetting Collections	-6,102	-6,102	-6,297	-195	+3%
Use of Prior Year Balances	0	0	0	0	0%
Alternative Financing	-1,598	-1,598	-1,685	-87	+5%
Total, Falcon and Amistad Operating and Maintenance Fund	**228**	**228**	**228**	**0**	**0%**

Falcon and Amistad Operating and Maintenance Fund

Description

The Falcon and Amistad Project consists of two international dams located on the Rio Grande River between Texas and Mexico. The United States and Mexico operate separate hydroelectric power plants on each side of the Rio Grande River. The power plants are independent and legislatively severable from the international reservoir storage dams. The Operating and Maintenance Fund was established in the Treasury of the United States and is administered by WAPA's Administrator for use by the Commissioner of the U.S. Section of the IBWC to defray administrative, O&M, replacement, and emergency costs for the hydroelectric facilities at the Falcon and Amistad Dams.

IBWC

O&M

Activities include salaries and benefits for the approximately 40 positions of the U.S. Section of the IBWC who operate and maintain the two power plants on a 24-hour/day basis, planned maintenance activities, required safety services, and emergency response to flood operations and/or equipment failure. O&M includes inspection and service of the HVAC and air compressor system, fire suppression systems, elevators, self-contained breathing apparatus, recharge and hydro-testing of fire extinguishers, calibration of test equipment, rebuild of electric motors, and repair of obsolete equipment when replacement parts are no longer available. Travel, training, communications, utilities, printing, and office supplies and materials for the IBWC employees and technical advisors is also funded by the O&M activity. The request includes essential training for employees to comply with standards of the Interagency Commission on Dam Safety, Occupational and Health Administration, and the National Dam Safety Act.

Capital Investment

WAPA, the IBWC, and the customer have collaboratively developed a rehabilitation work plan to address immediate and future infrastructure needs for the hydroelectric facilities. Future infrastructure needs will be appropriately planned and categorized by all parties through regularly scheduled progress reviews.

WAPA

Marketing, Contract, Repayment Studies

This activity funds power marketing, administration of power contracts, and preparation of rate and repayment studies. Based on accurate studies, staff ensures power revenues are set at an appropriate level to recover annual expenses and meet repayment schedules.

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Falcon and Amistad Operating and Maintenance Fund		
$7,928,000	**$8,210,000**	**+$282,000**
IBWC O&M ($6,041,000) This activity funds the salaries and benefits for those employees assigned to the U.S. Section of the IBWC who operate and maintain the two power plants, equipment inspections and maintenance services, and travel, training, communications, utilities, printing, and office supplies/materials for the IBWC employees and technical advisors.	*IBWC O&M ($6,243,000)* This activity funds the salaries and benefits for those employees assigned to the U.S. Section of the IBWC who operate and maintain the two power plants, equipment inspections and maintenance services, and travel, training, communications, utilities, printing, and office supplies/materials for the IBWC employees and technical advisors.	*IBWC O&M (+$202,000)* The request reflects projects in the 10-year O&M work plan that was developed to address recommendations in the U.S. Army Corps of Engineers (USACE) inspection report completed in 2018. Projects planned include corrosion mitigation requiring sandblasting and painting at the Amistad project. Amounts are for offsetting collections; no direct appropriations are requested for this activity.
IBWC Capital Investment ($1,826,000) This activity funds capital investment activities at the Falcon and Amistad hydroelectric facilities.	*IBWC Capital Investment ($1,913,000)* This activity funds capital investment activities at the Falcon and Amistad hydroelectric facilities.	*IBWC Capital Investment (+$87,000)* The request reflects projects in the 10-year capital work plan that was developed to address recommendations in the U.S. Army Corps of Engineers inspection report completed in 2018. Projects planned include installation of new SCADA equipment at Amistad.
WAPA Marketing, Contracts, Repayment ($61,000) This activity funds power marketing, administration of power contracts, and preparation of rate and repayment studies.	*WAPA Marketing, Contracts, Repayment ($54,000)* This activity funds power marketing, administration of power contracts, and preparation of rate and repayment studies.	*WAPA Marketing, Contracts, Repayment (-$7,000)* The decrease is attributed to reduced costs associated with power repayment studies software. Amounts are for offsetting collections; no direct appropriations are requested for this activity.

Colorado River Basins Power Marketing Fund
Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request
Gross	258,466	535,238	584,231
Offsets	-258,466	-535,238	-584,231
Net BA	**0**	**0**	**0**

Overview

WAPA operates and maintains the transmission system for the projects funded in this account to ensure an adequate supply of reliable electric power in a clean and environmentally safe, cost-effective manner. The Colorado River Basins Power Marketing Fund Program (CRBPMF) is comprised of the Colorado River Storage Project, including the Dolores, Seedskadee, and Olmsted Projects, and the Fort Peck Project. WAPA is responsible for operation and maintenance, including purchase power and wheeling and capital replacement, additions, and upgrades of facilities for transmitting and marketing the electrical energy generated in these power systems.

Highlights of the FY 2025 Budget Request

WAPA's request has been formulated to meet its power marketing and contractual power delivery obligations. Revenues collected from customers to recover the costs of the Federal Power Program will be sufficient to provide for WAPA's planned expenses for the power systems in the CRBPMF. The budget assumes continued severe drought conditions persist, impacting hydropower generation capability and significantly increasing purchase power and wheeling requirements.

Outyear Funding
($K)

	FY 2025 Request	FY 2026	FY 2027	FY 2028	FY 2029
CRBPMF Net BA	**0**	**0**	**0**	**0**	**0**

Major Outyear Priorities and Assumptions

Outyear funding levels for CRBPMF total $0 for FY 2026 through FY 2029. CRBPMF priorities include the following:

- Meeting power marketing and contractual power delivery obligations
- Addressing impact of severe drought and revenue concerns

Colorado River Basins Power Marketing Fund
Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Colorado River Basins Power Marketing Fund					
Equipment, Contracts and Related Expenses					
Supplies, Materials and Services	12,728	12,231	12,512	-216	-2%
Purchase Power Costs	119,236	401,799	453,403	+334,167	+280%
Capitalized Equipment	16,863	19,045	13,891	-2,972	-18%
Interest/Transfers	3,405	5,182	0	-3,405	-100%
Generating Agency Activities	26,695	16,600	20,732	-5,963	-22%
Total, Equipment, Contracts and Related Expenses	**178,927**	**454,857**	**500,538**	**+321,611**	+180%
Program Direction	**79,539**	**80,381**	**83,693**	**+4,154**	+5%
Total, Operating Expenses from new authority	**258,466**	**535,238**	**584,231**	**+325,765**	+126%
Offsetting Collections Realized	-258,466	-535,238	-584,231	-325,765	+126%
Total, Obligational Authority	**0**	**0**	**0**	**0**	**0**

Colorado River Basins Power Marketing Fund
Equipment, Contracts and Related Expenses

Description

WAPA's equipment, contracts and related expenses are necessary to operate and maintain this activity. Revenues from the sale of electric energy, capacity and transmission services replenish the fund and are available for expenditure for operation, maintenance, power billing and collection, purchase power and wheeling, interest, emergencies, and other power marketing expenses.

Supplies, Materials and Services

This activity funds the procurement of supplies, materials, and services necessary to respond to routine and emergency situations in the transmission system. Estimates are based on recent actual costs for supplies needed to maintain transmission system reliability.

Purchase Power Costs

This activity funds the procurement of electrical power, transmission capacity and wheeling services on the open market. The request anticipates persisting drought conditions and the results of continued low-steady-flow tests conducted at Glen Canyon Dam, as required by the Glen Canyon Dam Environmental Impact Statement Record of Decision. Additionally, the request includes obligation authority to accommodate replacement power purchases for customers served by the Colorado River Storage Project. The replacement power purchases, a provision of the Salt Lake City Area Integrated Projects electric power contracts, are made at the request of power customers at times when WAPA lacks sufficient generation to meet its full contract commitment. The funds for the replacement power purchases are advanced by the requesting customers prior to the purchase.

Capitalized Equipment

This activity funds the procurement of capitalized equipment including circuit breakers, transformers, relays, switches, transmission line equipment, microwave, SCADA, and other communication and control equipment to assure reliable service to WAPA's customers. Replacement and upgrade of aged power system components are crucial to system reliability and transmission services.

Transmission line estimates include the purchase of poles, crossarms, conductors, fusion splicers, line switches, overhead ground wire and hardware for the continued transmission line rebuilds. This estimate includes line rebuilds with the anticipated completion of 10 miles a year.

Planned substation estimates include upgrades, replacement of breakers and circuit switches, and replacement of transformers, test equipment, as well as other aged equipment at various substations. WAPA cyclically replaces older electro-mechanical relays with microprocessor relays. The microprocessor relays assist in finding faults faster in order to restore service more efficiently to customers. Other miscellaneous items required for substation replacements include surge arrestors, batteries and chargers, and monitoring equipment.

Planned movable capitalized property estimates include replacements of special purpose trucks, replacement of generators to maintain the reliability and backup power to the communications system, and replacement of outdated test and recording equipment. Other estimates include the replacement of test equipment used to troubleshoot the new digital microwave radio system. Ongoing replacement is also planned for aging information technology support systems and

routers. Other requests include funding for other minor enhancements that provide for ease of maintenance, protection of equipment and materials, and environmental compliance.

Interest/Transfers

This activity funds interest payments to the U.S. Treasury. Estimates are based on Power Repayment Studies for the Projects funded in this account.

Generating Agency Activities

This activity direct funds the U.S. Army Corps of Engineers for operation and maintenance and procurement of capitalized equipment for the Fort Peck Power Plant. Estimates are based on recent actual costs for supplies needed to maintain generating system reliability.

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Equipment and Related Expenses $178,927,000	**$500,538,000**	**+$321,611,000**
Supplies, Materials & Services ($12,728,000) This activity funds the procurement of supplies, materials, and services necessary to respond to routine and emergency situations in the transmission system.	*Supplies, Materials & Services ($12,512,000)* This activity funds the procurement of supplies, materials, and services necessary to respond to routine and emergency situations in the transmission system.	*Supplies, Materials & Services (-$216,000)* This is primarily attributed to decrease in purchases of non-capitalized equipment, supplies and services for general substation maintenance with slight offset for increase in IT maintenance services.
Purchase Power Costs ($119,236,000) This activity funds the procurement of electrical power, transmission capacity and wheeling services on the open market. Purchase power cost estimates are based on 24-month study factors including water cycle, snowpack, and market rates.	*Purchase Power Costs ($453,403,000)* This activity funds the procurement of electrical power, transmission capacity and wheeling services on the open market. Purchase power cost estimates are based on 24-month study factors including water cycle, snowpack, and market rates.	*Purchase Power Costs (+$334,167,000)* The increase is primarily attributed to purchase power requirements and costs. Severe drought conditions continue to persist and could lead to periods where hydrogeneration is significantly constrained.
Capitalized Equipment ($16,863,000) This activity funds the procurement of capitalized equipment including circuit breakers, transformers, relays, switches, transmission line equipment, microwave, SCADA, and other communication and control equipment to assure reliable service to WAPA's customers.	*Capitalized Equipment ($13,891,000)* This activity funds the procurement of capitalized equipment including circuit breakers, transformers, relays, switches, transmission line equipment, SCADA, and other communication and control equipment to assure reliable service to WAPA's customers.	*Capitalized Equipment (-$2,972,000)* Change reflects life cycle management of capitalized equipment purchases in support of transmission line, substation, communication, and control equipment replacements.

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Interest/Transfers ($3,405,000) This activity funds interest payments to the U.S. Treasury. Estimates are based on Power Repayment Studies for the Projects funded in this account.	*Interest/Transfers ($0)* This activity funds interest payments to the U.S. Treasury. Estimates are based on Power Repayment Studies for the Projects funded in this account.	*Interest/Transfers (-$3,405,000)* Decrease reflects interest payments being offset by non-reimbursable program expenses.
Generating Agency Activities ($26,695,000) This activity direct funds the U.S. Army Corps of Engineers operation and maintenance and procurement of capitalized equipment for the Fort Peck Power Plant.	*Generating Agency Activities ($20,732,000)* This activity direct funds the U.S. Army Corps of Engineers for operation and maintenance and procurement of capitalized equipment for the Fort Peck Power Plant.	*Generating Agency Activities (-$5,963,000)* The decrease reflects scheduled replacements for capitalized communication, substation equipment and maintenance for the Fort Peck Power Plant.

Colorado River Basins Power Marketing Fund
Program Direction

Overview

Program Direction provides compensation and all related expenses for its workforce, including those employees that operate and maintain WAPA's high-voltage interconnected transmission system and associated facilities; those that plan, design, and supervise the construction of replacements, upgrades and additions (capital investments) to the transmission facilities; those that market the power and energy produced to repay annual expenses and capital investment; and those that administratively support these functions.

The Program Direction subprogram supports DOE's and WAPA's mission of operating and maintaining a resilient and secure energy grid by attaining and developing a critical highly skilled workforce of engineers, dispatchers, linemen, power system operators, and high voltage electricians. The Program Direction subprogram also includes the administrative staff, including those positions that monitor, detect, and deter physical and cyber-attacks on WAPA's infrastructure.

WAPA trains its employees on a continuing basis in occupational safety and health regulations, policies, and procedures, and conducts safety meetings at employee, supervisory and management levels to keep the safety culture strong. Accidents are reviewed to ensure lessons are learned and proper work protocol is in place.

Highlights of the FY 2025 Budget Request

WAPA's request provides for the continuation of WAPA's revolving fund activities related to Program Direction at the level necessary to meet mission requirements.

Colorado River Basins Power Marketing Fund
Program Direction
Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Program Direction					
Salaries and Benefits	55,423	58,757	61,586	+6,163	+11%
Travel	3,428	3,024	2,966	-462	-13%
Support Services	9,032	8,019	7,940	-1,092	-12%
Other Related Expenses	11,656	10,581	11,201	-455	-4%
Total, Program Direction	**79,539**	**80,381**	**83,693**	**+4,154**	**+5%**
Federal FTEs	**308**	**311**	**302**	**-6**	**-2%**
Support Services					
Technical Support					
Engineering and Technical Services	2,858	2,397	2,411	-447	-16%
Total, Technical Support	**2,858**	**2,397**	**2,411**	**-447**	**-16%**
Management Support					
Automated Data Processing	3,225	3,003	3,063	-162	-5%
Training and Education	1,027	895	744	-283	-28%
Reports and Analyses, Management and General Administrative Support	1,922	1,724	1,722	-200	-10%
Total, Management Support	**6,174**	**5,622**	**5,529**	**-645**	**-10%**
Total, Support Services	**9,032**	**8,019**	**7,940**	**-1,092**	**-12%**
Other Related Expenses					
Rent to GSA	180	644	187	+7	+4%
Communication, Utilities, Misc.	2,466	1,850	1,941	-525	-21%
Printing and Reproduction	24	18	15	-9	-38%
Other Services	4,145	3,684	3,894	-251	-6%
Training	11	10	0	-11	-100%
Purchases from Gov. Accounts	364	258	249	-115	-32%

Operation and Maintenance of Equipment	2,008	2,040	2,573	+565	+28%
Supplies and Materials	676	583	670	-6	-1%
Equipment	949	730	907	-42	-4%
Working Capital Fund	833	764	765	-68	-8%
Total, Other Related Expenses	**11,656**	**10,581**	**11,201**	**-455**	**-4%**

Colorado River Basins Power Marketing Fund
Program Direction

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Program Direction $79,539,000	**$83,693,000**	**+$4,154,000**
Salaries and Benefits $55,423,000	**$61,586,000**	**+$6,163,000**
Salary and benefits support General Schedule employees, as well as those salaries determined through negotiations. This activity provides for Federal employees who operate and maintain the Program's high-voltage integrated transmission system and associated facilities; plan, design, and supervise the replacement (capital investments) to the transmission facilities; and market the power and energy produced to repay annual expenses and capital investment.	Salary and benefits support General Schedule employees, as well as those salaries determined through negotiations. This activity provides for Federal employees who operate and maintain the Program's high-voltage integrated transmission system and associated facilities; plan, design, and supervise the replacement (capital investments) to the transmission facilities; and market the power and energy produced to repay annual expenses and capital investment.	The increase in salaries and benefits supports the level of FTE charging to this account for maintenance and capital activities as well as known and anticipated increases for General Schedule, Wage Board and Administratively Determined employees.
Travel $3,428,000	**$2,966,000**	**-$462,000**
This activity funds personnel travel and per diem expenses for essential mission-related activities, including the maintenance of transmission facilities. The request includes estimates for the rent/lease of GSA vehicles and other transportation.	This activity funds personnel travel and per diem expenses for essential mission-related activities, including the maintenance of transmission facilities. The request includes estimates for the rent/lease of GSA vehicles and other transportation.	The slight decrease in travel reflects continued effort to use technological capabilities to decrease travel requirements.
Support Services $9,032,000	**$7,940,000**	**-$1,092,000**
Support services funded in this category include information technology support, warehousing, computer-aided drafting/engineering, job related training and education, and general administrative support.	Support services funded in this category include information technology support, warehousing, computer-aided drafting/engineering, job related training and education, and general administrative support.	The decrease is primarily due to services that support technical engineering and advisory activities.
Other Related Expenses $11,656,000	**$11,201,000**	**-$455,000**

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Other related expenses include, but are not limited to, DOE's working capital fund distribution, space, utilities and miscellaneous charges, printing and reproduction, training tuition, maintenance of office equipment, supplies and materials, telecommunications, and office equipment to include computers.	Other related expenses include, but are not limited to, DOE's working capital fund distribution, space, utilities and miscellaneous charges, printing and reproduction, training tuition, maintenance of office equipment, supplies and materials, telecommunications, and office equipment to include computers.	The decrease to this activity is primarily driven by cyclic requirements for transmission, substation, communication and operation and maintenance services.

Transmission Infrastructure Program
Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request
Gross	15,000	15,000	16,428
Offsets	-15,000	-15,000	-16,428
Net BA	**0**	**0**	**0**

Overview

WAPA established the Transmission Infrastructure Program (TIP) and Office to implement Title III, Section 301 of the Hoover Power Plant Act of 1984 as amended by the American Recovery and Reinvestment Act of 2009 (Recovery Act), which provided WAPA borrowing authority of up to $3.25 billion for the purposes of: (1) constructing, financing, facilitating, planning, operating, maintaining, or studying construction of new or upgraded electric power transmission lines and related facilities with at least one terminus within the area served by WAPA; and (2) delivering or facilitating the delivery of power generated by renewable energy resources constructed or reasonably expected to be constructed after the Recovery Act's date of enactment.

TIP is expected to be an administratively self-sustaining program that relies on funding arrangements with project developers. When developers seek technical assistance, WAPA collects funds from the project developers to support development of eligible projects and to cover the overhead and administrative costs of the program. Reimbursable or Advance Funding Agreements with project developers are required prior to initiating efforts to evaluate the technical and financial merits of a potential project to ensure the full cost of services delivered are paid by project beneficiaries. For projects that are approved for use of WAPA's borrowing authority, the authority to cover the full amount of the loan is apportioned at the outset and cash is borrowed periodically from the Department of the Treasury (Treasury) as needed. The debt is repaid according to the financial agreement terms and conditions of each project.

As mandated, the TIP program is separate and distinct from WAPA's power marketing program. TIP has one project currently using the borrowing authority for a total of $91 million in loan authority obligated. All other prior project borrowings have been fully repaid with interest.

The program has operated for more than a decade following the initial implementation funding. The collection of non-appropriated funding through completed project loans has been limited and intermittent leading to concern on program sustainability at a critical juncture as the Department of Energy's National Transmission Needs Study finds a "pressing need for additional transmission infrastructure" and associated investment through 2040. TIP is a unique and valuable tool to address this investment need and can provide up to $3.25 billion in debt financing for new and upgraded transmission facilities.

Highlights of the FY 2025 Budget Request

Borrowing authority and interest assumptions are only included for projects that have an active loan and/or loan application. While there are numerous other ongoing projects at various stages of development at any given time, the decision and timing for loan applications is dependent on the project sponsors. Advance funding (non-Federal project sponsors) and reimbursable funding (Federal project sponsors) provide authority for development assistance activities prior to loan issuance.

The WAPA Construction, Rehabilitation, Operation and Maintenance account includes non-reimbursable appropriated funding to supplement other resources available for TIP programmatic staffing and other administrative expenses to ensure continuation of this critical program.

Outyear Funding
($K)

	FY 2025 Request	FY 2026	FY 2027	FY 2028	FY 2029
TIP Net BA, Mandatory	**0**	**0**	**0**	**0**	**0**
TIP Net BA, Discretionary	**0**	**0**	**0**	**0**	**0**

Major Outyear Priorities and Assumptions
Outyear funding levels for TIP total $0 net mandatory and $0 net discretionary for FY 2026 through FY 2029. TIP priorities include the following:

- Mandatory amounts provide borrowing authority, offset by repayment of debt, for projects with an active loan and/or loan application (projects under development are not included)
- Discretionary amounts provide advance/reimbursable funding, offset by collections from project developers, for projects being evaluated for technical and financial merit prior to application for borrowing

Transmission Infrastructure Program
Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Mandatory, Direct Budget Authority					
New Borrowing Authority	0	0	0	0	0%
Repayment of Borrowing Authority	0	0	0	0	0%
Net, Borrowing Authority	**0**	**0**	**0**	**0**	**0%**
Operating Expenses	4,600	4,600	5,930	+1,330	+29%
Interest Payment to Treasury	2,311	2,311	2,311	0	0%
Other Uses	1,489	1,489	1,489	0	0%
Collections from Projects	-8,400	-8,400	-9,730	-1,330	+16%
Net, Operating & Debt Service	**0**	**0**	**0**	**0**	**0%**
Total Mandatory	**0**	**0**	**0**	**0**	**0%**
Federal FTEs (Mandatory)	**1**	**1**	**1**	**0**	**0%**
Discretionary, Reimbursable Budget Authority					
Program Direction	6,596	6,514	6,624	+28	+0%
Equipment, Contracts and Related Expenses	4	86	74	+70	+1,750%
Gross, Discretionary	**6,600**	**6,600**	**6,698**	**+98**	+1%
Advance Funding (Non-Federal)	-5,000	-5,000	-5,002	-2	0%
Reimbursable Funding (Federal)	-200	-200	-1,250	-1,050	+525%
Offsetting Collections	-1,400	-1,400	-446	+954	+68%
Net, Discretionary	**0**	**0**	**0**	**0**	**0%**
Federal FTEs (Discretionary)	**11**	**9**	**3**	**-8**	**-73%**
Total, Transmission Infrastructure Program	**0**	**0**	**0**	**0**	**0%**
Total, Federal FTEs	**12**	**10**	**4**	**-8**	**-67%**

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Mandatory, Direct Budget Authority $0	**$0**	**$0**
New Borrowing Authority $0	**$0**	**$0**
Projected loan estimates for projects with active loans or active loan applications.	Projected loan estimates for projects with active loans or active loan applications.	There are no projects with an active loan or an active loan application with projected borrowing in FY 2025.
Repayment of Borrowing Authority $0	**$0**	**$0**
This activity represents repayments to Treasury from projects for principal.	This activity represents repayments to Treasury from projects for principal.	There are no anticipated repayments to Treasury in FY 2025.
Operating Expenses $4,600,000	**$5,930,000**	**+$1,330,000**
Costs associated with operating and maintaining the ED5-PVH transmission system.	Costs associated with operating and maintaining the ED5-PVH transmission system.	Increase due to rising energy market costs.
Interest Payments to Treasury $2,311,000	**$2,311,000**	**$0**
Estimated interest payments to Treasury for the active ED5-PVH loan and other projects with active loan applications.	Estimated interest payments to Treasury for the active ED5-PVH loan and other projects with active loan applications.	No change to interest payments to Treasury.
Other Uses $1,489,000	**$1,489,000**	**$0**
This activity represents proceeds available for additional operating expenses or debt service requirements.	This activity represents proceeds available for additional operating expenses or debt service requirements.	No change to other uses.

Transmission Infrastructure Program
Program Direction

Overview

WAPA's TIP Program Direction subprogram provides compensation and all related expenses for its workforce, including those employees that are directly assigned to the program as project management, technical experts, finance and administration; those that provide expertise in land acquisition, engineering and environmental compliance; those that provide legal counsel; and those that administratively support these functions.

Unless otherwise provided by law, TIP program direction costs are expected to be offset by customers over time, either through advanced funding agreements or offsetting collections. Advanced funding is provided to TIP from project applicants who use TIP's expertise in the development of their project. The advanced funding agreements fund federal and/or contract staff working on the development of a specific project. Other sources of funds include the overhead rate applied to each active project; service charges; interest rate differentials; and the advance collection of Project Proposal and Business Plan Proposal evaluation expenses. These collections offset the costs of administering the TIP program and provide a risk mitigation reserve.

The Program Direction subprogram supports DOE and WAPA missions, specifically in facilitating delivery of renewable energy resources to market.

Program Direction
Funding ($K)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 Request	FY 2025 Request vs FY 2023 Enacted ($)	FY 2025 Request vs FY 2023 Enacted (%)
Transmission Infrastructure					
Salaries and Benefits	1,374	1,292	312	-1,062	-77%
Travel	44	44	39	-5	-11%
Support Services	60	62	1,917	+1,857	+3,095%
Other Related Expenses	5,118	5,116	4,356	-762	-15%
Subtotal, Program Direction	**6,596**	**6,514**	**6,624**	**+28**	**+0%**
Use of Offsetting Collections	-6,596	-6,514	-6,624	-28	+0%
Total, Program Direction	**0**	**0**	**0**	**0**	**na**
Federal FTEs (Mandatory)	**1**	**1**	**1**	**0**	**0%**
Federal FTEs (Discretionary)	**11**	**9**	**3**	**-8**	**-73%**
Federal FTEs (Total TIP)	**12**	**10**	**4**	**-8**	**-67%**
Support Services					
Technical Support					
Engineering and Technical Services	27	29	1,913	+1,886	+6,985%
Total, Technical Support	**27**	**29**	**1,913**	**+1,886**	**+6,985%**
Management Support					
Automated Data Processing	0	0	0	0	0%
Training and Education	13	13	4	-9	-69%
Reports and Analyses, Management and General Administrative Support	20	20	0	-20	-100%
Total Management Support	**33**	**33**	4	-29	-88%
Total, Support Services	**60**	**62**	**1,917**	**+1,857**	**+3,095%**
Other Related Expenses					
Communication, Utilities, Misc.	3	3	6	+3	+100%
Other Services	5,094	5,097	4,350	-744	-15%
Working Capital Fund	21	16	0	-21	-100%
Total, Other Related Expenses	**5,118**	**5,116**	**4,356**	**-762**	**-15%**

Program Direction

Activities and Explanation of Changes

FY 2023 Enacted	FY 2025 Request	Explanation of Changes FY 2025 Request vs FY 2023 Enacted
Program Direction $6,596,000	**$6,624,000**	**+$28,000**
Salaries and Benefits $1,374,000	**$312,000**	**-$1,062,000**
Salary and benefits provide for Federal employees that are directly assigned to the TIP program as project management, technical experts, finance and administration; those that provide expertise in land acquisition, engineering and environmental compliance; those that provide legal counsel; and those that administratively support these functions.	Salary and benefits provide for Federal employees that are directly assigned to the TIP program as project management, technical experts, finance and administration; those that provide expertise in land acquisition, engineering and environmental compliance; those that provide legal counsel; and those that administratively support these functions.	The decrease in salary and benefits reflects a reduction of eight FTE. To ensure continuity of the critical TIP program activities, the 8 FTE are shifting to non-reimbursable funding source requested for this activity in the WAPA CROM Program Direction program.
Travel $44,000	**$39,000**	**-$5,000**
Planned essential travel supports TIP's mission related activities. TIP supports efficient spending initiatives and is cognizant of travel costs associated with general program operations. TIP focuses on using alternative means to conduct meetings and training sessions where appropriate.	Planned essential travel supports TIP's mission related activities. TIP supports efficient spending initiatives and is cognizant of travel costs associated with general program operations. TIP focuses on using alternative means to conduct meetings and training sessions where appropriate.	The decrease in travel expenses can be attributed to a greater use of available technology to facilitate TIP activities as well as a reduction in FTE requests.
Support Services $60,000	**$1,917,000**	**+$1,857,000**
Support services funded in this category include technical support costs directly associated with TIP projects including environmental, lands, engineering, and project management activities; and management support costs including information technology, job related training and education, and general administrative support.	Support services funded in this category include technical support costs directly associated with TIP projects including environmental, lands, engineering, and project management activities; and management support costs to include information technology, job related training and education, and general administrative support.	The increase in support services is due to the growth in technical support associated with project management and stage of development of projects given revised work scope demands.
Other Related Expenses $5,118,000	**$4,356,000**	**-$762,000**
Other related expenses include communications, utilities, other services such as outside financial support and legal counsel, and DOE's working capital fund.	Other related expenses include communications, utilities, other services such as outside financial support and legal counsel, and DOE's working capital fund.	The decrease is due to lower anticipated outside financial support and legal counsel.

Estimate of Gross Revenues

(Dollars in Thousands)

	FY 2023 Preliminary	FY 2024	FY 2025
Boulder Canyon Project	168,445	89.821	96,855
Central Valley Project	411,370	467,256	477,153
Falcon-Amistad Project	7,296	7,066	9,132
Fryingpan-Arkansas Project	24,522	23,149	22,951
Pacific Northwest-Southwest Intertie Project	66,395	40,417	40,417
Parker-Davis Project	106,572	99,530	101,492
Pick-Sloan Missouri Basin Program	655,143	656,372	649,605
Provo River Project	288	494	495
Washoe Project	627	436	436
Salt Lake City Area Integrated Projects	303,579	180,628	188,903
Other (adjustments)	-25,200	0	0
Total, Gross Revenues	1,719,037	1,565,169	1,587,439
Total, Gross Revenues	1,719,037	1,565,169	1,587,439

Estimate of Proprietary Receipts

(Dollars in Thousands)

	FY 2023 Actual	FY 2024	FY 2025
Mandatory Receipts			
Falcon Amistad Maintenance Fund	86	0	0
Sale and Transmission of Electric Power, Falcon and Amistad Dams	500	1,000	1,000
Sale of Power and Other Utilities Not Otherwise Classified	0	0	0
Sale of Power–WAPA–Reclamation Fund	71,995	85,000	85,000
Total, Mandatory Receipts	**72,581**	**86,000**	**86,000**
Discretionary Receipts			
Offsetting Collections from the Recovery of Power Related Expenses – WAPA CROM	475,000	475,000	525,000
Less Purchase Power and Wheeling Expenses	-475,000	-475,000	-525,000
Subtotal, WAPA CROM Recovery of Power Related Expenses	0	0	0
Offsetting Collections from the Recovery of Annual Expenses – WAPA CROM	200,841	200,841	241,111
Less Operating and Maintenance expenses	-29,180	-29,180	-30,917
Less Program Direction Expenses	-171,661	-171,661	-210,194
Subtotal, WAPA CROM Recovery of Annual Expenses	0	0	0
Offsetting Collections from the recovery of power related expenses – Falcon and Amistad	6,102	6,102	6,297
Less Operating and Maintenance expenses	-6,102	-6,102	-6,297
Subtotal, Falcon and Amistad Recovery of Power Related Expenses	0	0	0
Total, Discretionary Receipts	**0**	**0**	**0**
Total, Proprietary Receipts	**72,581**	**86,000**	**86,000**

Western Area Power Administration
Estimate of Offsetting Collections for Reimbursable Work and Work-for-Others

(Dollars in Thousands)

	FY 2023	FY 2024	FY 2025
Construction, Rehabilitation, Operation and Maintenance (CROM)			
Offsetting Collections for Reimbursable Work [1]			
Alternative Financing			
Operations and Maintenance	7,641	42,276	79,848
Construction and Rehabilitation	38,219	0	0
Purchase Power and Wheeling (PPW)	275,322	240,824	163,345
Program Direction	54,868	60,084	57,657
Subtotal, Alternative Financing	376,050	343,184	300,850
Offsetting Collections not anticipated for obligation in budget year	74,137	102,690	108,770
Less PPW net billing, bill crediting, energy exchange	-138,591	-243,395	-115,895
Offsetting collections from Colorado River Dam Fund	9,404	9,521	11,075
Subtotal, Offsetting Collections for Reimbursable Work	**221,000**	**212,000**	**304,800**
Offsetting Collections for Reimbursable Work-for-Others [2]	**390,000**	**416,000**	**593,875**
Total, Offsetting Collections for Reimbursable	**611,000**	**628,000**	**898,675**

[1] WAPA relies significantly on alternative financing arrangements with customers to finance much of its direct mission work on a reimbursable basis.

[2] WAPA has partnering arrangements with many power customers and Federal agencies to perform electrical systems operations, maintenance, construction, purchase power, and transmission services on a reimbursable basis.

FY 2025 Expenditure Authorization

Expenditures from the Bonneville Power Administration Fund, established pursuant to Public Law 93-454, are approved for: Rocky Reach Kelt Facility, and the Colville Acclimation Building Enclosures, and for official reception and representation expenses in an amount not to exceed $5,000: Provided, that during fiscal year 2025, no new direct loan obligations may be made.

Explanation of Changes

The proposed appropriation language provides expenditure approval for the Rocky Reach Kelt Facility, and the Colville Acclimation Building Enclosures, and restricts new direct loans in FY 2025 as in FY 2023. This bill language is drafted consistent with the Credit Reform Act of 1990.

Overview

The Bonneville Power Administration (Bonneville) operates under a business-type budget under the Government Corporation Control Act, 31 U.S.C 9101-10, and on the basis of the self-financing authority provided by the Federal Columbia River Transmission System Act of 1974 (Transmission Act) (Public Law 93-454). Bonneville has authority to borrow from the U.S. Treasury under the Transmission Act, and the Pacific Northwest Electric Power Planning and Conservation Act of 1980 (Northwest Power Act) (Public Law 96-501) for acquisition of energy conservation, renewable and other power resources, investment in fish facilities, and other purposes, as well as the American Recovery and Reinvestment Act of 2009 (Public Law 111-5), the Infrastructure Investment and Jobs Act of 2021 (Section 40110, Public Law 117-58) and other legislation.

Authority to borrow from the U.S. Treasury is available to Bonneville on a permanent, revolving basis. The principal amount of U.S. Treasury borrowing outstanding at any time may not exceed $17.70 billion. The “obligation” of the $10.0 billion in additional borrowing authority that is made available to the Bonneville Administrator under Section 40110 of Public Law 117-58 cannot exceed $6 billion before FY 2028. Bonneville manages its overall debt portfolio by using its power and transmission revenues, and the proceeds of borrowing authority from the U.S. Treasury. Bonneville’s estimated FY 2025 obligations and cash transfers total approximately $4.9 billion.

This budget has been prepared in accordance with the Statutory Pay-As-You-Go Act (PAYGO) of 2010. Under PAYGO, all Bonneville budget estimates are treated as mandatory and are not subject to the discretionary caps included in the Budget Control Act of 2011. These estimates support activities that are separate from discretionary activities and accounts. Thus, any changes to Bonneville estimates cannot be used to affect any other budget categories, which have their own dollar caps. Because Bonneville’s obligations are and will be incurred under pre-existing legislative authority, Bonneville is not subject to a "pay-as-you-go" test regarding its revision of current law funding estimates.

Please note – The FY 2025 Bonneville Congressional Budget submission includes FY 2024 budget estimates.

Bonneville Funding Profile by Subprogram[1/]

Bonneville Power Administration

Funding Profile by Subprogram [1/]

(Accrued Expenditures in Thousands of Dollars)

	Fiscal Year			
	2023 Actuals	2024 Original [/2]	2024 Revised [/2]	2025 Proposed
Capital Investment Obligations				
Associated Project Costs [3/]	207,454	270,000	270,000	275,675
Fish & Wildlife	14,646	41,335	41,335	41,300
Subtotal, Power Services	222,100	311,335	311,335	316,975
Transmission Services	623,478	593,840	650,468	753,151
Capital Equipment & Bond Premium	15,514	23,983	23,100	22,384
Total, Capital Obligations [3/]	861,092	929,158	984,903	1,092,510
Expensed and Other Obligations				
Expensed	4,318,630	2,879,919	2,901,692	2,999,286
Projects Funded in Advance [4/]	24,528	45,924	46,232	55,353
Revenue Financing	40,000	80,000	88,740	89,290
Total, Obligations	5,244,250	3,935,001	4,021,567	4,236,439
Capital Transfers (cash)	740,659	673,266	665,012	633,438
Bonneville Total (Oligations & Capital Transfers)	5,984,909	4,608,267	4,686,579	4,869,877
Bonneville Net Outlays	522,000	(208,923)	(177,405)	(142,204)
Full-time Equivalents (FTEs) [5/]	2,980	3,000	3,150	3,225

Public Law Authorizations include:

Bonneville Project Act of 1937, Public Law No. 75-329

Federal Columbia River Transmission System Act of 1974, Public Law No. 93-454

Regional Preference Act of 1964, Public Law No. 88-552

Flood Control Act of 1944, Public Law No. 78-543

Pacific Northwest Electric Power Planning and Conservation Act of 1980 (Northwest Power Act), Public Law No. 96-501

Bonneville Outyear Funding Profile by Subprogram[1/]

(Accrued Expenditures in Thousands of Dollars)				
	Fiscal Year			
	2026	2027	2028	2029
Capital Investment Obligations				
Associated Project Costs [3/]	281,620	288,001	294,794	301,833
Fish & Wildlife	29,000	15,700	15,000	15,000
Subtotal, Power Services	310,620	303,701	309,794	316,833
Transmission Services	916,428	1,034,988	1,002,813	742,743
Capital Equipment & Bond Premium	24,400	22,500	23,200	23,665
Total, Capital Obligations [3/]	1,251,448	1,361,189	1,335,807	1,083,241
Expensed and Other Obligations				
Expensed	3,090,303	3,178,271	3,274,007	3,342,540
Projects Funded in Advance [4/]	56,131	56,779	56,740	57,221
Revenue Financing	103,690	103,000	118,560	119,240
Total, Obligations	4,501,573	4,699,239	4,785,114	4,602,242
Capital Transfers (cash)	676,532	666,403	882,667	845,079
Bonneville Total (Oligations & Capital Transfers)	5,178,105	5,365,642	5,667,781	5,447,321
Bonneville Net Outlays	76,751	243,460	281,814	71,781
Full-time Equivalents (FTEs) [5/]	3,300	3,375	3,450	3,525

These notes are an integral part of this table.

1/ This budget has been prepared in accordance with PAYGO. Under PAYGO all Bonneville budget estimates are treated as mandatory and are not subject to the discretionary caps included in the Budget Control Act of 2011. These estimates support activities that are separate from discretionary activities and accounts. Thus, any changes to Bonneville estimates cannot be used to affect any other budget categories which have their own dollar caps. Because Bonneville's obligations are and will be incurred under pre-existing legislative authority, Bonneville is not subject to a "pay-as-you-go" test regarding its revision of current-law funding estimates. For BP-1 table, the CJ reflects forecasted outlays while the yearend GTAS reflects the actual outlay in the Budget Appendix.

2/ Original estimates reflect Bonneville's FY 2024 Congressional Budget Submission. Revised estimates, consistent with Bonneville's annual near-term funding review process, provide notification to the Administration and Congress of updated capital and expense funding levels for FY 2025. The BPA estimates in this budget are consistent with the BP-24 IPR and the increased expenditures for

3/ Includes infrastructure investments to address the long-term electric power related needs of the Northwest and significant changes affecting Bonneville's power and transmission markets.

4/ In this instance, Projects Funded in Advance represents prepayment of Power customers' bills reimbursed by future credits and third party non-federal financing for Conservation initiatives. Also this category includes those facilities and/or equipment where Bonneville retains control or ownership which are funded or financed by a third party, revenue, or with Power or Transmission

5/ As of 9/30/2023, DOE HR staff has reported FY 2023 BPA's FTE actuals at 2,980

Additional table notes are on the following page.

Additional Notes

Capital funding levels reflect external factors such as the significant changes affecting West Coast power and transmission markets, along with planned infrastructure investments designed to address the long-term needs of the region.

Cumulative advance amortization payments as of the end of FY 2023 are $7 Billion.

Refer to 16 USC Chapters 12B, 12G, 12H, and Bonneville's other organic laws, including P.L. 100-371, Title III, Sec. 300, 102 Stat. 869, July 19, 1988, regarding Bonneville's ability to obligate funds.

Budget estimates included in this budget are subject to change due to rapidly changing economic and institutional conditions in the evolving electric utility industry.

Net Outlay estimates are based on current cost savings to date and anticipated cash management goals. They are expected to follow anticipated management decisions throughout the rate period that, along with actual market conditions, will impact revenues and expenses. Actual Net Outlays are volatile and are reported in Report on Budget Execution and Budgetary Resources (SF-133). Actual Net Outlays could differ from estimates due to changing market conditions, streamflow variability, continued restructuring of the

Revenues, included in the Net Outlay formulation, are calculated consistent with cash management goals and assume a combination of adjustments. Assumed adjustments include the use of a combination of tools, including upcoming rate adjustment mechanisms, a net revenue risk adjustment, debt service refinancing strategies and/or short-term financial tools to manage net revenues and cash. Some of these potential tools will reduce costs rather than generate revenue, causing the same Net Outlay result. Adjustments for depreciation and 4(h)(10)(C) credits of the Northwest Power Act are also assumed.

FY 2023 Net Outlays are calculated using Bonneville's FY 2023 Actuals. FY 2024 is based off of rate case and FY 2025 to 2029 Net Outlays are based on BP-24 IPR assumptions, an escalation factor from using the FY 2023 Whitebook Loads and Resources Report, and the increased expenditures for Transmission Evolving Grid Projects.

FTE outyear data are estimates and may change. Bonneville is facing a dynamic and changing energy marketplace and operations, and it is important to continue to attract and retain skilled individuals to meet the growing demands of a competitive and rapidly changing industry. Accordingly, FTE estimates may need to be adjusted in the future.

Amounts in tables and schedules may not add to totals due to rounding.

Major Outyear Considerations

Bonneville's outyear estimates reflect ongoing efforts to achieve its long-term mission and strategic direction. The outyear estimates are developed with consideration and support of Bonneville's multi-year performance targets that lay out the course for achieving Bonneville's long-term objectives. Outyear capital investment levels support Bonneville's infrastructure program, hydro efficiency program, and its fish and wildlife mitigation projects.

Bonneville continues to incorporate the various aspects of the Energy Policy Act of 2005 related to its business, in particular the energy supply, conservation, and new energy technologies for the future that are highlighted in the legislation.

Description of Bonneville Operations & Services

Bonneville markets power, provides transmission services, and acquires energy efficiency from its power customers. Bonneville's service territory is defined as the Pacific Northwest, which includes a 300,000 square mile area including the states of Oregon, Washington, Idaho, western Montana, and small parts of eastern Montana, California, Nevada, Utah, and Wyoming, with a population of about 14 million people. Bonneville markets the electric power produced from 31 FCRPS hydro projects in the Pacific Northwest owned by the Corps and the Reclamation. In addition, Bonneville also acquires power from non-federal generating resources, including the power from a nuclear power plant, the Columbia Generating Station (Columbia).

Bonneville uses the power primarily from the Federal Columbia River Power System hydroelectric projects and Columbia to meet the Administrator's long term firm power sales contract obligations. Bonneville currently maintains and operates 15,179 circuit miles of transmission lines, 259 substations, and associated power system control and communications facilities over which this electric power is delivered. Bonneville has capital and similar leases for certain transmission facilities. Bonneville also supports the protection and enhancement of fish and wildlife, and encourages the development of conservation and energy efficiency, as part of meeting its obligations to supply power and balance the economic and environmental benefits of the FCRPS.

The organization of Bonneville's FY 2025 Budget reflects Bonneville's business services basis for utility enterprise activities. Bonneville's two major areas of activity on a consolidated budget and accounting basis are Power Services and Transmission Services and include their related administrative costs.

- Power Service's costs include line items for Fish & Wildlife, Energy Efficiency, the Residential Exchange Program, Federal Projects Operations & Maintenance (O&M) Costs, and the Northwest Power and Conservation Council (NPCC or Council).
- Transmission Service's costs include line items for Engineering, Operations, and Maintenance for Bonneville's electric transmission system.

Bonneville's mission as a public service organization is to create and deliver Federal power and transmission services at cost as it acts to assure its customers in the Pacific Northwest have the following:

- An adequate, efficient, economical, and reliable power supply;
- An open access transmission system that is adequate for integrating and transmitting power from Federal and non-federal generating units, providing service to Bonneville's customers, providing interregional interconnections, and maintaining electrical reliability and stability; and
- Mitigation of the impacts on fish and wildlife from the federally owned hydroelectric projects from which Bonneville markets power.

Bonneville's vision is to be an engine of the Northwest's economic prosperity and environmental sustainability by advancing a Northwest power and transmission system that is a national leader in providing high reliability, low rates consistent with sound business principles, responsible environmental stewardship, and accountability to the region, all through a commercially successful business. Bonneville pursues this vision consistent with its four core values of safety, trustworthy stewardship, collaborative relationships, and operational excellence.

Legislative History

The Bonneville Project Act of 1937 provides the statutory basis for Bonneville's power marketing responsibilities and authorities. In 1974, passage of the Federal Columbia River Transmission System Act (Transmission Act) applied provisions of the Government Corporation Control Act (31 U.S.C. §§ 9101-9110) to Bonneville. The Transmission Act provides Bonneville with "self-financing" authority, establishes the Bonneville Fund (a permanent, indefinite appropriation) allowing Bonneville to use its revenues from electric power and transmission ratepayers to fund all programs without further appropriation, and authorizes Bonneville to sell bonds to the U.S. Treasury.

The 1980 enactment of the Northwest Power Act expanded Bonneville's authorities, obligations, and responsibilities. The purposes of the Act include:

- Encouraging development of electric energy conservation to meet regional electric power loads placed on Bonneville
- Encouraging the development of renewable energy resources within the Pacific Northwest
- Assuring the Northwest has an adequate, efficient, economical, and reliable power supply
- Promoting interregional participation and planning
- Protecting, mitigating, and enhancing the fish and wildlife affected by development and operation of Federal hydroelectric projects on the Columbia River and its tributaries.

The Northwest Power Act also established a revised statutory framework for Bonneville's administrative rate setting process and established judicial review of Bonneville's final actions in the U.S. Court of Appeals for the Ninth Circuit.

The 2022 Infrastructure Investment and Jobs Act added $10 billion to BPA's existing borrowing authority, bringing the total borrowing authority to $17.70 billion. Only up to $13.7 billion of the total may be outstanding at any time through fiscal year 2027. Beginning fiscal year 2028, the remaining $4 billion may be outstanding up to the overall limit of $17.7 billion. The borrowing authority may be used by BPA for any authorized BPA purpose. At of the end of FY 2023, Bonneville had revolving U.S. Treasury borrowing authority of $13.7 billion, of which approximately $7.9 billion remained available to be drawn.

Financial Mechanisms

Bonneville's program is treated as mandatory and nondiscretionary. Bonneville is "self-financed" from its own revenues and does not rely on annual appropriations from Congress. Under the Transmission Act, Bonneville funds the expense portion of its budget and repays the Federal investment with revenues from electric power and transmission sales. Bonneville's revenues fluctuate for a variety of reasons, including in response to variations in market prices for fuels and stream flow in the Columbia River System caused by variations in weather conditions and fish mitigation needs.

In the FY 2025 Budget, the term Bonneville "bonds" refers to the debt instruments under which Bonneville receives advances of funds from the U.S. Treasury. This reference is consistent with Section 13(a) of the Transmission Act, which defines "bonds" as all bonds, notes, and other evidence of indebtedness issued and sold by Bonneville to the U.S. Treasury.

Bonneville and the U.S. Treasury have a comprehensive banking arrangement that covers Bonneville's short- and long-term Federal borrowings. This provides Bonneville with the ability to borrow from the U.S. Treasury to finance capital investments and, on a short-term basis, to cover Northwest Power Act-related operating expenses. This latter ability provides Bonneville with much needed liquidity to help manage within-year cash flow needs and mitigate risk. Access to this use of U.S. Treasury borrowing authority has been incorporated into and relied upon in Bonneville's rate setting process.

> In May 2023, debt instruments issued by non-federal entities but secured by payment and other financial commitments provided by Bonneville received the following credit ratings: Standard & Poor's at AA- with a stable outlook and Fitch at AA with a stable outlook. Moody's upgraded Bonneville to Aa1 in June 2023 and then changed the outlook to negative in November 2023.

BACKGROUND: Power Prepayment Program

Bonneville undertook a Power Prepayment Program in FY 2013 under which all Bonneville preference customers had an opportunity to submit formal offers to provide lump-sum payments to Bonneville as prepayments of a portion of their power purchases through September 30, 2028, the termination date of their current Long-Term Regional Dialogue Power Sales Contracts. Bonneville accepted power prepayments from four preference customers.

Upon Bonneville's receipt of the agreed-to, lump-sum prepayments, the selected preference customers became entitled to future portions of their electricity from Bonneville without further payment. The power prepayments are and will be recognized in the customers' future power bills from Bonneville as fixed, equal monthly prepayment credits. In effect, the amount of electricity that is prepaid may vary by month, depending on Bonneville's power rates and rate schedules that apply to electricity purchases by the prepaying customers in the related month. Because this is structured as a variable amount of prepayment and not as a fixed-price/fixed-amount type of prepayment, Bonneville maintains flexibility to establish rates for the electric power that is prepaid.

As a result of the FY 2013 Prepayment solicitation, Bonneville received $340 million in prepayments, which Bonneville is using to fund needed FCRPS investments. The aggregate prepayment credits are set at $2.55 million per month through FY 2028.

Depending on a variety of factors it is possible that Bonneville may seek to implement later phases of the Power Prepayment Program in connection with future FCRPS hydroelectric investment needs.

U.S. Treasury Payments & Budget Overview

Bonneville's FY 2023 payment to the U.S. Treasury was approximately $1 billion. This was the 40th consecutive year that Bonneville made its scheduled payments to the U.S. Treasury on time and in full. The payment included $741 million in principal, which included $426 million in early retirement of U.S. Treasury and appropriation debt, $218 million for interest, $13 million in irrigation assistance payments, and $39 million in pension and post-retirement benefits. Total credits applied toward Bonneville's U.S. Treasury payment were $284 million for FY 2023. Most of these credits are established and applied under Section 4(h)(10)(C) of the Northwest Power Act. The FY 2024 and 2025 U.S. Treasury payments are currently estimated at $915 million and $885 million, respectively. The FY 2024 and 2025 4(h)(10)(C) credits are estimated to be $111.3 million and $111.5 million, respectively.

Estimates of interest and amortization levels for outyear U.S. Treasury payments are included in the FY 2024-2025 final transmission and power rates. Bond and Appropriations Interest will continue to be revised based on upcoming capital investments and debt management actions. These estimates may change due to revised capital investment plans and actual U.S. Treasury borrowing. In recent years, Bonneville has made amortization payments in excess of those scheduled in its FERC-approved rate filings resulting in a balance of advance repayment. The cumulative balance of advance amortization payments as of the end of FY 2023 was in excess of $7.0 billion.

Bonneville has direct funding arrangements to fund the power-related portion of O&M and capital investments at Corps and Reclamation facilities as well as the expense O&M costs of the U.S. Fish and Wildlife Service (USFWS) Lower Snake River Compensation Plan facilities. Direct-funded FCRPS capital costs, which had been funded exclusively through appropriations to the Corps and Reclamation prior to the initiation of direct funding, are now funded primarily from the proceeds of bonds issued by Bonneville to the U.S. Treasury. Certain power prepayments have also been a source of funds for direct funding. Bonneville's aggregate direct funding provided for capital and O&M was $457 million in FY 2023.

Bonneville manages its overall debt portfolio, which includes both debt that is issued by non-federal entities and secured by Bonneville's financial commitments ("Non-Federal Debt"), and Bonneville's repayment obligations to the U.S. Treasury, to meet the objectives of: (1) minimizing the cost to Bonneville's ratepayers, (2) maximizing Bonneville's access to its lowest cost capital sources to meet future capital needs, and (3) maintaining sufficient financial flexibility to meet Bonneville's financial requirements.

For years, Bonneville and Energy Northwest, the Washington state joint operating agency that owns and operates the CGS nuclear plant, have continued working together on an integrated debt management plan for their combined total debt portfolios. The debt service of these portfolios is borne by Bonneville and recovered from Bonneville ratepayers through Bonneville's rates. Energy Northwest-related debt, as refinanced under this effort, is called Regional Cooperation Debt.

The initial efforts under the Regional Cooperation Debt program included the issuance of Net Billed Bonds to refund outstanding Net Billed Bonds in FY 2014 through FY 2020. This enabled Bonneville to repay, earlier than would otherwise occur, Federal Appropriations Repayment Obligations.

The second phase of Regional Cooperation Debt program, which started in FY 2021, will have the effect of freeing up amounts in the Bonneville Fund that otherwise would have been used to fund the repayment of the principal of the refunded Net Billed Bonds, and that will instead be used to make payments to reduce the outstanding principal amount of bonds issued by Bonneville to the U.S. Treasury. Bonneville estimates that the aggregate remaining potential principal amount of refinancing Net Billed Bonds that could be issued in FY 2024 through 2030 could be up to $2.6 billion.

Bonneville can incur a bond premium or discount when it repays a U.S. Treasury bond before the due date. When bonds are refinanced and premiums or discounts are incurred, the resulting gains or losses associated with the bond premiums or discounts can be deferred. Historically, Bonneville generally has chosen to finance capitalized bond premiums with bonds issued to the U.S. Treasury, as envisioned by the Transmission Act.

Budget Estimates & Planning

This FY 2025 Budget proposes estimated accrued expenditures of $2,999 million for operating expenses, $55 million for Projects Funded in Advance (PFIA), $1,093 million for capital investments, and $633 million for capital transfers in FY 2025.

The estimated spending levels in this budget are still subject to change to accommodate competitive dynamics in the region's energy markets, debt management strategies, continuing changes in the electric industry, and other factors.

This FY 2025 Budget includes capital and expense estimates based on initial approved cost forecasts from Bonneville's BP-24 Integrated Program Review (IPR). Capital investment levels reflect Bonneville's capital asset management process and external factors such as changes affecting the West Coast power and transmission markets, along with planned infrastructure investments designed to address the long-term needs of the region and national energy security goals.

Bonneville utilizes a structured capital project selection process requiring submission of a standardized business case for review. Each business case consists of a description of the project, a clear statement of objectives, description and mitigation of risks, and a rigorous analysis of project costs and benefits, including a status quo assumption and preferred alternatives. In addition, both annual and end-of-project targets are set for each project covering cost, scope, and schedule. Progress reports on these targets are provided to Bonneville's senior executives at least quarterly.

FY 2024-2029 revenue estimates in this budget, included in the Net Outlay formulation, reflect revised cost estimates, debt management strategies, and capital financing assumptions. The Net Outlay also includes depreciation and U.S. Treasury repayment credit assumptions. These U.S. Treasury repayment credits offset, among other things, Bonneville's Fish & Wildlife program costs allocable to the non-power project purposes of the FCRPS, as provided under Section 4(h)(10)(C) of the Northwest Power Act.

Overview of Detailed Justifications

In Bonneville's Detailed Justification Summaries, accrued expenditure is the basis of presenting Bonneville's program funding levels in the power and transmission ratemaking processes and the basis upon which Bonneville managers control their resources to provide products and services. Accrued expenditures relate period costs to period performance. Traditional budget obligation requirements for Bonneville's budget are assumed on the Program and Financing Summary Schedule prepared in accordance with Office of Management & Budget (OMB) Circular A-11.

The organization of Bonneville's FY 2025 Budget and these performance summaries reflect Bonneville's business services basis for its utility enterprise activities. Bonneville's major areas of activity on a consolidated budget and accounting basis include power and transmission, with administrative costs included. Power Services includes line items for fish and wildlife, energy efficiency, Residential Exchange Program, associated projects O&M costs, and the Northwest Power Council. Environmental activities are shown in the relevant Power Services and Transmission Services sections, as are reimbursable

costs. Bonneville's interest expense, pension and post-retirement benefits, and capital transfers to the U.S. Treasury are shown by program.

The first section of performance summaries, **Capital Investments**, includes accrued expenditures for investments in electric utility and general plant associated with the FCRPS generation and transmission services, fish and wildlife, and capital equipment. These capital investments are estimated to require budget obligations and expected use of $1,093 million in bonds to be issued and sold to the U.S. Treasury in FY 2025.

The near-term forecast of capital funding levels has undergone an extensive internal review as a result of Bonneville's development of asset management plans. These plans encompass project cost management initiatives, capital investment assessments, and categorization of capital projects to be funded based on risk and other factors. Consistent with Bonneville's near-term asset planning process and Bonneville's standard operating budget process, this FY 2025 Budget includes updated capital investment levels for FY 2024 estimated at $985 million. Utilizing this review process helps Bonneville in its efforts as a participant in wholesale energy markets. Bonneville will continue to work with the Corps and Reclamation to optimize the mix of projects.

The second section of Bonneville's performance summaries, entitled **Annual Operating Expenses**, includes accrued expenditures for services and program activities financed by power sales revenues, transmission sales revenues, and projects funded in advance. For FY 2025, total budget expense and capital obligations are estimated at $4,236 million. The total program requirements of all Bonneville programs, including total obligations and $633 million of capital transfers, are estimated at $4,870 million for FY 2025.

Evidence & Analysis in the Budget

Bonneville has undertaken several initiatives and processes to determine appropriate budget expenditures.

Through Bonneville's IPR process, the public can see all relevant FCRPS expense and capital forecast costs in the same forum. In addition, Bonneville's IPR process allows the public to review and comment on Bonneville's 10-year capital forecasts. The IPR occurs prior to each Bonneville rate case and provides the public an opportunity to review and comment on Bonneville's forecast costs prior to being set for inclusion in rate cases.

Bonneville conducted the BP-24 IPR, which reviewed forecast costs for the FY 2024 and FY 2025 rate period during the summer of 2022. Bonneville was guided by the 2018 Strategic Direction goal to hold costs at or below the level of inflation through 2028, though Bonneville is experiencing greater cost pressures. Bonneville issued the closeout report for the BP-24 IPR in October 2022.

Judicial & Regulatory Activity

The Energy Policy Act of 2005 authorized the Federal Energy Regulatory Commission (FERC) to approve and enforce mandatory electric reliability standards with which users, owners, and operators of the bulk electric power system, including Bonneville, are required to comply. These standards became enforceable on June 18, 2007, and compliance is monitored by the North American Electric Regulatory Corporation (NERC) and the regional reliability organizations.

FCRPS Cost Allocations

The FY 2021 Energy and Water Development Appropriations Act included report language requesting that Bonneville, the Corps, and Reclamation provide quarterly reports on their work to resolve policy differences for the allocation of costs for multi-purpose projects of the FCRPS. Bonneville is continuing to provide the subcommittee with Quarterly reports of its progress.

BPA agrees that a joint proposal to OMB would support the effort to determine whether project costs are being appropriately allocated to power. Congress authorized the Corps to conduct a disposition study of hydropower in the Willamette Valley, and directed to be completed by June 2024 by the enacted federal law on December 23, 2022 as Section 8220, Disposition Study of hydropower in the Willamette, Valley, Oregon (pp. 3162-6), of Division H. of Title LXXXI, the Water Resources Development Act of 2022 (WRDA), of the James M. Inhofe National Defense Authorization Act (NDAA), P.L. 117-263.

This provision continued Congress' interest in obtaining findings from the Corps on the impacts of deauthorizing the hydropower project purpose at Willamette dams. Section 218 of WRDA 2020 authorized the Corps report on the impacts on other authorized project purposes at the Detroit/Big Cliff and Cougar dams of the Willamette Valley project within two years of the enactment of this Section. The Corps has not made any initial findings available to Bonneville for review and comment.

As part of the provisions for the disposition study required by Section 8220 of 2022 WRDA, Congress provided that, until the report is issued, new construction-related expenditures by the Corps for the Willamette Valley are non-reimbursable.

Overview of Bonneville Functions and Initiatives

On August 2, 2023, Bonneville released its 2024-2028 Strategic Plan. This update builds on Bonneville's previous 2018-2023 Strategic Plan, which described how Bonneville will operate in a commercially successful manner while meeting its statutory obligations. BPA's 2024-2028 Strategic Plan builds on the framework of its previous strategy, leveraging the foundational work of the last five years to position the agency as a leader in the clean energy transition. This crucial period will be marked by decarbonization, the buildout of renewable energy resources, and the associated demand for generation interconnections and transmission service.

This overview is organized by Bonneville's updated strategic goals.

- Invest in people
- Enhance the value of products and services
- Sustain financial strength
- Mature asset management
- Preserve safe and reliable system operations
- Modernize business systems and processes

Strategic Goal: Invest in People

Safety as a core value: Safety is one of Bonneville's four core values. Bonneville strives to provide a workplace free from safety and health hazards. Bonneville cultivates collaborative partnerships across its workforce and embraces a learning mindset to drive continuous improvement in all aspects of safety, both physical and psychological. Bonneville's objective is to become the safest utility in North America by continuously improving the physical and psychological safety of the BPA workforce.

Bonneville must continue to innovate, learn and adapt to an ever-changing industry environment. Bonneville adopts policies and practices that improve its ability to attract, retain and develop its workforce. This includes examining and adopting workplace flexibilities that support retention, satisfaction and engagement while meeting the responsibilities of a not-for-profit Federal power marketing administration. Competition for talent within the electric power industry is increasingly difficult under the Federal General Schedule and government classification standards. This issue is becoming increasingly concerning to BPA's power and transmission customers.

Bonneville is committed to diversity, equity, inclusion and accessibility at every stage of the employee lifecycle, from recruitment to retirement, beginning with outreach strategies to reach more diverse applicants both in-house and outside of the organization.

Educational activities: Bonneville is a supporter of science, technology, engineering, and math (collectively known as "STEM") education programs. These programs provide support and encouragement to middle and high school students to study the sciences in school and to pursue careers in these fields. As a regional leader in STEM education, Bonneville proudly supports and organizes an award-winning Science Bowl (math and science competitions). Bonneville also sponsors science fair competitions for students in Washington, as well as a First Robotics tournament championship. Bonneville employees also serve as volunteer ambassadors, providing presentations, curricula, and activities to K-12 schools that enhance the learning experience for students and teachers, and extend awareness of the role of the region's hydroelectric system.

Justice40 Initiative: Recently the U.S. Department of Energy (DOE) announced its list of existing Justice40 programs. Bonneville supports Justice40 through its business activities and statutory requirements that benefit the people of the Northwest. Bonneville has five large categories of activities that provide Justice40 benefits: Fish & Wildlife Mitigation Program; Energy Efficiency; Tribal STEM Grant Program; AISES internship partnership; public processes, including rate cases; and carbon-free, flexible hydropower and nuclear capacity and energy For more information refer to DOE link https://www.energy.gov/justice/doe-justice40-covered-programs

Strategic Goal: Enhance the Value of Products and Services

Renewal of long-term power sale contracts: Bonneville's current long-term power sale contracts end in 2028. Bonneville is conducting its Provider of Choice initiative to consider with customers and constituents the policies and structures of future contracts. Bonneville is committed to being responsive to customers' evolving needs while working within the framework of Bonneville's statutes. In addition to delivering power through the Federal base system, Bonneville is discussing how to offer customers flexibilities that enable their investment in and integration of non-federal resources as well as providing options for Bonneville to serve growing load needs. The Provider of Choice initiative leads to the expected offer and execution of new long-term contracts in 2025 with power deliveries under the new contracts beginning in 2028.

Integrated wholesale markets and system operations: New markets present opportunities to enhance the delivery of reliable, affordable and carbon-free hydropower to BPA customers. Bonneville joined the Western Energy Imbalance Market in 2022. Building on that experience, Bonneville is participating in the development of two day-ahead market initiatives underway in the West — the California Independent System Operator's Extended Day Ahead Market and Southwest Power Pool's Markets Plus — to determine if they will be consistent with Bonneville's statutory obligations and support its customers' needs and interests. In July 2023, Bonneville initiated a public process with customers and the public on its decision to participate in either market option. This process will continue through early 2024.

Bonneville is also taking an incremental approach toward more integrated system operations that promise to enhance reliability and resilience. BPA will position itself to consider moving beyond a day-ahead market, if it decides to participate in one, through the evaluation of services and benefits that could be provided by a regional transmission operator.

Over the past four years, entities in the West have come together through an initiative facilitated by the Western Power Pool (WPP) to scope and develop a voluntary, regional resource adequacy compliance program known as the Western Resource Adequacy Program (WRAP). FERC accepted the WRAP tariff in February 2023. Bonneville played a leading role in the development of the WRAP, which is a major step toward ensuring reliability while integrating new clean resources into the grid and assuring it will have the resources needed to meet demand. WRAP participants are working together to determine when WRAP will transition into a fully binding program, between summer of 2025 and winter of 2027-2028.

Supporting regional carbon policies: State policies to reduce greenhouse gas emissions and expand clean energy are challenging the electric industry to develop clean generation alternatives to baseload fossil fuel generation. The federal base system can provide flexible, reliable, carbon-free power that can further enhance regional efforts to reduce greenhouse gas emissions. The federal hydropower system and Columbia Generating Station produce carbon-free electricity and, on average, the power Bonneville sells is about 95 percent carbon-free. The emissions in the power Bonneville sells are attributed to the purchases Bonneville makes in the wholesale market, which Bonneville has historically relied upon to balance generation and loads. These unspecified power purchases cannot be attributed to a specific resource and therefore, states attribute emissions to them.

Going forward, Bonneville will strive to complement the existing system when acquiring energy from additional cost-effective carbon-free resources and enabling delivery of increasingly decarbonized power to the region. Acquiring carbon-free resources and market purchases, consistent with BPA's statutory obligations, could reduce Bonneville's total unspecified purchases and associated emissions and help us meet load growth with clean resources.

In addition, as Bonneville develops other agency policies, it will weigh the impacts of such decisions on the federal system's carbon content alongside other relevant considerations. The challenge of decarbonizing is a collective one. Given the

interconnected nature of the electrical system and power markets, Bonneville promotes greater coordination across states to provide consistency in greenhouse gas accounting and tracking the environmental attributes of power.

Advancing transmission investments and innovative solutions to integrate loads and resources: The demand for clean energy is driving the need for transmission expansion to deliver energy from geographically dispersed resources to population centers where demand is expected to grow. Innovative solutions will be needed to address the sharp rise in generation interconnection requests and transmission service while maintaining reliability and managing costs.

In July 2023, Bonneville announced it is moving forward with more than $2 billion in multiple transmission substation and line projects to reinforce the regional grid and support its customers' and the region's clean energy goals. In a related effort, Bonneville is conducting a public process to propose generation interconnection queue reforms and related tariff changes necessary for a first ready/first served approach, allowing it to prioritize the most viable projects.

Fish and wildlife mitigation: Bonneville partners with states, tribes, federal and local governments, the NPCC, and many others to mitigate the effects of constructing and operating the FCRPS. Bonneville meets its mitigation responsibilities while balancing fish and wildlife stewardship with power operations and other river uses. Effectively managing agency costs helps sustain the agency's financial strength and resilience and ensures that Bonneville can continue to invest in biologically-effective measures to enhance conditions for fish and wildlife.

The Columbia River System Operations Environmental Impact Statement and associated Endangered Species Act consultations: In 2020, the Corps, Reclamation, and Bonneville completed the Columbia River System Operations (CRSO) Environmental Impact Statement (EIS) and associated Endangered Species Act (ESA) consultations on the Columbia River System (CRS) operations, maintenance and configuration for 14 Federal projects in the interior Columbia Basin. These 14 CRS Federal projects are a subset of the FCRPS. In the CRSO EIS, the three agencies prepared a reasonable range of alternatives for long-term system operations and evaluated the potential environmental and socioeconomic impacts on several system purposes, including flood risk management, irrigation, power generation, navigation, fish and wildlife, cultural resources and recreation.

The on-going action that requires evaluation under the National Environmental Policy Act (NEPA) is the long term coordinated management of CRS projects. An underlying need to which the co-lead agencies responded is reviewing and updating the management of these projects, including evaluating measures to avoid, offset, or minimize impacts to resources affected by the management of the CRS in the context of new information and changed conditions in the Columbia River basin. In addition, the co-lead agencies responded to the Opinion and Order issued by the U.S. District Court for the District of Oregon such that this EIS evaluated how to ensure that the prospective management of the system is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of designated critical habitat, including evaluating mitigation measures to address impacts to listed species. The co-lead agencies released a final Record of Decision (ROD) in September 2020. Regional parties subsequently challenged the CRSO EIS ROD in court.

In October, 2021, the Administration announced a short-term agreement on the operation of the Federal CRS multiple purpose projects. The agreement paused litigation on the selected alternative in the CRSO EIS ROD and associated ESA consultations. On August 4, 2022, the Administration announced the pause in the litigation would be extended one year to August 31, 2023 in the District Court and September 8, 2023 in the Ninth Circuit. On August 31, 2023, the stay was extended by 60 days through October 31, 2023 in the District Court and on September 8, 2023, the stay was extended by 60 days through November 8, 2023 in the Ninth Circuit. On October 30, 2023 parties gave notice they will not seek to revive the litigation through December 15 to allow for continued mediation discussions. On December 14, 2023 the Biden-Harris Administration announced a historic agreement to work in partnership with Pacific Northwest Tribes and States to restore wild salmon populations, expand Tribally sponsored clean energy production, and provide stability for communities that depend on the Columbia River System. The Columbia River Salmon Agreement of December 14, 2023 was signed by the U.S. Government, including Bonneville, the Confederated Tribes and Bands of the Yakama Nation, the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes of the Warm Springs Reservation of Oregon, the Nez Perce Tribe, the State of Oregon, and the State of Washington, collectively referred to as the "Six Sovereigns," and a coalition of environmental advocacy groups led by the National Wildlife Federation.

Bonneville has already planned, through its fish and wildlife program, to add at least an additional $20 million in combined capital and expense funding in Fiscal Years 2024 and 2025 for fish and wildlife efforts throughout the Columbia River Basin on top of its annual program funding and the September commitments to the upriver Columbia River Tribes. In the Columbia River Salmon Agreement, Bonneville's commitments include and are limited to:

- $200 million over 10 years in additional capital funding will be available to be directly funded by Bonneville to the U.S. Fish and Wildlife Service for Lower Snake River Compensation Plan hatchery modernization, upgrades, and maintenance, as guided by the priorities of other fishery managers including the Six Sovereigns.
- An additional $100 million in funding over 10 years for projects that contribute to the restoration of salmon and other native fish populations. To implement this commitment, Bonneville will provide an annual $10 million payment to the Six Sovereigns in a manner to be agreed upon, to distribute to specific projects, as prioritized by the Six Sovereigns.

The Columbia River Salmon Agreement also provides an agreement on hydropower operations over the term of the agreement which will benefit Bonneville customers and the regional economy.

The Columbia River Salmon Agreement also states: "Nothing in these USG commitments or any implementing agreement is intended to affect BPA's reimbursement obligation regarding the Columbia River Fish Mitigation and O&M costs associated with the CRS project funds provided by the Corps or Reclamation. The USG and agencies, however, intend that all other funds committed by the agencies in support of the USG Commitments are non-reimbursable funds by BPA, whether or not expressly stated. The Federal agencies agree to coordinate before incurring any new reimbursable expenditure in support of the USG Commitments. In the event that Congress appropriates funds that require reimbursement by Bonneville for one of the specific USG Commitments identified in this document, and that type of reimbursement does not arise from BPA's current reimbursement obligations, then that reimbursed amount will count toward Bonneville's total $300 million funding commitment." The planned execution of commitments in the Phase 2 Implementation Plan (P2IP) and the 12.14 agreement are still being worked on between BPA and various parties for FY 2025 and beyond through the IPR and budget formulation processes in FY 2024 and 2025.

BPA's administrator stated in the agreement "BPA sought to provide our ratepayers operational certainty and reliability while avoiding costly, unpredictable litigation in support of our mission to provide a reliable, affordable power supply to the Pacific Northwest." This agreement concludes the mediation and on February 8, 2024, the U.S. District Court for the District of Oregon granted a stay through Dec. 13, 2028, and on February 23, 2024 the U.S. Court of Appeals for the Ninth Circuit dismissed without prejudice litigation regarding the CRSO EIS.

Discretionary taxpayer funds requested or enacted for litigation stay-related activities must be non-reimbursable in Federal law to assure such activities are not in lieu of ongoing priorities and programmatic and financial responsibilities of the other Federal agencies (Corps, Reclamation, USFWS, etc.). Those discretionary, non-reimbursable funds may not be recovered in Bonneville's wholesale electric power rates. Other Federal agencies that are seeking to fund stay activities beyond existing Bonneville funding priorities and beyond statutory obligations or responsibilities must seek non-reimbursable appropriations for those activities.

Energy Efficiency: For more than 40 years, Bonneville has been the catalyst in the Pacific Northwest in the development of conservation as a resource in meeting the load demands placed on Bonneville by its regional power customers. Conservation or energy efficiency is Bonneville's priority resource to meet its regional contractual firm power load obligations. As of 2023, Bonneville's cumulative energy efficiency savings totaled 2,582 average megawatts (aMW) since the passage of the Northwest Power Act in 1980.

Strategic Goal: Sustain Financial Strength

Financial Plan: Financial strength is an enduring priority for Bonneville. In the next five years, Bonneville will build on Bonneville's solid financial footing by focusing on the core objectives and metrics in Bonneville's Financial Plan. These objectives demonstrate Bonneville's commitment to deliver on Bonneville's public responsibilities and to maintain Bonneville's position as the region's leading power and transmission provider.
Objectives:

- Maintain cost-management discipline and execute capital plans.

Bonneville aggressively manages the costs of operating the federal power and transmission systems, consistent with its mission objectives and statutory obligations. Cost-management discipline remains a key focus, as outlined in the Financial Plan, recognizing it will require balancing different priorities and obligations. Bonneville will rely on input from customers and others through Bonneville's IPR process, the public forum where Bonneville develops forecast program costs ahead of each rate case. As Bonneville continues to control operating costs, it is equally important to execute on Bonneville's capital plans to ensure Bonneville maintains and preserves the value of the FCRPS. While access to secure, low-cost capital will not be an issue for the near future thanks to Bonneville's recent substantial increase in U.S. Treasury borrowing authority, Bonneville remains committed to disciplined capital investments. Bonneville intends to develop and execute capital plans with the goal of making the right investments in the right assets at the right time, returning the highest possible value for Bonneville's ratepayers and the region.

- Maintain financial resiliency through adequate reserves, leverage, and U.S. Treasury borrowing authority.
  Financial resilience enables Bonneville to withstand disruptive events and conditions that impact revenues, expenses, or the delivery of power and transmission services and other regional benefits. Bonneville achieves financial resilience by having sufficient liquidity to ensure all bills are paid in full and on time; a prudent amount of leverage to help reduce and stabilize interest costs and maintain a stable cost of service over time; and enough debt capacity to ensure essential and ongoing capital investments are funded with certainty and at low cost.

- Maintain high investment-grade credit ratings.
  Bonneville seeks to maintain high investment-grade credit ratings on its nonfederal debt from all three major ratings agencies. Strong credit ratings reflect Bonneville's financial strength and help ensure low costs on Bonneville-backed nonfederal debt.

Strategic Goal: Mature Asset Management

Asset Management Program: The foundation of Bonneville's value is the base of the generating resources from which it markets electricity, and Federal transmission assets it owns and operates. Bonneville has made significant progress by adopting the highest international standards for asset management. Bonneville has implemented 10-year Strategic Asset Management Plans for each asset category and tied them to our IPR process to better inform its capital spending forecasts.

Infrastructure investments: The FCRPS is one of the nation's largest nearly carbon-free power systems, and preserving and enhancing the value of the FCRPS for the future continues to be a major Bonneville focus. Bonneville's ongoing prioritization and execution of capital investment in transmission and FCRPS generation assets is the foundation for delivering clean, low-cost power to support the communities and economies of the region well into the future.

Bonneville continues to assess needed infrastructure investments in the Pacific Northwest to meet transmission capacity and reliability needs.

Southern Idaho Load Service: In 2023, Bonneville confirmed a long-term solution to reinforce the regional transmission system and assure access to clean, affordable and reliable power to some of the regions oldest public utilities, the Southern Idaho preference customers.

Bonneville provided a final decision to execute on contracts with Idaho Power and PacifiCorp for terms of service on their planned jointly owned transmission line connecting Boardman, Oregon, to Hemingway, Idaho, also known as B2H. Through this new plan of service, Bonneville will purchase transmission from Idaho Power over the new line, as well as existing Idaho Power transmission facilities, to its Southeast Idaho preference customers. This streamlines the current process, which involves buying transmission service from multiple utilities over frequently congested lines that reduce reliability in delivering power and increase costs.

Strategic Goal: Preserve Safe and Reliable Operations

Protect and enhance the delivery of power and transmission services in an evolving landscape: Bonneville has more than eight decades of experience maintaining safe, reliable power and transmission operations, a feat which required continual adjustment as the Northwest's grid evolved over time. We are prepared to continue this legacy as new and emerging

reliability and security risks challenge the grid. Key considerations are the impacts of extreme weather, wildfires, cyber and physical attacks, and the integration of more variable energy resources.

BACKGROUND: Grid Reliability

The grid modernization initiative BPA launched in 2018 included a portfolio of projects aimed to improve automation, accuracy and visibility. Many of these projects, now completed, targeted operational and reliability benefits that BPA can leverage today through our participation in the Western Energy Imbalance Market. In addition, BPA actively engaged in the funding and development of the Western Resource Adequacy Program, which is now operating under a FERC-approved tariff and independent Board of Directors. BPA also invested in significant upgrades to its automatic generation control system, improving the flexibility of the federal hydropower system while preserving grid stability. BPA further advanced its goals for safe and reliable service through its Wildfire Mitigation Plan. Released in 2020, the plan aims to protect public safety and preserve the reliable delivery of electricity through proactive and responsive measures. BPA continues to enhance this plan, which includes a public safety power shutoff procedure and industry-leading vegetation management.

The operation of the interconnected power grid requires a greater level of collaboration and cooperation going forward to ensure Bonneville can operate a reliable, resilient and secure grid for the customers and communities it serves.

Operational improvements to support grid reliability: Bonneville seeks to maximize the capacity of the existing system through a combination of operational studies, visualization tools, congestion management and other operational improvements. While Bonneville's strategy includes non-wires solutions when available, Bonneville is also planning substantial transmission expansion investments.

Resilience in preparation for high-impact events and system change: Climate-related risks and security threats – both physical and cyber – have intensified. At the same time, the resource and load mix are changing, with fewer baseload resources available and more variable energy resources connecting to the grid. Bonneville will ensure it is better prepared to respond to and recover from high-impact events as the system continues to change.

Bonneville is hardening facilities and communications systems to enable continued operations through high-impact events; and prioritizing proactive actions to improve our ability to respond to disruptive events. This includes developing tools to improve situational awareness for wildfires, cyber threats and storms, and to better understand and mitigate the impacts of climate change on Bonneville systems.

A culture of compliance: Bonneville anticipates an evolving regulatory environment within which it operates. Improvements in internal practices and capabilities will accommodate change and reduce cost, complexity and risk associated with meeting evolving compliance standards. Work will include increased engagement with regulators, as well as advancements in internal controls and causal analysis.

BACKGROUND: Sustainability and Resilience

Sustainability and resilience are inextricably linked, with the shared goal to protect people, assets and the environment in uncertain, sometimes extreme conditions. BPA's Sustainability Office and Resilience Program work closely to ensure the agency continues to thrive in a rapidly-changing, resource-constrained environment. BPA developed its first Climate Vulnerability Assessment and Resilience Plan in late 2022, and both programs will continue to collaborate to further embed climate resilience into BPA's critical business functions.

Resilience and security of information and operational technology: Bonneville is constantly reviewing and improving its cybersecurity protections to guard the agency from the latest threats. One area of significant focus is overcoming barriers to real-time threat detection for critical infrastructure, with an eye toward centralized monitoring of substations and substation networks. This involves the deployment of automated systems that monitor and manage the generation and delivery of power, otherwise known as operational technology. Bonneville will continue to expand its Continuous Diagnostics and Mitigation Program, led by the Cybersecurity and Infrastructure Security Agency, for enhanced situational

awareness. The sensors and tools that make up this program will set the foundation for zero-trust architecture to further fortify cybersecurity control.

Strategic Goal: Modernize Business Systems and Processes

Business transformation initiatives: Pursuant to the 2018-2023 Strategic Direction, Bonneville prioritized the budget and staffing resources for grid modernization. Bonneville took prudent cost-control measures in other parts of the business. Bonneville is now sharpening focus on needed investments to improve foundational internal business systems and processes. These enhancements will support delivering reliable, resilient, and competitive power and transmission services as the electricity industry landscape continues to change.

Systems to manage technology and business operations: To keep pace with changing markets and customer needs, Bonneville will seek technology solutions that enable greater flexibility and enhance efficiency across our enterprise. Further development of enterprise architecture – a blueprint that helps converge technology and business processes – will create tighter alignment of agency priorities with information technology service delivery, reducing the cost and complexity of Bonneville's corporate operations.

BACKGROUND: Grid Modernization

With the emergence of new markets, BPA heightened its focus on systems that could facilitate BPA's participation and provide greater regional integration. Through a comprehensive grid modernization initiative, we enabled BPA's entry into the Western Energy Imbalance Market, set the stage for future market evolution, and supported the development of the Western Resource Adequacy Program. This foundational work was integral for greater market evolution and regional integration in support of grid efficiencies, reliability and resilience.

Radio Spectrum Communications: Bonneville has additional work remaining to finish the construction related to the Advanced Wireless Services (AWS)-3 relocations (see "Background" sidebar). Bonneville will then complete its move of these four microwave hops to 7GHz-8GHz. For the 13A system, the new radio equipment has been installed and tentatively accepted for operational use so comparable capability has already been achieved, but circuit cutovers are waiting for completion of work on a separate but related project in February 2024. Retirement of the 13A equipment can begin once circuit cutovers are complete. For the 4K system, the new radio equipment has been installed, but there is pending waveguide installation and HVAC work that must be completed at Glass Butte before 30-day burn-in can begin. Since site access at Glass Butte is weather limited, the outstanding work may not be completed until the site is accessible again in late spring 2024. Once that work has been completed and the 30-day burn-in period has cleared with no issues, comparable capability will have been achieved, and circuit cutovers can begin. Retirement of the 4K equipment can begin once those cutovers are complete. Bonneville has spent the remaining SRF relocation funds and will complete the remaining construction work described above using separate BPA funding. Bonneville's wireless communication system is used to operate and control critical national transmission grid infrastructure in a reliable, secure, and safe manner. Bonneville's communication systems are designed to meet strict reliability/availability objectives required by NERC and Western Electricity Coordinating Council (WECC) standards. Concerning proper spectrum stewardship, Bonneville designs highly efficient radio systems that use minimal radio frequency (RF) channel bandwidths to meet critical mission needs. However, in certain circumstances, efficiently designed spectrum radio systems will require broad RF channels and/or lower state RF modulation schemes to meet existing and future requirements to meet operational and reliability/availability objectives.

To meet Bonneville's mission/operational requirements, RF communication equipment approved for system use goes through a rigorous evaluation and testing process. RF spectrum efficiency factors are considered during the evaluation/testing period. RF terminal equipment approved for use is normally purchased directly from vendors and is not typically supplied through a Request for Proposal process.

BACKGROUND: Radio Spectrum Communications

Bonneville's operational telecommunications and other capital equipment and systems are acquired using Bonneville's self-financing and procurement authorities. The Bonneville budget includes a system wide electric reliability performance indicator, consistent with NERC rules, to track and evaluate performance.

Bonneville may share temporarily-available dark spare capacity on its RF communication system with other government agencies (both Federal and state), and with other electric utilities in the region whose power systems interconnect with Bonneville. Non-critical administrative traffic is typically supported by commercial carrier enterprises. However, to meet the NERC and WECC electrical bulk transmission requirements, Bonneville exclusively operates highly critical transmission control traffic over its private telecommunication system as Bonneville has no control over the reliability/availability of the commercial enterprise or on how quickly critical operational control circuits are restored to active service during an interruption.

For high-capacity communication system applications, Bonneville considers and operates non-spectrum dependent alternatives such as dark fiber optic cable infrastructure systems.

During FY 2014, Bonneville began upgrading the Very High Frequency (VHF) land mobile system and installing several digital Synchronous Optical Network (SONET) rings typically consisting of dark fiber segments in combination with point-to-point microwave hops operating in the 4 GHz and 7/8 GHz bands. These various telecommunication systems operate within Bonneville's approximate 300,000 square mile regional utility service territory (Oregon, Washington, Idaho, western Montana) with much of the RF infrastructure located in low-population rural areas.

The FCRPS hydroelectric projects, owned by the Corps and Reclamation, also utilize Federal radio spectrum to preserve very high operational telecommunications and power system reliability.

BACKGROUND: Radio Spectrum Communications (Continued)

In FY 2014, Bonneville completed work costing approximately $40 million, funded through the Spectrum Relocation Fund (SRF), to relocate its operational telecommunication systems from the 1710-55 MHz radio spectrum bands to alternative Federal radio spectrum bands, part of the AWS-1 Federal Spectrum Relocation. In accordance with Federal law, Bonneville plans to return the approximately $8.2 million of excess funds to the U.S. Treasury, via the SRF, as soon as the National Telecommunications and Information Administration (NTIA) officially notifies the Federal Communications Commission (FCC) that the DOE relocation effort is complete.

Bonneville began participating in a new spectrum relocation effort in FY 2015 to relocate its operational telecommunication systems from the 1755-80 MHz radio spectrum bands. The NTIA has approved and, in July 2014, web-posted Federal agency relocation plans, including the Bonneville relocation plan. The FCC held an auction of this spectrum on November 13, 2014. Bonneville received an additional $5.2 million from the SRF on July 29, 2015, to fully pay for this new relocation effort, including, as in the prior relocation, the purchase and installation of new digital radio equipment. Bonneville received obligational authority to proceed with this relocation effort by apportionment on July 24, 2015.

Bonneville has worked to complete its move from 1755-80 MHz in two stages. First, Bonneville moved from the old Federal frequencies and "retuned" to new alternate Federal frequencies in the band segment of 1780-1850 MHz, which is above the highest frequency involved in the auction. Three hops Federal frequency moves/retuning were completed as of June 7, 2017. The last remaining path, Happy Camp to Hilltop in northern California near the Oregon-California Border, was moved/retuned, and as of July 31, 2018, Bonneville was off AWS-3 radio frequencies, meeting the commitment date promised to the NTIA.

The following pages provide more specifics on the primary budget categories and subcategories.

Power Services – Capital

Funding Schedule by Activity

Funding ($K)

Power Services - Capital	FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate	FY 2025 vs FY 2024 $	FY 2025 vs FY 2024 %
Associated Projects	$ 207,454	$ 270,000	$ 275,675	$ 5,675	2.1%
Fish & Wildlife	$ 14,646	$ 41,335	$ 41,300	$ (35)	-0.1%
Total, Power Services - Capital	**$ 222,100**	**$ 311,335**	**$ 316,975**	**$ 5,640**	**1.8%**

Outyears ($K)

Power Services - Capital	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate	FY 2029 Estimate
Associated Projects	$ 275,675	$ 281,620	$ 288,001	$ 294,794	$ 301,833
Fish & Wildlife	$ 41,300	$ 29,000	$ 15,700	$ 15,000	$ 15,000
Total, Power Services - Capital	**$ 316,975**	**$ 310,620**	**$ 303,701**	**$ 309,794**	**$ 316,833**

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Power Services – Capital

Overview

Under the Power Services – Capital category, there are three subcategories. **Associated Project** costs provide for direct funding of additions, improvements, and replacements of existing Corps and Reclamation hydroelectric projects in the Pacific Northwest. The FCRPS hydro projects produce a large portion of the electric power that is marketed by Bonneville.

Maintaining the availability and increasing the efficiency of the FCRPS is critical to ensuring that the region has an adequate, efficient, economic, and reliable power supply. As noted earlier, the FCRPS represents about 80 percent of Bonneville's firm power supply and includes 31 operating Federal hydroelectric projects with over 200 generating units. These projects have an average age of about 50 years, with some that exceed 60 years of age. Through direct funding and the cooperation of the Corps and Reclamation, Bonneville uses its U.S. Treasury borrowing authority and other sources to make investments needed to restore generation availability and improve efficiency, reducing demand on Corps and Reclamation appropriations for power-related investments.

These planned investments, included in the FY 2025 Budget estimates, will maintain the generation performance of the FCRPS. Moving forward with the cost-effective opportunities to preserve and enhance the capability of the FCRPS is a smart, economic, and environmentally beneficial decision for serving the growing Pacific Northwest electricity needs of Bonneville customers, particularly when compared to purchasing power from the wholesale power market.

Fish & Wildlife capital costs incurred by Bonneville are directed at activities that mitigate the impacts of the FCRPS on fish and wildlife resources. Bonneville uses a combination of capital and U.S. Treasury reimbursements to fund projects designed to increase juvenile and adult fish passage through the Federal hydrosystem, to increase fish production and survival through construction and operation of hatchery, acclimation and fish monitoring facilities, and to protect wildlife and resident fish populations through land acquisitions and associated habitat maintenance. These capital projects support both Northwest Power Act and ESA priorities and are integrated with the NPCC's Columbia Basin Fish and Wildlife Program (NPCC's Program) to efficiently meet Bonneville's responsibilities under the Northwest Power Act and other statutes to mitigate Federal hydrosystem impacts to Columbia River Basin fish and wildlife.

Background: Investment in FCRPS

Since the beginning of direct funding in 1997, Bonneville has invested over $3 billion in direct capital in the FCRPS with the goal of maximizing system value for the region and its stakeholders. Ongoing analysis with its operating partners, the Corps and Reclamation, has identified ongoing investment needs for the foreseeable future to maintain the health of the hydro system.

As of September 30, 2023, BPA has long-term fish and wildlife agreements with estimated contractual commitments of $649.3 million, which are likely to result in future expenses or regulatory assets. These agreements will expire at various dates through FY 2027 and do not include the Columbia Basin Fish Accords extension agreements. BPA, the Corps and Reclamation have signed agreements to extend the Columbia Basin Fish Accords with current Accords partners, namely certain states and tribes. The Accords and associated BPA funding commitments facilitate implementation of projects that provide BPA with legal compliance actions under applicable laws, including the Northwest Power Act and Endangered Species Act, and that benefit Columbia River Basin fish and wildlife. The extension agreements committed approximately $409 million for fish and wildlife protection and mitigation, which will result in future expenses or regulatory assets. As noted above, BiOps, Fish Accord extensions, and wildlife settlement commitments are integrated with other projects and implemented through the NPCC Program under the Northwest Power Act. They provide the basis for Bonneville's planned capital investment for fish and wildlife.

Background: Fish and Wildlife

Under the Northwest Power Act, the NPCC must develop a program of measures designed to protect, mitigate, and enhance Columbia River Basin fish and wildlife affected by the Federal and non-federal hydroelectric projects in the basin while assuring the Pacific Northwest an adequate, efficient, economical, and reliable power supply. The NPCC Program, the Columbia River System BiOps, other BiOps, and Bonneville's long-term agreements include prioritized strategies for mitigation actions and projects to meet Bonneville's responsibilities under the Northwest Power Act, the ESA, the Federal Clean Water Act, and other laws. When issues arise that potentially trigger the in-lieu provision of the Northwest Power Act, which prohibits Bonneville from funding mitigation that other entities are authorized or required to undertake, Bonneville works with the NPCC and regional fish and wildlife managers, customers, and tribes, as appropriate, to ensure ratepayers fund only appropriate mitigation.

Most projects recommended by the NPCC also undergo independent scientific review as directed by the 1996 Energy and Water Development Appropriations Act, which added Section 4(h)(10)(D) to the Northwest Power Act. As a result, the Council appoints an Independent Scientific Review Panel (ISRP) "to review a sufficient number of projects" proposed to be funded through Bonneville's annual Fish & Wildlife budget "to adequately ensure that the list of prioritized projects recommended is consistent with the Program." The Northwest Power Act further states that "in making its recommendations to Bonneville, the Council shall consider the impact of ocean conditions on fish and wildlife populations and shall determine whether the projects employ cost-effective measures to achieve program objectives." Today, most mitigation projects funded by Bonneville receive ISRP review as part of the NPCC recommendation process. The NPCC uses a multi-year project review cycle during which the ISRP reviews categories of projects grouped together.

To comply with the ESA, Bonneville funds capital investment actions to avoid jeopardizing listed species. Guidance for those actions is found in the current BiOps issued by the National Oceanic and Atmospheric Administration (NOAA) and the USFWS.

Under these collective BiOps, the Action Agencies (Bonneville, Corps, Reclamation) have committed to implement hydro, habitat, hatchery, and other actions throughout the Columbia River Basin to address impacts stemming from the operation of the Federal hydro-electric dams on ESA-listed fish, and to ensure that operations of the Federal dams do not jeopardize the continued existence of the ESA-listed species or adversely modify their designated critical habitat.

The Action Agencies also signed the 2008 Columbia Basin Fish Accords (Fish Accords or Accords) with five Northwest Tribes and the states of Idaho and Montana. In 2009, an agreement was signed with the state of Washington and Federal agencies (the state of Washington Estuary agreement). And in 2012, the Action Agencies signed an agreement with the Kalispel Tribe of Indians covering Albeni Falls Dam and FCRPS operations. Wildlife settlement agreements have been signed with the states of Oregon and Idaho to help complete mitigation for the flooding and inundation caused by the construction of FCRPS dams operating in those states. These Fish Accords and settlements complement the BiOps and provide firm commitments to prioritize mitigation actions and secure funding over the life of the agreements.

There are no anticipated expenditures under the third Power Services—Capital subcategory, **Projects Funded In Advance,** during this budget period.

Accomplishments

Power Services – Capital expenditures over the past fiscal year resulted in the following:

- The BP-24 Draft ROD was issued in June 2022 and the final ROD was issued in late July 2023
- 45,134 acre-feet/year of water protected and conserved
- 6,242 acres improved and protected in riparian areas
- 29,545 acres protected by purchase or lease
- 258 cubic-feet per second (cfs) of water flow protected and conserved
- 191 miles of stream improved and protected in riparian areas
- 129 miles of habitat accessed
- Completed switchyard modernization at Palisades
- Completed station service breaker replacement at Ice Harbor
- Completed intake gantry crane controls replacement at Ice Harbor
- Completed drainage system oil water separator at McNary
- Completed tailrace gantry crane rehabilitation at Dworshak
- Completed generator coolers replacement at Bonneville
- Completed transformers replacement at The Dalles
- Completed main unit breakers and station service upgrades at Bonneville
- Completed GDACS replacement at Chief Joseph
- Completed SCC board replacement at Chief Joseph

Explanation of Changes

Bonneville's budget includes $316.9 million in FY 2025 for Power Services – Capital, which is a 1.8 percent increase from the FY 2024 forecasted level. The FY 2025 level allows additional work efforts while continuing to align with Bonneville's strategic asset management plans, which focus on the need for investment in hydroelectric system assets and investments necessary to implement the BiOps, Fish Accord extensions, and other Columbia Basin fish and wildlife activities.

The FY 2025 budget increases the levels for Associated Projects by $5.6 million and decreases the funding level for Fish & Wildlife, by $35 thousand compared to FY 2024.

Strategic Management

Bonneville markets available electric power to meet requested load while supporting the achievement of its vital responsibilities for fish and wildlife, energy efficiency, renewable resources, and low-cost power in the Pacific Northwest region. Bonneville will continue to implement the following strategies to serve the region:

1. Bonneville coordinates its power operational activities with the Corps, Reclamation, NERC, regional electric reliability councils, its customers, and other stakeholders to provide the most efficient use of Federal assets.
2. Ongoing work with the Corps and Reclamation is focused on improving the reliability of the FCRPS, increasing its generation efficiency, and optimizing hydro facility operation.
3. Bonneville is committed to funding efforts to protect listed fish and wildlife species in the Columbia Basin under the ESA and working closely with the NPCC, regional fisheries managers, and other Federal agencies to prioritize and manage projects to mitigate fish and wildlife impacts by the FCRPS.
4. Bonneville's utility customers have been, and continue to be, a critical part of Bonneville's collaborative efforts to promote and foster the efficient use of energy.
5. Bonneville has assisted with a DOE Wind Power cross-cutting initiative to strengthen energy security.

The following external factors present the most significant risk and impact to overall achievement of the strategies listed above:

1. Continually changing regional economic and institutional conditions;
2. Competitive dynamics; and
3. Ongoing changes in the electric industry.

The following pages discuss budget specifics under two of the three Power Services – Capital subcategories: Associated Projects and Fish & Wildlife Projects.

Associated Projects – Capital

Overview

Bonneville will work with both the Corps and Reclamation to reach mutual agreement on budgeting and scheduling capital improvement projects that are cost-effective and provide system or site-specific enhancements, increase system reliability, or provide generation efficiencies.

The work is focused on improving the reliability of the FCRPS and on increasing its generation efficiency or capacity through turbine runner replacements, optimizing hydro facility operation, and new unit construction. Also, limited investments may be made in joint-use facilities that are beneficial to both the FCRPS operations and to other Corps and Reclamation project purposes.

The text below discusses Corps projects first, followed by Reclamation projects.

Corps of Engineers Projects
($K)

FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$166,541	$201,075	$228,060

Bonneville Dam:

- FY 2023. Completed ice and trash sluice gate replacement, and oil storage room fire protection. Continued trashracks replacement, elevators rehabilitation, feeder boards replacement and tailrace gantry crane replacement. Began digital governors replacement and headgate repair pit rehabilitation.
- FY 2024. Complete feeder boards replacement and oil water separator improvements. Continue digital governors replacement, headgate repair pit rehabilitation, and trashracks replacement and elevators rehabilitation. Begin main unit breaker replacement.
- FY 2025. Complete trashracks replacement and elevators rehabilitation. Continue digital governors replacement, headgate repair pit rehabilitation, and main unit breaker replacement.

John Day Dam:

- FY 2023. Completed control room fire protection upgrades, feeder boards replacement, emergency gantry crane replacement and turbine pit pumps replacement. Continued BLH turbine hub upgrades and fixed blade conversions, HVAC system upgrade, and trashracks replacement. Began turbine pit pumps replacement.
- FY 2024. Complete turbine pit pumps replacement. Continue BLH turbine hub upgrades and fixed blade conversions, HVAC system upgrade, and trashracks replacement. Begin generator cooling water system upgrades.
- FY 2025. Continue BLH turbine hub upgrades and fixed blade conversions, generator cooling water system, HVAC system upgrades, and trashracks replacement. Begin installation of powerhouse oil detection system and turbine runner replacement and generator rewinds.

The Dalles Dam:

- FY 2023. Completed fish unit breaker replacement, gate repair pit upgrades and ice and trash sluiceway sprat controls. Continued intake and tailrace crane rails, intake gantry crane replacement and oil accountability measures.
- FY 2024. Continue intake and tailrace crane rails replacement, intake gantry crane replacement and oil accountability measures.
- FY 2025. Complete intake and tailrace crane rails replacement and intake gantry crane replacement. Continue oil accountability measures.

Willamette Plants:

- FY 2023. Completed intake gantry crane replacement at Dexter, powerhouse and transformer oil water separator at Foster, and oil water separator upgrades at Hills Creek. Continued butterfly valve replacement at Cougar, electrical reliability upgrades at Foster, main unit breakers and electrical reliability upgrades, spillway gate

rehabilitation and spillway rock removal at Hills Creek. Began intake gantry crane replacement at Big Cliff, and spillway gates at Cougar.

- FY 2024. Complete butterfly valves replacement at Cougar and spillway gates rehabilitation at Detroit. Continue spillway gates replacement at Cougar, main unit breaker and electrical reliability upgrades, spillway gate rehabilitation and spillway rock removal at Hills Creek. Begin powerhouse and transformer oil water separator at Detroit.
- FY 2025. Complete spillway gate rehabilitation at Hills Creek. Continue main unit breakers and electrical reliability upgrades and spillway rock removal at Hills Creek. Begin trashracks and intake gate replacement at Big Cliff, turbine and generator rehab at Foster, bridge crane replacement and trashracks and intake gates replacement at Green Peter.

Albeni Falls Dam:

- FY 2023. Completed main unit transformers replacement.
- FY 2024. No planned capital projects.
- FY 2025. Begin bridge crane rehabilitation.

Libby Dam:

- FY 2023. Continued system control console replacement, powerhouse gantry crane rehabilitation and DC boards and breakers replacement.
- FY 2024. Complete system control console replacement. Continue powerhouse gantry crane rehabilitation and DC boards and breakers replacement. Begin 6th unit installation and GDACS installation.
- FY 2025. Complete DC boards and breakers system replacement, powerhouse gantry crane rehabilitation and system control console replacement. Continue 6th unit installation and GDACS installation.

Chief Joseph Dam:

- FY 2023. Continued feeder boards replacement, intake gantry crane replacement, tailrace crane replacement and generator rewinds.
- FY 2024. Complete feeder boards replacement. Continue intake gantry crane rehabilitation, generator rewinds and upgrades for station service units. Begin exciters replacement, powerbus replacement and powerhouse and sump pump controls.
- FY 2025. Continue intake gantry crane rehabilitation, generator rewinds and upgrades for station service units, exciters replacement, powerbus replacement and powerhouse and sump pump controls.

Dworshak Dam:

- FY 2023. No capital projects.
- FY 2024. Begin and complete fire-rated transformer containment walls.
- FY 2025. No planned capital projects.

McNary Dam:

- FY 2023. Completed headgate repair pit rehabilitation. Continued digital and mechanical governors upgrade, exciters upgrade, headgate system rehabilitation, intake gantry crane replacement, tailrace gantry crane replacement, iso-phase bus replacement, powerhouse control system upgrade, station service turbine rehabilitation and turbine design and replacement. Began drainage, unwatering and equalization system rehabilitation.
- FY 2024. Complete intake gantry crane replacement, tailrace gantry crane replacement and station service turbine rehabilitation. Continue digital and mechanical governors upgrade, drainage, unwatering and equalization system rehabilitation, headgate system rehabilitation, iso-phase bus replacement, powerhouse control system upgrade, and turbine design and replacement. Begin life safety/fire alarm system upgrades.
- FY 2025. Complete drainage, unwatering and equalization system rehabilitation, mechanical governors, and life safety/fire alarm system upgrades. Continue digital governors upgrade, exciters upgrade, headgate system rehabilitation, iso-phase and HV bus replacement, powerhouse control system upgrades, and turbine design and replacement.

Ice Harbor Dam:

- FY 2023. Continued Units 1-3 turbine runners replacement and Units 1-3 stator windings replacement. Began EIM gen metering additions.

- FY 2024. Complete EIM gen metering additions. Continue Units 1-3 turbine runner replacements and stator winding replacements. Begin intake gate hydraulic system upgrades.
- FY 2025. Continue Units 1-3 turbine runner replacements, stator winding replacements, intake gate hydraulic system upgrades. Begin life safety fire alarm system upgrades.

Little Goose Dam:

- FY 2023. Continued headgate repair pit upgrade, iso-phase bus upgrades, trashrake crane and rake upgrade, and powerhouse roof replacement. Began DC system and LV switchgear upgrades.
- FY 2024. Complete powerhouse roof replacement, headgate repair pit upgrade and trashrack crane and rake upgrade. Continue DC system and LV switchgear upgrades, headgate repair pit upgrade, and iso-phase bus upgrades. Begin intake gate rehabilitation, main Unit 1-6 discharge ring upgrades and turbine blade cavitation repair, powerhouse control and annunciation system upgrades, and spare transformer purchase.
- FY 2025. Continue DC system and LV switchgear upgrades, headgate repair pit upgrade, iso-phase bus upgrades, intake gate rehabilitation, main Unit 1-6 discharge ring upgrades and turbine blade cavitation repair, powerhouse control and annunciation system upgrades, and spare transformer purchase.

Lower Granite Dam:

- FY 2023. Continued main Unit 2 blade sleeve upgrade and rehabilitation, and trashrack crane and rake upgrade.
- FY 2024. Complete trashrack crane and rake upgrade. Continue main Unit 2 blade sleeve upgrade and rehabilitation.
- FY 2025. Continue main Unit 2 blade sleeve upgrade and rehabilitation. Begin Turbine Intake Gate Hydraulic System Upgrade.

Lower Monumental Dam:

- FY 2023. Completed trash rake crane and rake upgrades and headgate repair pit upgrades. Continued DC system and LV switchgear upgrades, iso-phase bus upgrades and intake gate rehabilitation.
- FY 2024. Continue DC system and LV switchgear upgrades, iso-phase bus upgrades and intake gate rehabilitation. Begin powerhouse bridge crane and drive system upgrade.
- FY 2025. Complete DC system and LV switchgear upgrades and iso-phase bus upgrades. Continue powerhouse bridge crane and drive system upgrades.

Bureau of Reclamation Projects
($K)

FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$40,913	$68,925	$47,615

Grand Coulee Dam:

- FY 2023. Continued G11-18 transformers replacement, Block 31 elevator replacement, LPH/RPH bridge crane replacement, new firehouse construction, TPP K21-K24 transformers replacement, transformer dissolved gas-in-oil analyzers, and TPP crane controls upgrade. Began powerplant battery replacement.
- FY 2024. Complete new firehouse construction. Continue Block 31 elevator replacement, G11-18 transformers replacement, G1-G18 penstock stoplogs, LPH/RPH bridge crane replacement, powerplant battery replacement, TPP crane controls upgrade, K21-K24 transformers replacement and transformer dissolved gas-in-oil analyzers. Begin G19-G21 modernization, LPH/RPH cyclops semi-gantry crane replacement, radio system modernization, replacement of underground feeders to the town of Coulee Dam, and station service compressed air system upgrades.
- FY 2025. Complete Block 31 elevator replacement, G1-G18 penstock stoplogs, LPH/RPH bridge crane replacement, TPP crane controls upgrade, and transformer dissolved gas-in-oil analyzers installation. Continue G11-G18 transformers replacement, G19-G21 modernization, LPH/RPH cyclops semi-gantry crane replacement, powerplant battery replacement, radio system modernization, underground feeders to the town of Coulee Dam, station service compressed air system upgrades, and K21-K24 transformer replacement.

Keys Pump Generating Plant:

- FY 2023. Completed P5 and P6 impellers, stators and core rewinds. Continue P1-P6 coaster gate replacement, P1-P6 exciters, relays and controls and PG7-PG12 governors, exciters, relays and controls replacement, and phase reversal switch replacement. Begin KP10B transformer replacement.
- FY 2024. Complete phase reversal switch replacement and P1-P6 coaster gate replacement. Continue KP10B transformer replacement, and P6 exciters, relays and unit controls, PG7-12 governors, exciters, relays and unit controls. Begin PGP crane modernization.
- FY 2025. Continue KP10B transformer replacement, P1-P6 exciters, relays and unit controls, PG7-12 governors, exciters, and relays and unit controls, and PGP crane modernization.

Hungry Horse Dam:

- FY 2023. Completed control room panel revisions and powerplant cranes and controls replacement. Continued G1-G4 static exciters replacement, powerplant crane controls, main unit transformer fire protection system replacement, powerplant windows replacement, radio system addition and disconnect switches replacement.
- FY 2024. Complete powerplant windows replacement, radio system modernization and powerplant cranes and controls replacement. Continue G1-G4 static exciters replacement, main unit transformer fire protection system replacement and disconnect switches replacement. Begin domestic water system upgrades.
- FY 2025. Complete domestic water system upgrades. Continue G1-G4 static exciters replacement, main unit transformer fire protection system replacement and disconnect switch replacement.

Chandler Dam:

- FY 2023. No capital projects.
- FY 2024. No planned capital projects.
- FY 2025. No planned capital projects.

Palisades Dam:

- FY 2023. Continued hollow jet valve replacement.
- FY 2024. Complete hollow jet valve replacement.
- FY 2025. No planned capital projects.

Green Springs Dam:

- FY 2023. No planned capital projects.

- FY 2024. No planned capital projects.
- FY 2025. No planned capital projects.

Black Canyon Dam:

- FY 2023. Continued station service arc flash mitigation, Units 1 & 2 life safety modernization and trash rake system installation.
- FY 2024. Continue station service arc flash mitigation, Units 1 & 2 life safety modernization and trash rake system installation.
- FY 2025. Continue trash rake system installation. Complete station service arc flash mitigation and Units 1 & 2 life safety modernization.

Anderson Ranch Dam:

- FY 2023. No capital projects.
- FY 2024. No planned capital projects.
- FY 2025. Begin turbine runner replacement.

Roza Dam:

- FY 2023. No capital projects.
- FY 2024. No planned capital projects.
- FY 2025. No planned capital projects.

Minidoka Dam:

- FY 2023. No capital projects.
- FY 2024. No planned capital projects.
- FY 2025. No planned capital projects.

Fish & Wildlife Projects – Capital

Overview

Bonneville continues to develop budgets for the suite of fish and wildlife mitigation projects originally adopted in FY 2007 based on recommendations from the NPCC. Bonneville reaffirmed and expanded many project-specific commitments in subsequent agreements and processes, including BiOps and 2022 Fish Accord extensions, and since then, virtually all these projects received independent science review through the NPCC and its project review processes. Bonneville's funding decisions embrace many of the management objectives and priorities in the NPCC's Program and continue to integrate ESA compliance as described in the NOAA Fisheries' and USFWS's FCRPS BiOps. Coordination continues among Bonneville, NPCC, Federal resource management agencies, states, tribes, and others to support the projects that satisfy Bonneville's mitigation responsibilities.

Fish & Wildlife Projects

($K)

FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$14,646	$41,335	$41,300

Bonneville intends to continue implementing the types of capital projects listed below. These projects are based upon the best available science and are regionally important in that they provide high priority mitigation and protection actions for fish and wildlife populations affected by the construction and operation of the FCRPS dams. Projects and facilities listed below deliver direct, on-the-ground benefits to both ESA listed and non-listed fish and wildlife throughout the Columbia River Basin and have been evaluated and coordinated with the Council, State, Federal and tribal fish and wildlife resource managers, local governments, watershed and environmental groups, and other interested parties. Specifically, as capital construction projects, hatchery facilities typically go through the NPCC's three-step process, which includes development of a master plan, environmental compliance, ESA consultation, value-engineering analysis, and review by the ISRP.

The three types of fish and wildlife projects that Bonneville capitalizes are as follows:

1) Fish passage structures – Structures funded with capital that enhance fish access to habitat in the Columbia River Basin including but not limited to wells, ladders, screens, pumping, culverts, diversion (irrigation) consolidation, piping to reduce water loss, irrigation efficiencies (drip irrigation), lining of ditches (seepage reduction), removal of objects impeding fish passage or pushup dams, and construction-related habitat restoration.
2) Hatchery facility construction – Projects and activities relating to the construction, improvement, and replacement of fish hatcheries, including related satellite facilities (acclimation ponds and collection weirs). This may also include construction-related habitat restoration.
3) Land acquisition and stewardship – Land acquisition projects that protect, enhance, and maintain fish and wildlife habitat and provide credit to Bonneville, such as acres for wildlife or instream miles for resident fish, to fulfill the legal obligation of Bonneville to mitigate the impacts from construction and operation of the FCRPS.

New projects included in this budget include the following:

Rocky Reach Kelt Facility:

Yakama Nation has proposed expansion of an existing facility for the purposes of collecting and reconditioning localized steelhead kelt. Steelhead are currently collected at Rock Island Hydro bypass and trucked to Methow National Fish Hatchery for reconditioning. Localizing the reconditioning facility could improve sub-basin capture, collection and effectiveness of release. This project is still in negotiation for Bonneville funding.

Colville Acclimation Building Enclosures

The Chief Joseph Hatchery operates to restore and enhance depleted runs of spring and summer/fall salmon Chinook salmon for release into the Columbia and Okanogan rivers. Juvenile salmon are transferred from the hatchery; reared, acclimated and released to acclimation facilities. The CCT have proposed construction of roof enclosures for acclimation facilities Omak and Riverside. The enclosures are intended to keep ice-cover off the ponds and to allow picking of mortalities throughout the winter for improved pond hygiene and reduced occurrence of disease.

Existing projects included in this budget include the following:

Colville Tribes Resident Fish Hatchery Expansion:

Constructed to produce 50,000 pounds of trout annually, this facility is unable to meet all its annual spring stocking goals for Buffalo, North Twin, South Twin, and Rufus Woods lakes as identified in the 2020 Fisheries Management Plan. To meet annual stocking goals for these four lakes, the hatchery began contracting with a commercial net pen operator in 2010 to rear a component of the hatchery's Rainbow Trout in net pens located in Lake Rufus Woods. Poor net pen water quality conditions have consistently contributed to annual mortality rates between 33-50 percent. The Confederated Tribes of the Colville Reservation is exploring the feasibility of expanding on-site hatchery rearing vessels to increase on-site production and reduce net pen rearing. The expansion would allow the hatchery to utilize clean, cool, pathogen-free water and intended to increase trout survival, helping meet stocking objectives identified in the management plan. In 2021, the Colville Tribe hired a licensed engineering firm to complete a conceptual design and construction cost estimates for a facility capable of producing 25,000 triploid rainbow trout at a maximum size of 2 pounds each. The documents produced will provide the Colville Tribes Fish and Wildlife Department with a plan and construction cost estimate that will assist in determining if the project should continue to the next phase. Design for the project has been completed and the expected construction start date is yet to be determined.

Chief Joseph Hatchery Water Quality Project:

The Chief Joseph Hatchery operates to restore and enhance depleted runs of spring and summer/fall salmon Chinook salmon for release into the Columbia and Okanogan rivers. Current infrastructure/operational constraints are preventing the hatchery from achieving full production of 2.9 million Chinook smolts; Bonneville and Colville Tribal staff are developing a coordinated approach and plan to address water temperature and production issues at the hatchery. Design for the project has not begun and expected start date yet to be determined. The Chief Joseph Hatchery was a 2008 Accord commitment with the Confederated Tribes of the Colville (CCT) Reservation; construction began in FY 2010, with fish production starting in 2013.

Umatilla Hatchery Facility and Acclimation Facilities:

Bonneville funds the Oregon Department of Fish and Wildlife (ODFW) to operate the hatchery and the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) to operate acclimation facilities supporting the hatchery.

Congress originally authorized Bonneville expenditure authority for construction of the Umatilla Hatchery and acclimation facilities under P.L. 98-360, 98 STAT. 403, 415 (July 16, 1984). The NPCC recommended that Bonneville construct the Umatilla Hatchery, just east of the town of Irrigon, Oregon, and acclimation facilities, on the Umatilla River, to mitigate for the loss of salmon and steelhead habitat and migration blockage resulting from the CRS dams. Umatilla River anadromous fish had been largely extirpated in the early 1900s by irrigation dams, prior to construction of the CRS dams. Current hatchery production includes 810,000 spring Chinook, 600,000 fall Chinook, 500,000 coho, and 150,000 native summer steelhead. Construction of the Umatilla Hatchery was completed in 1991. BPA built juvenile salmonid acclimation facilities at Minthorn, Imeques, C-mem-ini-kem, Thornhollow, and Pendleton locations, all within in the Umatilla River basin from 1985 to 1999 to place juvenile fish back in the basin to imprint on the Umatilla River water, so that adult fish would return to their natal waters.

At the hatchery, the available water supply never met expected production levels, and water supply has continued to deteriorate over time. To preserve and improve fish production at the hatchery, Bonneville is exploring options to address the water supply issue and is in the early evaluation phase.

At the acclimation facilities, water intakes have experienced clogging from debris and ice, due to their locations and configurations, resulting in emergency releases of juvenile salmon and steelhead, which have resulted in poor survival to adulthood. Alternatives to the current facility intake configurations will be designed to address these issues. It appears costs of upgrades at the hatchery and acclimation sites will exceed the statutory threshold of $2.5 million and have an estimated life of 15 years or more, thus triggering the need to obtain expenditure authority from Congress, prior to- commencing construction, as required by 16 U.S.C. 839b(h)(10)(B), as amended by Section 307 of the FY 2012 Consolidated Appropriations Act, P.L. 112–74 125 STAT. 877. (Dec. 23, 2011). Congress originally authorized Bonneville expenditure authority for construction of the Umatilla Hatchery under P.L. 98-360, 98 STAT. 403, 415 (July 16, 1984). The NPCC in 1990 recommended that Bonneville construct the Umatilla Hatchery, just east of the town of Irrigon, Oregon, to mitigate for the loss of salmon and steelhead habitat and migration blockage resulting from the CRS dams. Umatilla River anadromous fish had been largely extirpated in the early 1900s by irrigation dams, prior to construction of the CRS dams. Current hatchery production includes 810,000 spring Chinook, 600,000 fall Chinook, 500,000 coho, and 150,000 summer steelhead. Construction of the Umatilla Hatchery was completed in 1991 at a cost of $14 million.

UmaBirch Conservation Easement Project:

Fish and wildlife mitigation and ecology restoration is proposed for the UmaBirch Conservation Easement. The easement includes 774 acres for fish and wildlife mitigation and ecological restoration. Bonneville is currently working with the Confederated Tribes of the Umatilla Reservation to design a stream and floodplain restoration in the area. Much of the instream and floodplain improvements would occur at the confluence of the Umatilla River and Birch Creek (Project Area 2) to benefit multiple life stages of salmonids and lamprey. Actions likely would include added complexity for 1 mile of the Umatilla River and 0.3 miles of Birch Creek; removal of 1.3 miles of agricultural berms and removal of 0.3 miles of Corps levee; reconnection of tens of acres (exact acreage TBD) of floodplain rearing habitat; and the restoration of over 100 acres of riparian vegetation. The project would help implement the proposed action consulted upon in the 2020 BiOp and the project sponsor, the Confederated Tribes of the Umatilla Indian Reservation, has designated the project a high priority due to linkages with the Umatilla Habitat Program Objectives and Umatilla River Vision. This project requires the environmental compliance process be complete, which may impact implementation timeframes; the project is currently expected to start construction in FY 2025.

New construction-related habitat restoration projects that require capital funds in FY 2025 include the following:

Svensen Island:

The Svensen Island Restoration Project would reconnect the 320-acre island, east of Astoria, Oregon, directly to the mainstream Columbia River to increase ecological function and provide refuge and rearing capacity for out-migrating juvenile salmon and steelhead. Specifically, the project would remove and lower approximately 1.5 miles of existing levee and remove approximately 100 pile dikes on the northern side of the island to provide unobstructed access to 40 acres of re-connected and newly excavated floodplain and tributary habitats for salmonids and lamprey. The Columbia Restoration Group is leading the project, in partnership with the Columbia Land Trust. This estuary project ranks high on the list of priorities in the estuary and will help to meet the proposed action consulted upon in the 2020 BiOp. This project requires the environmental compliance process be complete, which may impact implementation timeframes; the project is currently expected to start construction in FY 2024.

Catherine Creek/Hall Ranch:

This project is intended to improve off-channel rearing habitat complexity for Chinook, steelhead, and bull trout by restoring dynamic channel geomorphology and habitat-forming processes in Catherine Creek and Milk Creek. It would improve floodplain connectivity through removal and relocation of 1 mile of Washington State Route 203 and re-connecting 50 acres of the historic Catherine Creek floodplain and channel network. The request is for a project-funding match of $3,294,616 from Bonneville against additional project investment from other Federal and state partners, for a total projected project cost of $5,994,616. This project has multiple coordination points and requires the

environmental compliance process be complete, which may impact implementation timeframes; the project is currently expected to start construction in FY 2024.

The Further Consolidated Appropriations Act, 2019 (Public Law 116-94) provided expenditure authority for the following project:

Steigerwald Project:

The Steigerwald Floodplain Restoration Project is a collaborative project that will reconfigure the Port of Camas-Washougal's (Port's) existing Columbia River levee system to reduce flood risk, reconnect 960 acres of Columbia River floodplain, and increase ecological function at the Steigerwald Lake National Wildlife Refuge. Specifically, the project will construct 1.6 miles of setback levee, completely remove 2.2 miles of existing levee, provide unobstructed access to floodplain and tributary habitats for salmonids and lamprey, and greatly reduce flood risk to the Port's Industrial Park and City of Washougal's wastewater treatment plant, which serves 15,000 residents. Bonneville is working with the lower Columbia Estuary Partnership, which is leading the project. The project will provide seven survival benefit units (~15 percent of the Action Agencies' total goal in the estuary). Other partners include the Port, USFWS, Washington State Department of Transportation, City of Washougal, and several private landowners. Capital construction began in FY 2020 and was completed in June 2023.

The Consolidated Appropriations Act, 2016 (Public Law 114-113) provided expenditure authority for the following projects:

Shoshone Paiute Trout Hatchery:

The Shoshone Paiute Tribes of the Duck Valley Reservation, Idaho, have proposed that Bonneville fund the purchase or construction of a trout hatchery. The Tribes would own and operate the hatchery to produce trout to stock the Duck Valley Reservation reservoirs. The hatchery would meet contemporary aquaculture standards and achieve fish production goals. The Tribes believe they can reduce Federal reservoir stocking costs, some of which Bonneville currently pays on an annual basis. Design for the project has not begun and the expected start date is yet to be determined.

The FY 2014 Omnibus Appropriations Act (Public Law No. 113-76) provided expenditure authority for the following projects:

John Day Reprogramming and Construction:

The Columbia River Inter-Tribal Fish Commission (CRITFC) has proposed this project to balance the upriver and downriver salmon hatchery production mitigating for the effects of John Day and The Dalles dams within the Zone 6 area in the mainstream Columbia River, from the base of McNary Dam downstream to The Dalles Dam. The Tribes, Corps, and Bonneville have proposed to site the project at Prosser Hatchery. Bonneville would fund the construction of new circular tanks utilizing water reuse systems and the Corps would take over the operations and maintenance for the new infrastructure, which accommodates the reprogramming of hatchery fish. Design for the project is complete and construction is scheduled to begin in FY2024.

Columbia River Basin White Sturgeon Hatchery:

This project, proposed by the CRITFC, would mitigate for the decline of the white sturgeon population caused by consistently poor recruitment upstream of Bonneville Dam. Bonneville would fund the construction of a new facility, or the acquisition of an existing facility, to produce 15,000-30,000 yearling white sturgeon per year. The final project may include the collection, holding and spawning of broodstock, the rearing of wild-spawned juveniles, and the acclimation of juveniles prior to release. The site of the Yakama Nation's existing Marion Drain Sturgeon Hatchery near Toppenish, Washington, has been proposed as a location. The project team is working on additional analyses to respond to Council comments and to begin the environmental review process. Design for the project has not begun and the expected start date has yet to be determined.

Kelt Reconditioning and Reproductive Success Evaluation Research:

CRITFC is proposing a facility to recondition female steelhead (kelts) after they have spawned. The fish will be held and fed until they have re-matured and then be released into the Snake River where they will contribute to the spawning run. The capital portion of the project is expected to be constructed in the Snake River Basin, at the Nez Perce Tribal Hatchery in Idaho. Pursuant to the 2008 FCRPS BiOp and Supplemental FCRPS BiOps issued in 2010 and 2014, and consistent with the proposed action consulted upon in the 2020 CRS BiOp, Bonneville will implement the kelt reconditioning plan to improve the productivity of Snake River basin B-run steelhead populations that are listed for protection under the ESA. NOAA's analysis of prospective actions indicates that a combination of transportation, kelt

reconditioning, and in-stream passage improvements (e.g., spill-flow modifications) could increase kelt returns enough to achieve a targeted 6 percent increase in the number of returning Snake River B-run steelhead spawners to Lower Granite Dam. Construction is expected to start in FY 2024.

Ongoing projects (expenditure authority previously received):

Klickitat Production Expansion:

In 2008, the Klickitat River Master Plan was submitted by the Yakama Nation, reviewed by the ISRP, recommended with comments by the NPCC, and conditionally approved by Bonneville. The plan's original goals were to protect and increase naturally producing populations of spring Chinook and steelhead, localize brood collection of harvest stocks (fall Chinook and coho), while protecting the biological integrity and the genetic diversity of indigenous fish stocks in the sub-basin. A component of the master plan was implemented in 2009, including the completion of upgrades to Lyle Falls Fishway and Castile Falls Fishway, and the construction of a new bridge at the Klickitat Hatchery. In July 2009, a new Klickitat Hatchery Complex EIS was initiated to examine options for the development and operation of new production and supplementation facilities, acclimation alternatives, and additional upgrades to the existing hatchery facility. The Yakama Nation issued a revised master plan in July, 2012, that provided updates to its fish management plans. Bonneville suspended the NEPA process while the Yakama Nation refined its proposal in response to site and budgetary limitations and comments on the draft EIS.

Since that time, the National Marine Fisheries Service (NMFS) has completed its Mitchell Act EIS and BiOp, helping inform its funding responsibilities in the sub-basin. Bonneville negotiated a new scope of work with the Yakama Nation, and a revised Master Plan was submitted to the NPCC in 2017 and approved in 2018. The new scope of work targets design and construction activities for the expansion of the current spring Chinook program only, from 600,000 to 800,000 smolt, and converting to a wild broodstock collection program, as well as general water supply and water abatement upgrades. Construction will occur after Bonneville completes its environmental compliance and alongside a three-way operations and maintenance agreement which affirms that NMFS will remain responsible for providing funding post-construction. Project design was initiated in summer of 2021 and construction is expected to begin in FY2024.

Mid-Columbia Coho Restoration:

This Yakama Accord project is intended to re-establish naturally reproducing coho salmon populations in the Wenatchee River and Methow River sub-basins at biologically sustainable levels that also provide significant harvests. The biological objective to develop a mid-Columbia hatchery broodstock includes local adaptation to tributaries in the Wenatchee and Methow Basins and habitat restoration that will benefit coho as well as ESA-listed spring Chinook, steelhead, and bull trout. The fish programming was originally scoped for construction of a facility west of Leavenworth on the Wenatchee River near Natapoc Mountain for holding and spawning broodstock, incubating eggs, and rearing juveniles. The Yakama Nation has since determined the site to be infeasible for construction, given water quality and budget constraints. Additional semi-natural ponds and standard acclimation facilities have been constructed in the Wenatchee and Methow sub-basins for acclimating smolts prior to their release with one final site, Trinity Acclimation, to be completed. Construction is phased, with the first beginning early FY2024, followed by phase 2 in FY2024/2025.

Potential non-construction capital wildlife and resident fish habitat acquisitions (including conservation easements) eligible for capitalization are:

- Albeni Falls Wildlife Mitigation
- Willamette Wildlife Habitat Acquisitions
- Libby and Hungry Horse Reservoirs Resident Fish Acquisitions
- Southern Idaho Habitat Acquisitions

Power Services – Capital: Activities, Milestones and Explanation of Changes ($K)

FY 2024 Estimate	FY 2025 Estimate	Explanation of Changes FY 2025 vs FY 2024 Estimate
Power Services – Capital $311,335	**$316,975**	**$5,640/1.8%**
Associated Projects $270,000	**$275,675**	**$5,675/2.1%**
Milestones: Complete control room fire protection upgrades at Bonneville Dam. Complete emergency gantry crane replacement, SQ board replacement and trash rack crane replacement at John Day Dam. Complete fish unit breaker replacement and gate repair pit upgrades at The Dalles Dam. Complete spillway gate rehabilitation at Detroit, intake gantry crane at Dexter and Oil Water Separator at Foster. Complete powerhouse gantry crane rehabilitation at Libby Dam. Complete intake gantry crane rehabilitation at Chief Joseph Dam. Complete RO valve upgrade at Dworshak Dam. Complete tailrace gantry crane 4 replacement at McNary Dam. Complete intake gantry crane controls upgrade at Ice Harbor Dam. Complete powerhouse roof replacement at Little Goose Dam. Complete iso-phase bus and housing upgrade at Lower Granite Dam. Complete iso-phase bus upgrades at Lower Monumental Dam. Complete P1-P6 coaster gate replacement at Keys Pump Generating Plant. Complete SCADA replacement and main unit	Milestones: Complete emergency gantry crane rehabilitation at The Dalles Dam. Complete butterfly valves and spillway gates at Cougar Dam. Complete main unit transformers installation at Albeni Falls Dam. Complete DC boards and breakers system replacement at Libby Dam. Complete Unit 5 rotor frame and bracket repair at Little Goose Dam. Complete DC system and LV switchgear upgrade, trashrake crane and rake upgrade and main unit 2 blade sleeve upgrade and rehabilitation at Lower Granite Dam. Complete trashrake crane and rake upgrades at Lower Monumental Dam. Complete LPH/RPH bridge crane replacement and station service compressed air system replacement at Grand Coulee Dam. Complete hollow jet valve replacement at Palisades Dam. Complete station service turbine rehab at McNary. Complete DC boards and breakers system replacement at Libby. Complete system control console replacement at Libby.	The increase reflects additional work efforts while continuing to align with Bonneville's strategic asset management plans.

FY 2024 Estimate	FY 2025 Estimate	Explanation of Changes FY 2025 vs FY 2024 Estimate
transformer fire protection system replacement at Hungry Horse Dam. Complete switchyard modernization at Palisades Dam. Complete switchyard rehabilitation and breaker upgrade at Roza Dam. Complete microwave system backbone modernization at Minidoka Dam.		
Fish & Wildlife $41,335	**$41,300**	**$-35/-0.1%**
Milestones: Continue implementation of the Program, BiOps and applicable Fish Accord extensions.	Milestones: Continue implementation of the Program, BiOps and applicable Fish Accord extensions.	Fish & Wildlife will continue long-term, planned effort to reshape funding necessary to implement the BiOps, applicable Fish Accord extensions, Columbia River Basin fish and wildlife activities.

Funding Schedule by Activity

Funding ($K)

Transmission Services - Capital	FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate	FY 2025 vs FY 2024 $	FY 2025 vs FY 2024 %
Main Grid	$ 50,606	$ 38,527	$ 38,747	$ 221	0.6%
Area & Customer Services	$ 58,896	$ 38,527	$ 44,282	$ 5,756	14.9%
Upgrades & Additions	$ 73,393	$ 152,027	$ 147,362	$ (4,665)	-3.1%
System Replacements	$ 440,640	$ 365,387	$ 350,759	$ (14,628)	-4.0%
Projects Funded in Advance	$ 24,528	$ 46,232	$ 55,353	$ 9,121	19.7%
Total, Transmission Services - Capital	**$ 648,063**	**$ 640,700**	**$ 636,504**	**$ (4,196)**	**-0.7%**
Evolving Grid Projects	$ -	$ 56,000	$ 172,000	$ 116,000	207.1%
Total, Transmission Services - Capital + EGP	**$ 648,063**	**$ 696,700**	**$ 808,504**	**$ 111,804**	**16.0%**

Outyears ($K)

Transmission Services - Capital	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate	FY 2029 Estimate
Main Grid	$ 38,747	$ 44,905	$ 39,745	$ 28,370	$ 22,888
Area & Customer Services	$ 44,282	$ 39,292	$ 45,423	$ 52,201	$ 48,924
Upgrades & Additions	$ 147,362	$ 99,914	$ 42,016	$ 47,268	$ 57,857
System Replacements	$ 350,759	$ 369,317	$ 407,803	$ 416,974	$ 404,073
Projects Funded in Advance	$ 55,353	$ 56,131	$ 56,779	$ 56,740	$ 57,221
Total, Transmission Services - Capital	**$ 636,504**	**$ 609,560**	**$ 591,767**	**$ 601,553**	**$ 590,964**
Evolving Grid Projects	$ 172,000	$ 363,000	$ 500,000	$ 458,000	$ 209,000
Total, Transmission Services - Capital + EGP	**$ 808,504**	**$ 972,560**	**$ 1,091,767**	**$ 1,059,553**	**$ 799,964**

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Transmission Services – Capital

Overview

Transmission Services is responsible for about 75 percent of the Pacific Northwest's high-voltage transmission. Transmission Services provides funding for all additions and upgrades ("expand" investments), and replacements ("sustain" investments) to the Bonneville transmission system, resulting in reliable service to Northwest generators and transmission customers. The Bonneville transmission system also facilitates the delivery of power under sales and exchange agreements to and from the Pacific Northwest Region. The Transmission Services Capital Program is structured with a balanced focus on expand and sustain investments.

In addition to replacing aging and obsolete equipment, Transmission Services continues to make significant infrastructure improvements and additions to the system to assure continued reliable transmission in the Northwest. These improvements and additions will help the Bonneville transmission system continue to comply with national reliability standards and remove constraints that limit economic trade or the ability to maintain the system. Some of the proposed Transmission Services projects may be funded through Bonneville lease-purchase agreements. The lease-purchases obligate Bonneville to make expenditures to acquire the use of the related facilities and are identified on an as-needed basis. Bonneville may also make related expenditures to facilitate lease-purchase opportunities.

Strategic Asset Management

Transmission Services' efforts are coordinated through Bonneville's Strategic Asset Management Plan (SAMP) development. Based on strategic goals, Transmission Services implements integrated, detailed asset plans to guide the following activities:

1. Improvements to system adequacy, reliability, and availability. These projects address multiple challenges, such as integration of renewable energy, the need to relieve several congested transmission paths, the challenge to keep up with growing energy demands, and the need to meet changing regulatory and customer requirements.
2. An open access policy in support of competitive markets for load and generation.
3. Replacement of aging assets, which is vital to the reliability of the existing transmission system. To that end, Transmission Services has developed specific long-term strategies for the following asset categories:
    a. Substations AC
    b. Power system control/system telecommunications
    c. Wood lines
    d. Steel lines
    e. Rights-of-way, (land rights, access roads, and vegetation management)
    f. System protection and control
    g. Control centers
    h. Non-electric facilities

The following external factors present the strongest impact to overall achievement of Transmission Services' strategic goals:

- Continually changing economic and institutional conditions
- Competitive dynamics
- Ongoing regulatory and technology changes in the electric industry
- Siting issues

The following text discusses "Expand" or expansion investments first, following by "Sustain" or replacement investments.

Expand Investments

Expand (or expansion) investments continue to make significant infrastructure improvements and additions to the Bonneville transmission system to assure reliable transmission operations in the Northwest and fall into two categories:

1. Internally driven expansion requests, which are derived from system engineering studies, technology innovation research, system operations and maintenance functions, and system event analysis.
2. Externally driven expansion investment requests, which are derived from governmental initiatives and regulations, customer demand, and the integration of customer load service and generation needs.

These investments are further categorized into:

1. **Main Grid** – System investments affecting the major interties or internal paths and flowgates that transfer bulk power across the system.
2. **Area & Customer Service** – System investments related to geographical load service areas.
3. **Upgrades & Additions** – Upgrades are system investments that replace existing assets to increase capacity, reliability, or functionality, while additions are net new assets added to the system.
4. **Projects Funded in Advance (PFIA)** – System investments that are requested, and funded in advance, by customers.
5. **Evolving Grid Projects** – The EGPs are a group of 10 strategic capital projects needed across our service territory to eliminate chokepoints on our transmission system and enable renewable generation projects access to our transmission system and neighboring states' utilities to market their production.

Congressionally-approved Production Tax Credits (PTC) for renewable energy were enacted in 2005 and were to phase out beginning in 2023. The Inflation Reduction Act (IRA), enacted by President Biden on August 16, 2022, substantially changes and expands existing Federal income tax benefits for renewable energy, including extending the Wind PTC through 2033. The incentives created by these credits, along with Renewable Portfolio Standards (RPS) mandates implemented by the states of Oregon, Washington, and California, have spurred many renewable projects requesting to interconnect to the Bonneville transmission system grid. As of September 30, 2023, Bonneville had interconnected between 8,000 and 8,583 MW of renewable qualified generation projects and anticipates that number to climb to 10,000 MWs by the end of FY2024. Bonneville has more than 125,000 MW in additional renewable (wind, solar, biomass, geothermal, etc.) interconnection requests remaining in the study queue. Solar project interconnection requests are currently making up many of the new requests in Bonneville's queue. The current projections are possibly 11,000 MW of renewable generation projects interconnected by 2026.

Much of the remaining generation project transmission demand is the result of the RPS and other legislation enacted by Oregon and Washington that require retail utilities to acquire more than 8,000 MW of renewable energy in the Northwest by 2025, some of which will connect to Bonneville. Exports of power from the Northwest to California are currently limited by California laws to 2,000-2,500 MW. If California chooses to allow more exports from the Northwest, the exports will be limited to about 6,000 MW by the ratings of the physical infrastructure between the Northwest and California. Bonneville could possibly expect another 1,000 to 2,000 MW to connect to our system in that event. Also in the Bonneville transmission interconnection request queue is approximately 2,500 MW of natural gas-fired generation. Efficiency improvements to the FCRPS hydro units that qualify as renewable are also proposed between 2025 and 2026.

Background: Expansion Investments

In June 2008, Bonneville's first Network Open Season (NOS) received 153 requests from 28 customers for 6,410 MW of new service, about three-fourths for wind energy integration. Bonneville subsequently offered 1,782 MW of new transmission service on its existing system. Bonneville identified four new Main Grid capital projects from the 2008 NOS: (1) McNary-John Day 500 kV transmission line (part of West of McNary Reinforcements Group 1); (2) Big Eddy-Knight 500 kV transmission line and substation (part of West of McNary Reinforcements Group 2); (3) Central Ferry-Lower Monumental 500 kV Reinforcement (formerly Little Goose Area Reinforcement); and (4) I-5 Corridor 500 kV Reinforcement. Construction of the McNary-John Day 500 kV transmission line is complete and Bonneville has completed construction of the Big Eddy-Knight project and the Central Ferry-Lower Monumental 500 kV Reinforcement project. On May 18, 2017, Bonneville announced its decision to not build the I-5 Corridor Reinforcement Project. Bonneville continues to work with constituents and stakeholders to study more cost-effective options to mitigate the current limitations along this path. Public meetings began in July 2017 to address alternatives to building. An update to Bonneville's Available Transfer Capability (ATC) methodology increased the available transmission service on the Westside paths by a few hundred megawatts. Other alternatives, such as energy storage devices, are still being evaluated.

Bonneville's 2009, 2010, 2013, 2016, 2019, 2020, 2021 and 2022 study processes for new Transmission Service Requests (TSR) total 38,397 MW, including approximately 12,600 MW of wind project interconnection and 12,800 MW of solar project interconnection. The 2010 study process identified the Montana to Washington project, for which environmental review was begun, however, the original requests to support this project have been subsequently withdrawn and so all work on the project was terminated. Subsequent TSRs also require this project, and Bonneville is now undertaking preliminary engineering activities on it again to move wind generation in Montana to the Northwest. The 2016 and 2019 study processes re-identified the Montana-to-Washington and Garrison-to-Ashe projects to move new wind generation in Montana to the Northwest. Requests to support the Garrison-to-Ashe project have subsequently been withdrawn as that project was terminated.

The 2013 study process identified upgrades to the Monroe-Novelty Hill 230-kV transmission line which were re-identified for additional new requests in the 2016 study process. The 2016 study process identified network upgrades in Central Oregon, Walla Walla, Washington, and across the Raver-Paul flowgate. The 2019 study process identified additional reinforcements across the Raver-Paul flowgate, the same Central Oregon and Walla Walla projects, and some significant impacts to third parties, specifically Portland General Electric and Puget Sound Energy. The 2020 study process identified an additional Schultz-Raver Series Capacitor project. The 2021 study process identified major reinforcements to transfer more power to the loads on the Olympic peninsula. The 2022 study identified massive upgrades in central Oregon and the southern Oregon coast, along with moderate reinforcements of both the Cross Cascades North and Cross Cascades South paths, as well as more modest upgrades of the Raver-Paul, South of Allston, and South of Knight paths. Efforts are currently underway to provide required studies to requesting customers.

Sustain Investments

Sustain investments are made to maintain the health of the existing infrastructure to assure reliable transmission in the Pacific Northwest. These investments enable continued compliance with national reliability standards, replace aging and obsolete equipment, and remove constraints that limit economic trade or the ability to maintain the transmission system.

Transmission Services' sustain program asset programs include:

1. Steel Lines – Transmission lines with steel structures including footings, insulators assemblies, vibration dampers, grounding systems, conductor, ground wire.
2. Wood Lines – Transmission lines with wood structures including cross arm systems, insulator assemblies, vibration dampers, grounding systems, conductor, ground wire.
3. Rights-of-Way – Real property including land parcels, easements, use right, access roads.
4. AC Substations – Substations managing AC current including transformers, reactors, shunt capacitors, power circuit breakers, circuit switchers, series capacitors, disconnect switches.
5. Power System Controls and System Telecommunications – Control and communication equipment including SCADA, transfer trips, fiber, communications, SONET, Telephone, RAS.
6. System Protection and Control – Control equipment including relays, control houses, meters.

7. DC Substations – Celilo DC converter station, static VAR compensators, DC control systems.
8. Control Centers – Various control equipment and software.
9. Tools and Equipment Acquisition Program (TEAP) – Tools, equipment, fleet.
10. Facilities – Non-electric facilities including warehouses, operational structures, hangar, and maintenance centers.

Background: Asset Management

In 2009, Bonneville Transmission Services began implementing best practice frameworks that provide a standardized structure and approach to asset management. As a result, Transmission Services' asset management strategies, drive Bonneville's asset plans, which determine its capital and expense investment priorities. Sustain investments are forecasted, prioritized within asset programs, and optimized across the asset base for asset planning and approval. Bonneville now bundles both sustain and expand capital projects to improve execution and to lower risks and costs. Transmission Services' capital program does remain somewhat fluid and subject to changes as the complexity of the transmission system produces unexpected needs resulting from equipment failure, climate/weather incidents, changes in performance and/or operation of connected systems, outage schedules and conflicts, updated regulations, customer interconnection requests, etc. For these and other reasons, specificity with sustain investments in the transmission system is somewhat limited.

In 2019, Transmission Services began an effort to determine the "Criticality, Health and Risk" (CHR) of major assets within the system. While all assets have not been analyzed yet, most major substations and lines have been assessed. The resulting information (the CHR score) is used to prioritize sustain work on the system. Expand work is also routed to the sustain asset managers to determine if there is any sustain work that should be bundled with expand work based on the CHR score. The bundling of expand and sustain work increases crew efficiencies on site and minimizes overlap of projects on the same site.

Given the recent disasters in California involving transmission and distribution lines being identified as the root cause of many wildfires, Bonneville has been assessing its transmission facilities for wildfire risks. This is an ongoing effort that began three years ago and continues to mature. During the dry hot summer periods, Bonneville has proactively de-energized transmission lines to mitigate the risk of fire hazards to our customers and the region. Bonneville is continually looking to upgrade its forecasting and wildfire risk analysis tools and capabilities, as well as identify and implement other preventive steps to mitigate the risk of wildfires.

Notwithstanding that the capital program for Transmission Services is subject to change, Bonneville has identified several general areas where capital investments will occur.

Background: Fiber Optic Networks and Spectrum Relocation

Bonneville will continue to fund fiber optic communications facilities needed to meet Bonneville's projected operational needs. To the extent that these investments create temporary periods of excess fiber optic capacity, such fiber capacity can be made available to telecommunications providers and to non-profits to meet public benefit internet access needs and other needs in Bonneville's service area. Bonneville's investments in fiber optics, including the role of the private sector in building fiber optic networks, is consistent with the "Fiber Optic Cable Plan" submitted to Congress on May 24, 2000, accompanying the FY 2000 Energy and Water Development Appropriations Act. In accordance with this plan, when possible, Bonneville establishes partnerships with fiber optic facility and service providers to meet its needs.

In December 2004, Congress passed and the President signed the Commercial Spectrum Enhancement Act (CSEA, Title II of P.L. 108-494), creating the Spectrum Relocation Fund (SRF) to streamline the relocation of Federal systems from certain spectrum bands to accommodate commercial use by facilitating reimbursement of relocation costs to affected agencies. The Federal Communications Commission (FCC) has auctioned licenses for reallocated Federal spectrum, which will facilitate the provision of Advanced Wireless Services (AWS) to consumers. Funds were made available to agencies in FY 2007 for relocation of communications systems operating on the affected spectrum. These funds are mandatory and will remain available until expended, and agencies will return to the SRF any amounts received in excess of actual relocation costs. The estimated Bonneville cost of this relocation was $48.7 million. The project was completed in November 2013 with a cost of approximately $40 million and the operational system performance was being observed during FY 2014 and early FY 2015 to determine that it has achieved comparable capability as defined under the CSEA. Bonneville determined in December 2014 that comparable capability had been achieved.

Bonneville began participating in a new spectrum relocation effort in FY 2015. The NTIA has approved and, in July 2014, web-posted Federal agency relocation plans, including the Bonneville relocation plan. The FCC held an auction of this spectrum on November 13, 2014. Bonneville received an additional $5.2 million from the SRF on July 29, 2015, to fully pay for this new relocation effort, including, as in the prior relocation, the purchase and installation of new digital radio equipment.

As part of the Homeland Security Presidential Directives, Bonneville has completed a physical security assessment of all critical facilities and is implementing security enhancements at these facilities. These security enhancements increase controlled access to Bonneville's facilities and provide video surveillance and monitoring capabilities.

Accomplishments

Transmission Services – Capital expenditures over the past fiscal year resulted in the following:

- The Transmission rates (BP-24) Draft ROD was issued in June 2023 and the final ROD was issued in late July 2023.
- The Terms and Conditions (TC-24) ROD was issued in February 2023.
- Integrated 6524.66 MW of renewable energy through September 2023 on Bonneville's transmission system.
- Completed the addition of a 500 kV transformer for wind hubs at John Day and Central Ferry Subs.
- Completed the Bonneville-Hood River line upgrade.
- Completed the Lane-Wendson-1 line rebuild.
- Completed the Monroe line relay replacement and re-termination of Bays 4 and 5 project.
- Completed the replacement of Raver Reactor Banks 3 and 4.
- Completed the security enhancements at Bell substation and maintenance yards.
- Completed the addition of a new 230kV transformer, breaker and disconnects at Longview substation.
- Completed 5 Grid Mod projects, with 12 in construction, 1 in design, 2 approved, 1 in draft and 11 in scoping and under development.
- Completed Morrow Flats UEC Phase 2 L0389.
- Completed Holcomb Naselle 1 line rebuild.
- Completed Ostrander and Malin substation security enhancements.
- Completed the PSANI project capital work in the Seattle area.
- Completed replacement of dilapidated control houses at Holcomb and Kerr. Richland, Warren and Wendson are under construction and Kitsap, Pendleton, Troy, Cosmopolis, and NaSelle will be the next group started.
- Completed the installation of new reactor at Fairview Substation

- Completed the installation of new transformers at Anaconda and Dixon and retired Silver Bow Substation. Sold Anaconda Substation and related facilities to Northwestern Energy.
- Added new 4th bay at Morrow Flats and a new reactor will be installed in December 2023. A new reactor has already been installed at Jones Canyon. A new reactor was also installed at Spar Canyon
- Completed 230kV breaker replacement and addition at Tacoma Substation.
- We have 2 Grid Mod Metering installations that have been approved for funding, 2 that are not approved, 1 in initiation, 5 that are in scoping, 4 that are in design, 1 in construction and 1 in Completion in Process.
- Completed Sonet Ring for Bell Boundary.
- Completed Holcomb Naselle Wood Line rebuild.
- Completed Avangrid's Montague Solar and Wind interconnection.
- Completed addition of a single 500kV transformer at Slatt for wind projects.
- Began design of Big Eddy-Ostrander-1 2.5" steel conductor replacement. Installation is scheduled to be completed in FY2027.
- Completed replacements and upgrades of SVC equipment at Keeler and Maple Valley.
- Completed addition of bus tie breakers at Toledo.
- Implementation of the addition of a new OMS (Outage Management System) at Dittmer.

Explanation of Changes

Bonneville's budget includes $808.5 million in FY 2025 for Transmission Services capital needs, which is a 16 percent increase from the FY 2024 forecasted level. The FY 2025 budget increases the levels for Main Grid ($221 thousand), Area & Customer Services ($5.8 million), PFIA ($9.1 million), and Evolving Grid Projects ($116 million), but decreases the levels for Upgrades & Additions ($4.7 million) and System Replacements ($14.6 million).

The following pages discuss budget specifics under the six Transmission Services subcategories noted above: Main Grid, Area & Customer Services, Upgrades & Additions, System Replacements, Projects Funded in Advance, and Evolving Grid Projects.

Main Grid

Overview

Bonneville's strategic objectives for Main Grid projects are to assure compliance with the NERC and WECC reliability criteria, provide voltage support, provide a reliable transmission system for open access, and provide for relief of transmission system congestion. During this budgeting period, projects are planned that will provide transmission reinforcement and voltage support to major load areas that are primarily west of the Cascade Mountains.

Main Grid
($K)

FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$50,606	$38,527	$38,747

Continued investments in Main Grid assets include the following projects. These projects require that environmental compliance be complete, which may impact implementation timeframes.

Schultz-Wautoma 500KV Series Capacitors

- FY 2023. Continued construction.
- FY 2024. Complete construction.
- FY 2025. No planned projects.

Montana-Washington

- FY 2023. Began design of TSEP Montana to Washington Project.
- FY 2024. Complete design, begin construction.
- FY 2025. Continue construction.

Schultz Raver Series Cap Addition

- FY 2023. Began design of new Series cap installation.
- FY 2024. Begin site preparation and construction.
- FY 2025. Continue construction.

Continue Planning Studies *(all years)*

- Identify infrastructure additions.
- Identify projects driven by NERC and WECC reliability criteria.
- Identify system reactive needs to mitigate unacceptable low or high voltage problems and other system additions.
- Relieve transmission system congestion and integrate new generation facilities.

Area & Customer Service

Overview

Bonneville's strategic objective for Area and Customer Service projects is to assure that Bonneville meets reliability standards and contractual obligations to its load service areas.

Area & Customer Service
($K)

FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$58,896	$38,527	$44,282

Continued investments in Area & Customer Service assets include the following projects. These projects require environmental compliance be complete, which may impact implementation timeframes.

Whistling Ridge 230kV Ring Buss Substation

- FY 2023. Began Scoping.
- FY 2024. Begin Design.
- FY 2025. Continue Design.

Big Eddy Breaker Additions

- FY 2023. Began scoping and design.
- FY 2024. Begin construction.
- FY 2025. Continue Construction.

Midway –Ashe Double Circuit 230kV Line

- FY 2023. Continued construction.
- FY 2024. Continue construction.
- FY 2025. Continue construction.

Carlton Substation Upgrade

- FY 2023. SC Disruptions resulted in 1 year delay.
- FY 2024. Continue construction.
- FY 2025. Continue construction.

South Tri-Cities Reinforcement

- FY 2023. Began construction.
- FY 2024. Continue construction.
- FY 2025. Continue construction.

LaPine Substation Upgrade TSEP – 2016

- FY 2023. Began construction.
- FY 2024. Continue construction.
- FY 2025. Continue construction.

Longview Transformer Addition

- FY 2023. Completed construction.
- FY 2024. No new capital projects planned.
- FY 2025. No new capital projects planned.

Continuous Activities (*all years*)

- Continue preliminary engineering and design for miscellaneous facilities required to meet contractual obligations and maintain reliable service for Bonneville's service area.

Upgrades & Additions

Overview

Bonneville's strategic objectives for Upgrades & Additions are to replace older 60 Hertz (Hz) communications and controls with newer technology, including fiber optics, to maintain or enhance the capabilities of the transmission system, to implement special remedial action control schemes to accommodate new generation and mitigate immediate operational and market-constrained paths, and to support communications, among other proposals.

Upgrades & Additions
($K)

FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$73,393	$152,027	$147,362

During this budget period, Bonneville will complete design, material acquisition, construction, and activation of several fiber optics facilities to provide bandwidth capacity and high-speed data transfers to eventually replace microwave analog radios, which are technologically obsolete and nearing the end of their useful life. Temporarily, in some areas, excess dark fiber capacity is being offered for a term to telecommunications providers or to public entities such as public utilities, schools, libraries, and hospitals, providing them access to high-speed telecommunication services as a public benefit.

Continued investments in Upgrades & Additions assets include the following projects. These projects require environmental compliance be complete, which may impact implementation timeframes.

VHF Radio System Upgrade
- FY 2023. 3 sites still in design.
- FY 2024. Continue design.
- FY 2025. Start construction.

Vancouver Control Center (VCC)
- FY 2023. Continued design and technology planning
- FY 2024. Demolish Ampere Building
- FY 2025. Complete design of VCC building and begin construction.

500 kV Spares at Wind construction.
- FY 2024. No planned projects.
- FY 2025. No planned projects.

Ross Station Service Upgrade
- FY 2023. Finished design and started construction. (SC Cable shortages)
- FY 2024. Finish construction.
- FY 2025. No planned projects.

Dworshak Substation
- FY 2023. Began scoping.
- FY 2024. Begin design.
- FY 2025. Complete Design and begin construction.

Targhee Breaker Installation
- FY 2023. Began Design.
- FY 2024. Collect and map outage data to determine individual circuit solutions.
- FY 2025. Add information collected above to align the design with findings.

P03372 Bridge Substation Expansion
- FY 2023. Began Design.
- FY 2024. Complete Design and begin construction.

- FY 2025. Complete construction.

Conkelley Substation Retirement

- FY 2023. Continued construction.
- FY 2024. Continue construction.
- FY 2025. Complete construction.

New LaPine – Bonanza 230kV Line

- FY 2023. Began design.
- FY 2024. Continue design.
- FY 2025. Begin construction.

Bonanza Substation Project

- FY 2023. Begun design.
- FY 2024. Complete design.
- FY 2025. Begin construction.

LaPine Transformer Addition

- FY 2023. Begun design.
- FY 2024. Begin construction.
- FY 2025. Complete construction.

Rock Creek-John Day-1: 500kV Line Upgrade TSEP 2022

- FY 2023. No planned projects.
- FY 2024. Start design.
- FY 2025. Begin construction.

Troy Substation Expansion and Breaker Addition

- FY 2023. No planned projects.
- FY 2024. Begin design.
- FY 2025. Begin Construction.

Carlton PCB and Bus Tie Breaker Additions

- FY 2023. In construction. (Stalled due to Supply Chain issues)
- FY 2024. Resume construction.
- FY 2025. Complete construction.

Continuous Activities (*all years*)

- Transmission Services Building was completed in July 2023 and all occupants should be in place by the end of the year enabling the demolition of the Ampere Building in 2024 to make room for the new Vancouver Control Center. Construction will begin in 2025 with the cutover to the new building complete by 2032, if not sooner.
- Upgrading 2 miles of fiber between Bonneville Power House and Bonneville Control House.
- Planning, design, material acquisition, and construction of special remedial action control schemes required for interconnecting new generation projects and mitigating immediate constrained paths.
- Planning, design, material acquisition, and construction of various system additions and upgrades necessary to maintain a reliable system for Bonneville's service area.
- Construction of secondary fiber related projects and digital radio system upgrades to improve the operational telecommunication system.
- Material procurement and construction to upgrade the main fiber optic backbone system (#KC and #NC systems).

System Replacements

Overview

Bonneville's strategic objectives for the Sustain Program are to replace high-risk, obsolete, and maintenance-intensive facilities and equipment and to reduce the chance of equipment failure by: (1) replacing high voltage transformers and power circuit breakers which are at or near the end of their useful life; (2) replacing risky, outdated and obsolete control and communications equipment and systems, including mandated replacements due to legislation; and (3) replacing all other existing high-risk equipment and facilities affecting the safety and reliability of the transmission system. Transmission Services uses a total economic cost model to determine priorities for replacement.

System Replacements
($K)

FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$440,640	$365,387	$350,759

Continued investments in System Replacements assets include the following.

Non-Electric Replacements

- Continue non-electric replacements as necessary.
- Continue the design, material acquisition, and construction for the access road program capital component and the Land Rights program capital component in support of the Lines and ROW Programs.
- Continue design and construction of capital improvements for identified existing facilities.
- Continue replacement of tools, equipment, and vehicle fleet.
- Replaced four helicopters with four new helicopters utilizing GSA exchange sale authority in FY 2023.
- Replace a fixed-wing aircraft with a new fixed-wing aircraft utilizing GSA exchange sale authority in FY 2024, with procurement started in FY 2023.

Electric Replacements

- Continue replacement of system protection and control equipment and other substation and line facilities as needed to maintain reliability using reliability centered maintenance criteria. Such replacements include relays, annunciators, oscillographs, metering, and various types of communication related equipment replacing and migrating analog to digital technology and SCADA equipment.
- Began replacement of Big Eddy-Ostrander-1 2.5" steel in FY 2023.
- Continue replacement of under-rated and high maintenance substation equipment.
- Continue replacing insulators and refurbishing foundations on 500 kV Lines.
- Continue replacement of older generations of digital equipment that is obsolete.
- Continue replacing critical, operational tools and business systems at the Dittmer and Munro Control Centers.
- Continue replacing deteriorating wood pole transmission line structures, spacer dampers, and insulators.

Projects Funded in Advance

Overview

The PFIA subcategory includes those facilities and/or equipment where Bonneville retains control or ownership but which are funded or financed by a third party, revenue, or with reserves, either in total or in part.

Projects Funded in Advance
($K)

FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$24,528	$46,232	$55,353

Continued investments in PFIA assets include the following projects. These projects require environmental compliance be complete, which may impact implementation timeframes.

Avangrid Montague 1 Wind Project

- FY 2023. No planned capital projects.
- FY 2024. No planned capital projects.
- FY 2025. No planned capital projects.

Badger Canyon 1: (This project has been rolled into the Tri-Cities Project P04691)

- FY 2023. Began construction.
- FY 2024. Continue construction.
- FY 2025. Continue construction.

Badger Canyon 2: (This project has been rolled into the Tri-Cities Project P04691)

- FY 2023. Completed design and began construction.
- FY 2024. Continue construction.
- FY 2025. Continue construction.

Badger Mountain POI Substation

- FY 2023. Performed Studies.
- FY 2024. Begin design.
- FY 2025. Complete design and begin construction.

Badger Mountain Pumped Storage

- FY 2023. Performed Studies.
- FY 2024. Begin design.
- FY 2025. Complete design and begin construction.

Bakeoven Wind Project

- FY 2023. Continued construction.
- FY 2024. Project complete.
- FY 2025. No planned projects.

Benton Solar Project

- FY 2023. Began design.
- FY 2024. Complete design and begin construction.
- FY 2025. Complete construction.

Big River Wind Project

- FY 2023. Performed System Impact Studies.
- FY 2024. Begin design.

- FY 2025. Begin construction.

Boardman 69kV Line Relocation and 230kV stepdown

- FY 2023. No planned projects.
- FY 2024. Begin design.
- FY 2025. Complete design and begin construction.

Add new Bonanza Substation adjacent to Ponderosa

- FY 2023. Began design.
- FY 2024. Complete design and begin construction.
- FY 2025. Continue construction.

Buckley Substation

- FY 2023. Began design and completed construction of Bypass.
- FY 2024. Finish design and begin construction of new station.
- FY 2025. Continue construction.

L0496 Meriwether Data Center

- FY 2023. Completed Studies.
- FY 2024. Begin design.
- FY 2025. Complete design and begin construction.

Nolan Hills Wind

- FY 2023. Completed studies and begin design.
- FY 2024. Complete design.
- FY 2025. Begin construction.

North Hawk Solar

- FY 2023. Began design.
- FY 2024. Complete design.
- FY 2025. Begin construction.

Obsidian Solar New POI for 500kV

- FY 2023. Began design.
- FY 2024. Complete design.
- FY 2025. Begin construction.

Boyd Ridge Substation

- FY 2023. Late start due to shortage of TE staff. Now in Scoping.
- FY 2024. Begin design.
- FY 2025. Complete design and begin construction.

Columbia Basin Hydroelectric Generating

- FY 2023. Began design.
- FY 2024. Begin and complete construction.
- FY 2025. No planned projects.

Invenergy Crider Valley Wind: (project awaiting customer decision)

- FY 2023. Began design.
- FY 2024. Finish design and begin construction.
- FY 2025. Continue construction.

Longhorn Substation

- FY 2023. Finished design and began construction.
- FY 2024. Continue construction.
- FY 2025. Complete construction.

McNary 230KV Section Bay addition

- FY 2023. Completed design and started construction.
- FY 2024. Continue construction.
- FY 2025. Continue construction.

Midway-Ashe Line Project

- FY 2023. Began construction.
- FY 2024. Continue construction.
- FY 2025. Continue construction.

Morrow Solar Project

- FY 2023. Began design.
- FY 2024. Begin construction.
- FY 2025. Continue construction.

Morrow Flat 230kV Shunt Reactor

- FY 2023. Started construction.
- FY 2024. Complete construction.
- FY 2025. No planned projects.

NextEra's Ella Butte Wind Project

- FY 2023. No planned capital projects.
- FY 2024. Begin design.
- FY 2025. Start construction.

PacifiCorps' Ponderosa Project Vitesse

- FY 2023. Completed Project.
- FY 2024. No planned capital projects.
- FY 2025. No planned projects.

Quenett Creek Load Service Project

- FY 2023. Began construction.
- FY 2024. Continue construction at Big Eddy.
- FY 2025. Continue construction.

Spar Canyon 230kV Reactor

- FY 2023. Completed construction.
- FY 2024. No planned projects.
- FY 2025. No planned projects.

Wheat Ridge Technical Studies

- FY 2023. Performed studies.
- FY 2024. Begin design.
- FY 2025. Begin construction.

Whistling Ridge 230 kV Ring Bus Project

- FY 2023. Project cancelled.
- FY 2024. No planned projects.
- FY 2025. No planned projects.

New LaPine – Bonanza 230kV line

- FY 2023. No planned projects.
- FY 2024. Start design.
- FY 2025. Complete design.

Silver Lodge Power Project

- FY 2023. No planned projects.
- FY 2024. Begin design.
- FY 2025. Begin construction.

Continuous Activity (*all years*):

- Continue to integrate various new generation and line/load projects into Bonneville transmission grid based on requests placed and processed in accordance with transmission tariff.
- Continue planning studies to identify system impacts and needs regarding proposed new generation projects.
- Engineer and begin construction of several large wind generation interconnection substations.

Evolving Grid Projects

Overview

BPA recently announced it is moving forward with over $2 billion in electricity grid improvement projects that will significantly increase the capacity and reliability of the Pacific Northwest grid and its ability to integrate new energy sources. The Evolving Grid Projects are a group of 10 strategic capital projects needed across BPA's service territory to eliminate chokepoints on BPA's Transmission system and enable renewable generation projects access to BPA's Transmission system and neighboring states' utilities to market their production. Projects will increase transmission capacity by up to 6 gigawatts, enough to power about 4.5 million homes—and help meet growing demand for more affordable clean power. BPA's generating and transmission portfolio consists primarily of emissions-free sources and is the backbone of an electricity system that is relied on by tens of millions of people throughout the Western United States. DOE estimates that the Pacific Northwest will need to add 56 percent more transmission capacity by 2040. The NPCC calculates the region will need 3,500 MW of new renewable generation by 2027 and an additional 14,000 MW by 2040.

Evolving Grid Projects
($K)

EGP		
FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$0	$56,000	$172,000

Continued investments into Evolving Grid assets include the following projects. These projects require environmental compliance be complete, which may impact implementation timeframes.

Cross Cascades North: Schultz – Raver Reconductor P05470

- FY 2023. Completed scoping.
- FY 2024. Begin design.
- FY 2025. Complete design and begin construction.

Cross Cascades South: Big Eddy – Chemawa 500kV Rebuild P05468

- FY 2023. Began scoping.
- FY 2024. Complete scoping and begin design.
- FY 2025. Complete design and begin construction.

Raver Paul: Chehalis – Cowlitz Tap 230kV Rebuild P01277

- FY 2023. Began scoping.
- FY 2024. Continue scoping.
- FY 2025. Begin design.

South of Knight: Rock Creek – John Day Upgrade P05472

- FY 2023. No planned projects.
- FY 2024. Begin scoping.
- FY 2025. Complete scoping and begin design.

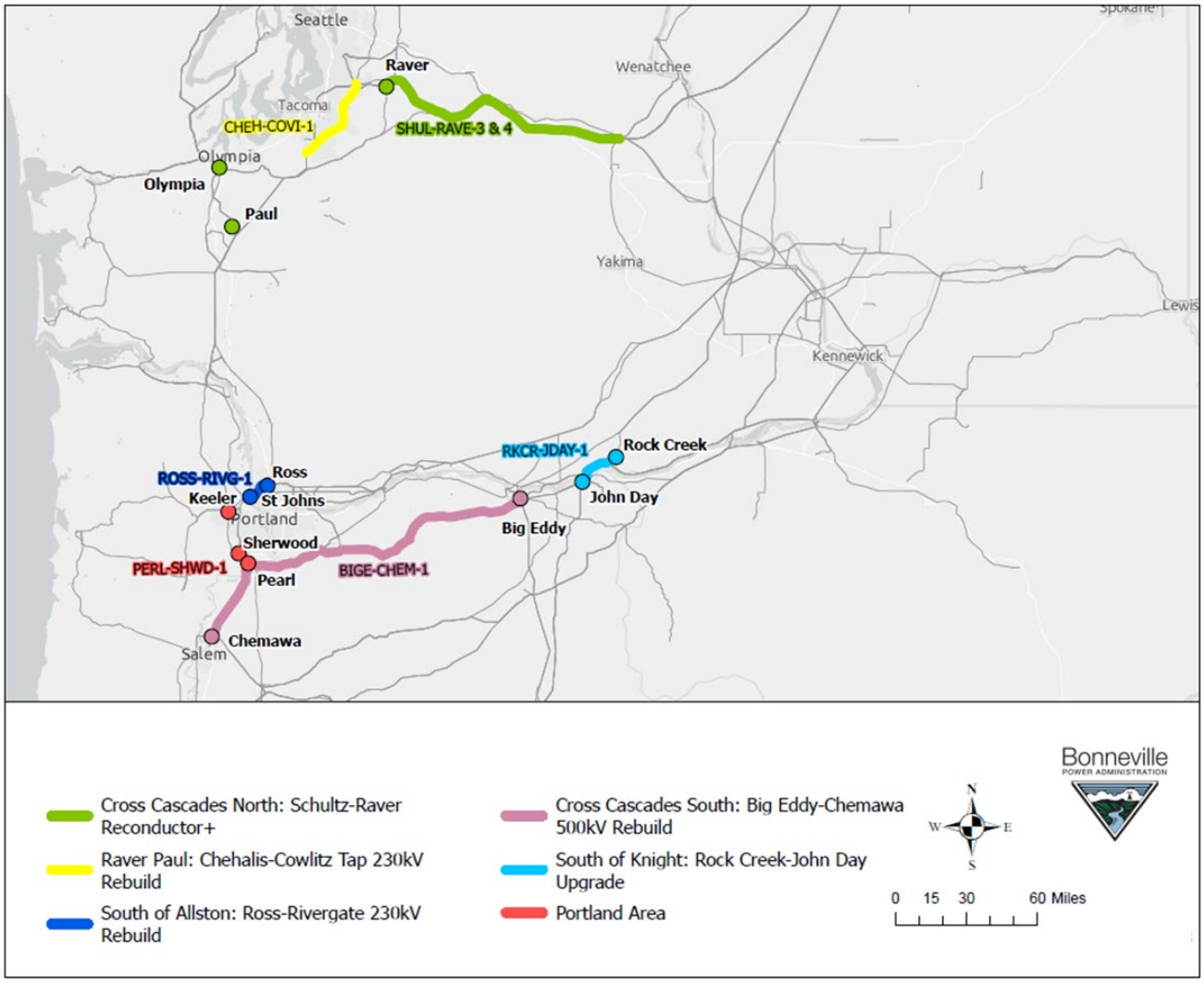
South of Allston: Ross – Rivergate 230kV Rebuild P05471

- FY 2023. No planned projects.
- FY 2024. Begin scoping.
- FY 2025. Complete scoping and begin design.

Portland Area P01322/P04974/P05449

- FY 2023. Continued scoping.

- FY 2024. Begin design.
- FY 2025. Complete design and begin construction.



Buckley Rebuild P03999

- FY 2023. Constructed emergency bypass and began design.
- FY 2024. Activate emergency bypass, complete design, and begin construction.
- FY 2025. Continue construction.

La Pine – Bonaza P05971

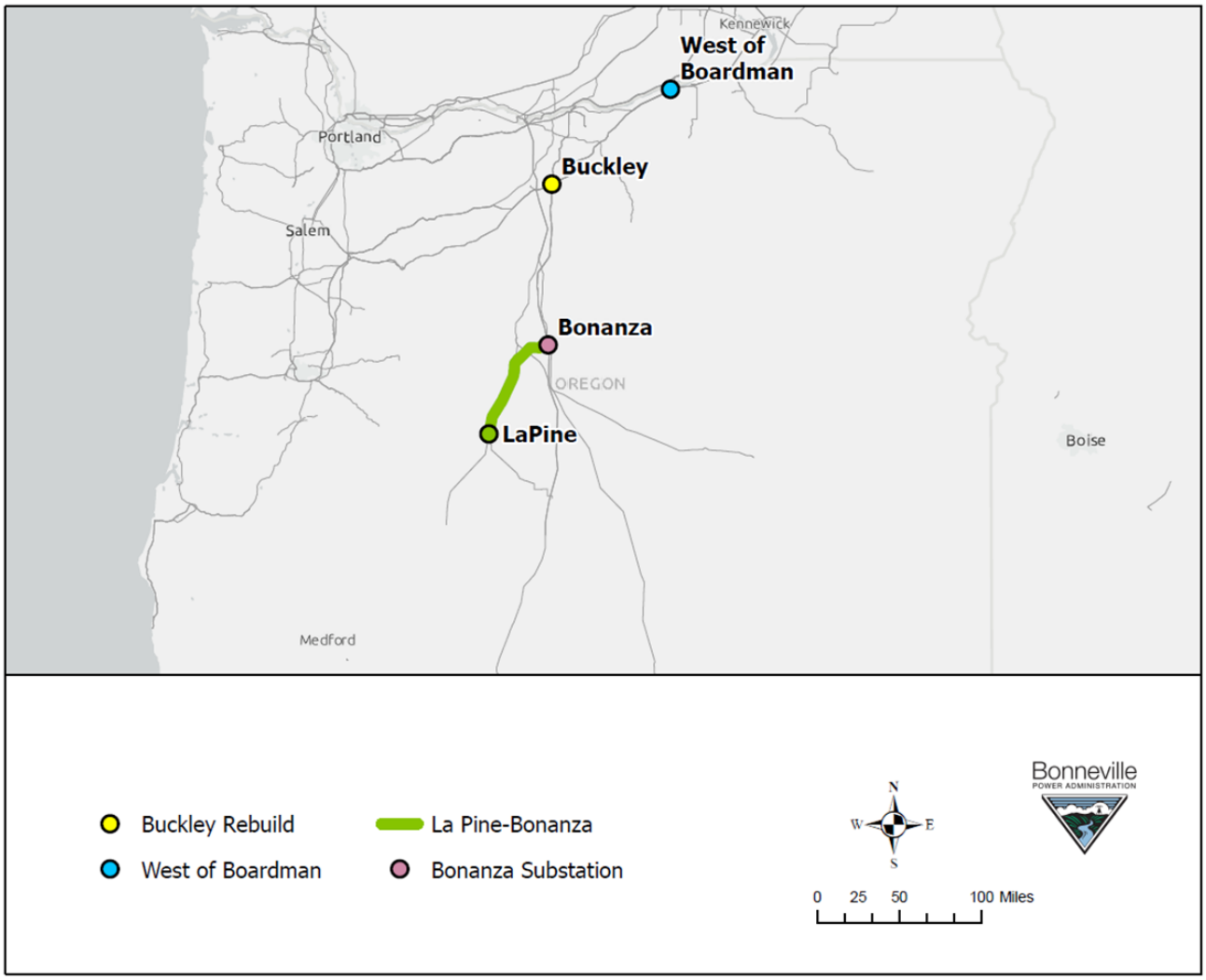
- FY 2023. Began scoping.
- FY 2024. Complete scoping and begin design.
- FY 2025. Complete design and begin construction.

West of Boardman P02574

- FY 2023. Continued Scoping.
- FY 2024. Complete scoping and begin design.
- FY 2025. Complete design.

Bonanza Substation P05847

- FY 2023. Began scoping.
- FY 2024. Complete scoping and begin design.
- FY 2025. Complete design and begin construction.


Kennewick
West of Boardman
Portland
Buckley
Salem
Bonanza
OREGON
LaPine
Boise
Medford
Buckley Rebuild
La Pine-Bonanza
West of Boardman
Bonanza Substation
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Bonneville
POWER ADMINISTRATION

Transmission Services – Capital: Activities, Milestones and Explanation of Changes ($K)

FY 2024 Estimate	FY 2025 Estimate	Explanation of Changes FY 2025 vs FY 2024 Estimate
Transmission Services – Capital $696,700	**$808,504**	**$111,804/16.0%**
Main Grid $38,527	**$38,747**	**$221/0.6%**
Milestones: Continue construction of Schultz-Wautoma 500KV series capacitors. Begin design of TSEP Montana-to-Washington Project.	Milestones: Complete construction of Schultz-Wautoma 500kv series capacitors. Complete design and begin construction TSEP Montana-to-Washington Project.	The increase reflects additional funding needs for investment in the transmission system assets.
Area & Customer Service $38,527	**$44,282**	**$5,756/14.9%**
Milestones: Finalize design and begin construction of Midway-Ashe double circuit 230kV line. Complete construction of Carlton Substation Upgrade. Begin construction of Conkelly Substation retirement. Finish design of south Tri-Cities reinforcement project and begin construction.	Milestones: Begin scoping and design of Big Eddy breaker additions project. Continue construction of Midway-Ashe double circuit 230kV line. Begin construction of south Tri-Cities reinforcement. Complete numerous customer service projects Begin construction of Bonanza substation.	The increase in the costs reflects a reshaping of funding needs for investment in the transmission system assets.
Upgrades & Additions $152,027	**$147,362**	**$-4,665/-3.1%**
Milestones: Complete design and complete demolition of North Ampere building. Complete Wendson project Finish construction of Ross Station Service upgrade.	Milestones: Begin construction of Vancouver Control Center. Complete construction of Ross Station service upgrade.	The decrease in the costs reflects a reshaping of funding needs for investment in the transmission system assets.
Systems Replacements $365,387	**$350,759**	**$-14,628/-4.0%**

Transmission Services – Capital: Activities, Milestones and Explanation of Changes ($K)

FY 2024 Estimate	FY 2025 Estimate	Explanation of Changes FY 2025 vs FY 2024 Estimate
Milestones: Replaced a Bonneville fixed-wing aircraft with a new helicopter in April, 2022 utilizing GSA exchange sale authority. Continue non-electric replacements as necessary. Continue the design, material acquisition, and construction for the access road program capital component and the land rights program capital component in support of the lines and ROW programs. Continue design and construction of capital improvements for identified existing facilities. Continue replacement of tools, equipment, and vehicle fleet. Continue replacement of system protection and control equipment and other substation and line facilities as needed to maintain reliability using reliability centered maintenance criteria. Such replacements include relays, annunciators, oscillographs, metering, and various types of communication related equipment replacing and migrating analog to digital technology and SCADA equipment. Replace four helicopters with four new helicopters utilizing GSA exchange sale authority in FY 2023.	Milestones: Continue replacement of under-rated and high maintenance substation equipment. Continue replacing insulators and refurbishing foundations on 500 kV Lines. Continue replacement of older generations of digital equipment that is obsolete. Replace a fixed wing aircraft with a new fixed wing aircraft utilizing GSA exchange sale authority in FY 2024, with procurement starting in FY 2023. Continue replacing critical, operational tools and business systems at the Dittmer and Munro Control Centers. Continue replacing deteriorating wood pole transmission line structures, spacer dampers, and insulators.	The decrease in the costs reflects a reshaping of funding needs for investment in the transmission system assets.
Projects Funded in Advanced $46,232	**$55,353**	**$9,121/19.7%**

Transmission Services – Capital: Activities, Milestones and Explanation of Changes ($K)

FY 2024 Estimate	FY 2025 Estimate	Explanation of Changes FY 2025 vs FY 2024 Estimate
Milestone: Finish design of Quenett Creek load service project. Begin construction of Midway-Ashe line project. Scoping and begin design of Morrow solar project. Begin design of Badger Canyon 1 project. Begin design of Invenergy Crider Valley wind project. Begin construction of Boyd Ridge Substation.	Milestones: Begin construction of Quenett Creek load service project. Complete construction of Midway-Ashe line project. Begin construction of Morrow solar project. Begin construction of Badger Canyon 1 project. Begin construction of Invenergy Crider Valley wind project. Continue construction of Boyd Ridge Substation. Begin construction of Bonanza-LaPine line.	The increase in the costs reflects a reshaping of funding needs for investment in the transmission system assets.
Evolving Grid Projects $56,000	**$172,000**	**$116,000/207.1%**

Transmission Services – Capital: Activities, Milestones and Explanation of Changes ($K)

FY 2024 Estimate	FY 2025 Estimate	Explanation of Changes FY 2025 vs FY 2024 Estimate
Milestone: Begin design on Cross Cascades North: Schultz – Raver Reconductor P05470. Complete scoping and begin design on Cross Cascades South: Big Eddy – Chemawa 500kV Rebuild P05468. Continue scoping on Raver Paul: Chehalis – Cowlitz Tap 230kV Rebuild P01277. Begin scoping on South of Knight: Rock Creek – John Day Upgrade P05472. Begin scoping on South of Allston: Ross – Rivergate 230kV Rebuild P05471. Begin scoping on Portland Area P01322/P04974/P05449. Activate emergency bypass, complete design, and begin construction on Buckley Rebuild P03999. Complete scoping and design on La Pine – Bonaza P05971. Complete scoping and design on West of Boardman P02574. Complete scoping and design on Bonanza Substation P05847.	Milestone: Complete design and begin construction on Cross Cascades North: Schultz – Raver Reconductor P05470. Complete design and begin construction on Cross Cascades South: Big Eddy – Chemawa 500kV Rebuild P05468. Begin design on Raver Paul: Chehalis – Cowlitz Tap 230kV Rebuild P01277. Begin scoping on South of Knight: Rock Creek – John Day Upgrade P05472. Complete scoping and begin design on South of Allston: Ross – Rivergate 230kV Rebuild P05471. Complete scoping and begin design on Portland Area P01322/P04974/P05449. Continue construction on Buckley Rebuild P03999. Complete design and begin construction on La Pine – Bonaza P05971. Complete design on West of Boardman P02574. Complete design and begin construction on Bonanza Substation P05847.	The increase in the costs reflects a reshaping of funding needs for investment in the transmission system assets.

Capital Expenditures

Funding Schedule by Activity

Funding ($K)

Capital Expenditures	FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate	FY 2025 vs FY 2024 $	FY 2025 vs FY 2024 %
Transmission Services Revenue/Reserves Financing	$ 40,000	$ 55,000	$ 55,000	$ -	0.0%
Power Services Revenue/Reserves Financing	$ -	$ 33,740	$ 34,290	$ 550	1.6%
Total, Capital Expenditures	**$ 40,000**	**$ 88,740**	**$ 89,290**	$ 550	0.6%

Outyears ($K)

Capital Expenditures	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate	FY 2029 Estimate
Transmission Services Revenue/Reserves Financing	$ 55,000	$ 70,000	$ 70,000	$ 85,000	$ 85,000
Power Services Revenue/Reserves Financing	$ 34,290	$ 33,690	$ 33,000	$ 33,560	$ 34,240
Total, Capital Expenditures	**$ 89,290**	**$ 103,690**	**$ 103,000**	**$ 118,560**	**$ 119,240**

Capital Expenditures

Overview

Capital Expenditures provide revenue and reserves financing to Bonneville, which includes in its rates funds to be raised to finance a portion of its capital investments, known as revenue financing. Prior to the BP-24 rate case, revenue financing had been included intermittently. In FY 2022, Bonneville adopted the Sustainable Capital Financing Policy which requires each business unit to raise sufficient funds through rates to pay for 10% of its annual capital spending with the objective of achieving at least a 60% debt to asset ratio by FY 2040. If a business unit is not on track to achieve this target, the amount of revenue financing may be raised to 20% of its capital spending.

The funds raised for revenue financing are not tied to a specific capital project. Instead, they are available to pay for any of BPA's capital investments. These funds may be redirected to support Bonneville's financial liquidity needs if a rate surcharge or cost recovery adjustment clause (CRAC) rate adjustment is triggered within a rate period.

Transmission Services Revenue/Reserves Financing
($K)

FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$40,000	$55,000	$55,000

Power Services Revenue/Reserves Financing
($K)

FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$0	$33,740	$34,290

Capital Information Technology & Equipment

Funding Schedule by Activity

Funding ($K)

Capital Information Technology (IT) & Equipment	FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate	FY 2025 vs FY 2024 $	FY 2025 vs FY 2024 %
Capital IT & Equipment	$ 15,514	23,100	$ 22,384	$ (716)	-3.1%
Total, Capital IT & Equipment	**$ 15,514**	**23,100**	**$ 22,384**	**$ (716)**	**-3.1%**

Outyears ($K)

Capital Information Technology (IT) & Equipment	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate	FY 2029 Estimate
Capital IT & Equipment	$ 22,384	$ 24,400	$ 22,500	$ 23,200	$ 23,665
Total, Capital IT & Equipment	**$ 22,384**	**$ 24,400**	**$ 22,500**	**$ 23,200**	**$ 23,665**

Capital Information Technology & Equipment

Overview

Capital Information Technology (IT) & Equipment provides for the acquisition of both general and dedicated special purpose capital information technologies, and acquisition of special-use capital and IT equipment in support of Bonneville's strategic objectives. This category also includes Bonneville's on-going efforts to operate as a highly resilient organization able to anticipate, withstand, and effectively respond to disruptive events affecting it and its partners in the Northwest region. The four main areas of resiliency focus continue to include asset management, emergency management, crisis management, and continuity of operations.

Capital Information Technology & Equipment
($K)

FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$15,514	$23,100	$22,384

Bonneville continues to move its IT infrastructure to a more efficient and resilient architecture. This FY 2025 Budget supports this effort. IT continues to practice active cost management by eliminating redundancies in tools and applications, establishing an agency-wide IT enterprise architecture supported by a standardized technical architecture, standardizing IT purchasing criteria, minimizing agency liabilities through stronger licensing processes and contracts, leveraging continuous improvement practices for IT project management, and maintaining an agency IT portfolio cost management strategy. Other planned investments include capital automated data processing (ADP) equipment (hardware and software) in support of asset life cycle replacement, support of capital software procurement and configuration for certain Bonneville programs, and consolidation and modernization of our primary data centers.

The IT estimates in this FY 2025 Budget under Capital IT & Equipment include all IT functions within the agency except Transmission Services grid operations.

Continued investments in Capital IT & Equipment assets include the following.

Continuous Activity (*all years*):

- Capital system developments in support of
  - Corporate IT projects
  - IT Infrastructure projects
  - Power IT projects
  - Transmission Services IT projects (excluding grid operations)

Capital Information Technology & Equipment:
Activities, Milestones and Explanation of Changes ($K)

FY 2024 Estimate	FY 2025 Estimate	Explanation of Changes FY 2025 vs FY 2024 Estimate
Capital Information Technology & Equipment $23,100	**$22,830**	**$-726/-3.1%**
Milestones: Capital system developments in support of: Corporate IT projects IT Infrastructure projects Power IT projects Transmission Services IT projects	Milestones: Capital system developments in support of: Corporate IT projects IT Infrastructure projects Power IT projects Transmission Services IT projects	The decrease in the costs reflects a reshaping of funding needs for investment in Capital Information Technology & Equipment.

Funding Schedule by Activity

Funding ($K)

Power Services - Operating Expenses	FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate	FY 2025 vs FY 2024 $	FY 2025 vs FY 2024 %
Production	$ 2,076,450	$ 940,553	$ 1,009,725	$ 69,172	7.4%
Associated Projects	$ 486,492	$ 474,769	$ 487,375	$ 12,606	2.7%
Fish & Wildlife	$ 245,469	$ 268,620	$ 268,250	$ (369)	-0.1%
Residential Exchange Program	$ 267,350	$ 266,663	$ 266,696	$ 33	0.0%
Northwest Power & Conservation Council	$ 11,762	$ 11,942	$ 11,942	$ (0)	0.0%
Energy Efficiency & Renewable Resources	$ 136,938	$ 151,233	$ 152,096	$ 862	0.6%
Total, Power Services - Operating Expenses	**$ 3,224,462**	**$ 2,113,780**	**$ 2,196,083**	**$ 82,303**	**3.9%**

Outyears ($K)

Power Services - Operating Expenses	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate	FY 2029 Estimate
Production	$ 1,009,725	$ 1,037,948	$ 1,065,140	$ 1,091,451	$ 1,120,620
Associated Projects	$ 487,375	$ 498,097	$ 509,770	$ 521,394	$ 532,921
Fish & Wildlife	$ 268,250	$ 274,922	$ 281,565	$ 288,177	$ 294,733
Residential Exchange Program	$ 266,696	$ 273,123	$ 279,524	$ 285,898	$ 292,219
Northwest Power & Conservation Council	$ 11,942	$ 12,230	$ 12,516	$ 12,802	$ 13,085
Energy Efficiency & Renewable Resources	$ 152,096	$ 155,761	$ 159,411	$ 163,047	$ 166,651
Total, Power Services - Operating Expenses	**$ 2,196,083**	**$ 2,252,081**	**$ 2,307,926**	**$ 2,362,768**	**$ 2,420,230**

[1] Residential Exchange Program Settlement expires by its own terms in FY 2028, currently there is no forecast for FY 2029.

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Power Services – Operating Expense

Overview

This budget category contains six subcategories. The **Production** subcategory includes certain Bonneville non-Federal amortization (including Energy Northwest amortization), O&M costs for Federal base power system generation resources (including CGS, business operations, and short- and long-term power purchases[1]), acquisition of conservation, marketing of power, and oversight of the FCRPS hydroelectric projects and CGS. Bonneville develops power products and services to meet the needs of Bonneville's wholesale customers and acquires power as needed.

The **Associated Projects** subcategory contains funding for O&M costs for the FCRPS hydroelectric projects, minor additions, improvements and replacements, and costs of Corps and Reclamation hydroelectric projects in the Pacific Northwest, which serve many purposes. All agencies emphasize efficient power production from existing facilities and improvement of the performance and availability of power generating units. Bonneville pays additional financing costs of the FCRPS facilities through its interest expense and capital transfer budget programs. Bonneville also provides direct funding to the USFWS for the operations and maintenance costs that are part of the USFWS's Lower Snake River Compensation Plan (LSRCP) hatcheries.

Background: Long-Term Resource Program and Payments to Tribes

In FY 2018, Bonneville completed a long-term resource program, with the purpose of assessing Bonneville's future need for power and reserves and to develop an acquisition strategy to meet those projected needs. If Bonneville does acquire output from a generating resource on a long-term basis, Bonneville will comply with Section 6 of the Northwest Power Act and will modify its budget to reflect the acquisition.

Bonneville is responsible for annual payments to the Confederated Tribes of the Colville Reservation for their contribution to the production of hydropower by the Grand Coulee Dam in accordance with the Settlement Agreement between the United States and the Colville Tribes (April 1994). Additionally, the Spokane Tribe of Indians of the Spokane Reservation Equitable Compensation Act (Public Law 116-100), enacted on December 20, 2019, provides for equitable compensation to the Spokane Tribe of Indians of the Spokane Reservation for the use of tribal land to produce hydropower by the Grand Coulee Dam, and for other purposes. The Act provides Bonneville and Northwest electric ratepayers cost certainty on this issue as we move toward discussions of long-term power sales contracts with our utility customers. Bonneville expenditures under the settlement that began in FY 2021 are estimated at $6 million annually.

Bonneville's **Fish & Wildlife Program** provides for extensive protection, mitigation, and enhancement of Columbia River Basin fish and wildlife adversely affected by the development and operation of the FCRPS. Bonneville satisfies its fish and wildlife responsibilities by funding projects and activities designed to be consistent with the NPCC's Program under the Northwest Power Act. Consistent with the NPCC's Program, Bonneville also implements measures to aid in the protection of fish and wildlife in the Columbia River and its tributaries, under the ESA (see ESA discussion in the Power Services – Capital Overview section).

Bonneville's mitigation expenditures will focus on activities that benefit Columbia River Basin fish and wildlife resources, following priorities established through ESA consultations, agreements with resource managers, and the NPCC's Program, including actions that:

- Increase survival of ESA-listed and non-listed fish at FCRPS dams and reservoirs;
- Increase survival of ESA-listed and non-listed fish throughout their life cycle by protecting and enhancing important habitat areas;
- Protect and enhance important wildlife habitat;
- Use hatcheries to contribute to conservation and recovery of ESA-listed and non-listed fish;

[1] Including expenses associated with the use of power financial instruments to hedge Bonneville's exposure to market price risk and certain index sales contract provisions as permitted by Bonneville's internal power transacting risk management guidance.

- Provide offsite mitigation projects and habitat, passage, and other improvements that address factors limiting improvements of target species; and
- Support a focused and well-coordinated research, monitoring, and evaluation program.

The **Residential Exchange Program (REP)** was created by Section 5(c) of the Northwest Power Act to extend the benefits of low-cost Federal power to the residential and small farm loads of Pacific Northwest retail electric utilities that have high average system costs. These benefits are passed directly to the consumers. Currently, the region's six investor-owned utilities (IOUs) and two of the region's consumer-owned utilities are actively participating in the REP. Payments under the REP are made to individual investor-owned utilities (IOUs) based on the difference between Bonneville's utility-specific Priority Firm (PF) Exchange rates and each utility's average system cost (ASC), times a utility's residential and small farm loads. ASCs are determined in accordance with Bonneville's 2008 Average System Cost Methodology (ASCM). Participating retail utility ASCs are established in a public process that occurs prior to and during Bonneville's power rate cases. Bonneville's utility-specific PF Exchange rates are determined each rate period. As described below, Bonneville and regional parties reached a settlement of the REP in 2011 (see background in sidebar) under which the total amount of REP benefits available to the IOUs was established through 2028. Payments to the IOUs are made monthly based on historical invoiced exchange loads and the terms of the settlement.

The **Northwest Power and Conservation Council** (NPCC) budget subcategory provides continued support of NPCC activities, as directed under the Northwest Power Act. The NPCC's major activities include the periodic preparation of a Northwest Conservation and Electric Power Plan (a 20-year electric energy demand and resources forecast and conservation program – known as the Power Plan) and the Fish and Wildlife Program. The Northwest Power Act directs Bonneville's funding of the NPCC, subject to certain limits based on forecasted Bonneville power sales, be included in Bonneville's annual budget to Congress. The cost of funding the Council is recovered through Bonneville's power rates.

Background: REP Settlements and ISRP Reviews

Over the past decade, and prior to the settlement, regional parties filed multiple lawsuits challenging Bonneville's implementation of the REP. These lawsuits were consolidated into four cases that were stayed before the U.S. Court of Appeals for the Ninth Circuit. On July 26, 2011, Bonneville adopted a regionally supported settlement, referred to as the 2012 REP Settlement. Under the settlement, the region's six IOUs will receive about $4.1 billion in REP payments over the 17-year term of the settlement, beginning at $182.1 million in FY 2012, and increasing to $286.1 million in FY 2028. In addition to this settlement, Bonneville has reached related REP settlements with two consumer-owned utilities. A single challenge to the 2012 REP Settlement was dismissed by the U.S. Court of Appeals for the Ninth Circuit in October of 2013.

The Energy and Water Development Appropriations Act of 1996 added Section 4(h)(10)(D) to the Northwest Power Act, directing the NPCC to appoint the Independent Scientific Review Panel (ISRP) "to review a sufficient number of projects" proposed to be funded through Bonneville's annual fish and wildlife budget "to adequately ensure that the list of prioritized projects recommended is consistent with the Program." The Northwest Power Act further states that "in making its recommendations to Bonneville, the NPCC shall consider the impact of ocean conditions on fish and wildlife populations and shall determine whether the projects employ cost effective measures to achieve program objectives." Today, most mitigation projects funded by Bonneville receive ISRP review as part of the NPCC recommendation process. The NPCC has shifted to a multi-year project review cycle during which the ISRP reviews categories of projects grouped together.

Under the **Energy Efficiency & Renewable Resources** subcategory, Bonneville's Energy Efficiency program promotes the efficient use of energy in the loads of customers and supports Bonneville's acquisition of conservation as the region's lowest cost resource. Such actions will: 1) meet energy efficiency targets; 2) achieve a least cost resource mix; 3) lessen the cost impacts of power purchases; 4) avoid the costs of ramping programs and infrastructure up and down; 5) extend the value of the FCRPS to customers; and 6) build the region's resource portfolio with energy efficiency.

Bonneville's Energy Efficiency program offers several ways for customer utilities to participate in energy conservation. Program components include:

1. Standard offer efficiency measures and custom projects, which customers use to conserve energy through such programs as residential weatherization; commercial lighting; heating, ventilation, and air conditioning (HVAC); industrial processes and lighting; and irrigated agriculture.
2. Third-party delivery programs, such as Comfort Ready Home, Energy Smart Industrial, and the Green Motors programs.

3. Programs to help regional Federal installations reduce energy use, including Federal hatcheries and irrigation districts, and to support the Corps and Reclamation in their efforts to reduce energy use.
4. Efficiency achieved independently through the market or through codes and standards, e.g., Momentum Savings.
5. Market transformation through the Northwest Energy Efficiency Alliance (NEEA).
6. Exploring integration of demand-side management, distributed generation and other leading-edge technologies which help manage peak loads.

Bonneville also provides research, evaluation, contract support, NEEA support, and emerging technology development. Additionally, customers perform self-funded conservation.

Explanation of Changes

Bonneville's budget includes $2,196 million in FY 2025 for Power Services operating expenses, which is an increase of 3.9 percent over the FY 2024 forecasted level.

The FY 2025 budget decreases the level for Fish & Wildlife ($369 thousand), but increases the level for Production ($69.2 million), Associated Projects costs ($12.6 million), Residential Exchange ($33 thousand), and Energy Efficiency & Renewable Resources ($862 thousand). NPCC stays at the same level.

The following pages discuss budget specifics under each of the six Power Services subcategories.

Production

Overview

Under the Production subcategory are three budget areas.

Production
($K)

FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$2,076,450	$940,553	$1,009,725

Power Purchases includes power purchased to cover power supply obligations as well as balancing loads with generation from the hydro system. These power purchases can be made in the form of long-term purchases to meet Bonneville's contract obligations to its utility and other customers based on long-term planning requirements or they can be made within the year due to the monthly shape of the customers' loads and the monthly shape of the hydroelectric generation. Also, power purchases can be made within the month and within the day to fill temporary shortages due to fluctuations in the hydro system capability and in Bonneville's load.

FY 2023 results for Power Purchases is higher than the BP-22 rate case driven by higher prices and low stream flows. The low stream flows are a big component of the higher FY23 results due to the impact of increased loads and dry winter conditions leading to increased purchases (notably December through March).

Power Scheduling/Marketing relates to the scheduling and marketing (buy/sell) of electric energy with Bonneville's customers and the Pacific Northwest's interconnected utilities. Scheduling includes Power Services' implementation of physical and memo power schedules and associated transmission schedules, implementation of Electronic Tagging (ETag) in accordance with NERC and FERC, and implementation of electronic scheduling.

The third budget area is the **Columbia Generating Station (CGS).** Bonneville includes the project capability of CGS, a non-federal nuclear power plant, in the marketing of Federal power to meet Bonneville's long term firm power supply obligations. CGS is on a 24-month fuel and outage cycle. A maintenance and refueling outage occurred in the fall of 2021 and another refueling occurred in May 2023.

Operating expenses in Production include the following.

Continuous Activity (*all years*):

- Provide oversight of all power supply contracts and related projects from which Bonneville acquires generation capability to ensure that all Bonneville approval rights are protected; coordinate, communicate, and administer agreements, issues, and programs between Bonneville and the project owners.
- Provide wind resource integration services for wind generation.
- Power purchases.
- Power scheduling/marketing.
- Provide oversight of all contracts signed to date. Pursue cost-effective means to mitigate capacity demands associated with interconnecting large amounts of variable resource into the Bonneville system.
- Pursue acquisition of additional cost-effective generation to meet load growth.
- Provide oversight on the wind resource integration services currently purchased by public power customers and offer additional renewable resource shaping services to such customers using variable resource generation to serve their load.

Associated Projects

Overview

Under Associated Projects, funds are budgeted to support FCRPS project costs and work to strengthen interagency and regional relationships to improve project performance and supporting functions, and to better understand project resource requirements and costs. This helps to maintain FCRPS reliability and system performance, as well as to attain Bonneville's strategic business objectives.

Associated Projects
($K)

FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$486,492	$474,769	$487,375

Continued investments in Associated Projects include the following.

Continuous Activity (*all years*):

- Bureau of Reclamation
  - Continue direct funding of Reclamation operations and maintenance (O&M) power activities.
- Corps of Engineers
  - Continue direct funding of Corps O&M power activities.

Fish & Wildlife Projects

Overview

As discussed at length in the Fish & Wildlife Projects – Capital Section of this document, Bonneville implements a mature Fish & Wildlife mitigation program based on NPCC Program measures and developed from recommendations made by the region's fish and wildlife management agencies and tribes. Several recent NPCC reviews have made additional fish and wildlife project recommendations to Bonneville. Bonneville, in coordination with the NPCC, reviews new and on-going projects for consistency with the NPCC's Program and purposes of the Northwest Power Act. Bonneville reviews and resets project-specific funding commitments annually, including for projects related to applicable BiOps and other agreements. Bonneville informs its funding decisions with the management objectives and priorities in the NPCC's Program (including ISRP reviews) and the Accords extension as it integrates their implementation with actions necessary to fulfill ESA responsibilities. Regular coordination on implementation priorities continues among Bonneville, the NPCC, federal resource management agencies, states, tribes, and others.

Fish & Wildlife
($K)

FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$245,469	$268,620	$268,250

Continued investments in Bonneville's Fish &Wildlife Program include the following.

Continuous Activity (*all years*):

- Anadromous Fish: Continue implementing both ongoing and new projects that support ESA-listed species and other measures called for under applicable BiOps, the Washington Estuary Agreement, the Kalispel Agreement, the Willamette and Southern Idaho agreements, and applicable extensions of the Columbia Basin Fish Accords. Prioritize projects that address the factors that contribute most to mitigation success and that fulfill Bonneville's responsibility for mitigating the impacts from the FCRPS. Implement and develop activities that protect and enhance tributary and estuary habitat, improve mainstream habitat, reduce potentially harmful hatchery practices on ESA-listed populations, and contribute to sustainable fisheries.
- Resident Fish: Implement activities to mitigate the impacts of the CRS on lamprey, sturgeon, and bull trout and promote the reproduction and recruitment of Kootenai River white sturgeon. These activities have been proposed and consulted upon in the 2020 USFWS CRS BiOp, the NPCC Program, and the 2022 amendments to extend the Columbia Basin Fish Accords.
- Mitigation supporting resident fish to offset anadromous fish losses in areas of the basin where Federal dams have blocked anadromy (referred to as "substitution" in the NPCC's Program): mitigate for reservoir power operation impacts to resident fish and wildlife by seeking projects that benefit both simultaneously. Those resident fish habitat acquisition projects that meet Bonneville's capitalization policy will be funded under the capital portion of Bonneville's Fish & Wildlife budget and credited for both fish and wildlife where appropriate.
- Wildlife: Use existing Bonneville policies to continue the current effort to mitigate wildlife in a manner consistent with the NPCC Program and fulfill commitments in wildlife agreements such as the Kalispel Agreement, Willamette Wildlife Agreement, and Southern Idaho Wildlife Agreement. Those wildlife projects that meet Bonneville's capitalization policy will be funded under the capital portion of Bonneville's Fish & Wildlife budget and credited against both wildlife and fish obligations according to Bonneville's crediting policy and applicable mitigation contracts.

Residential Exchange Program, NPPC, Energy Efficiency & Renewable Resources

Overview

See detailed descriptions of these three budget subcategories in the Activities, Milestones, and Explanation of Changes Section on the following pages.

Residential Exchange, NPCC,
and Energy Efficiency & Renewable Resources
($K)

FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$416,050	$429,838	$430,733

Continued investments in these three subcategories include the following.

Residential Exchange Program (REP)

- Includes forecasted REP benefits based on the 2012 REP Settlement.

Northwest Power & Conservation Council

- Continue support of NPCC activities, as directed under the Northwest Power Act, including regional power plan development and maintenance and fish and wildlife program activities.

Energy Efficiency & Renewable Resources

- Conservation purchases: Provide programmatic savings reimbursements and energy efficiency incentives to Bonneville customers to purchase conservation savings. This includes performance payments and Energy Smart Reserved Power payments for Federal installations and fish hatcheries and irrigation districts.
- Conservation infrastructure: All support for programs and operations, including third-party program implementation, contract support, market research (Momentum Savings research), evaluation, and emerging technology research.
- Market transformation: Support for NEEA's market transformation initiatives. NEEA identifies barriers and opportunities to increase the market adoption of efficiency by leveraging its regional partnerships.

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Residential Exchange Program, Northwest Power & Conservation Council
Energy Efficiency & Renewable Resources:
Activities, Milestones and Explanation of Changes ($K)

FY 2024 Estimate	FY 2025 Estimate	Explanation of Changes FY 2025 vs FY 2024 Estimate
Power Services - Operating Expense $2,113,780	**$2,196,083**	**$82,303/3.9%**
Production $940,553	**$1,009,725**	**$69,172/7.4%**
Milestones: Continue to provide oversight of all signed contracts. Continue to provide wind resource integration services for customer wind generation.	Milestones: Continue to provide oversight of all signed contracts. Continue to provide wind resource integration services for customer wind generation.	The increase is due to higher CGS and support costs.
Associated Project Costs $474,769	**$487,375**	**$12,606/2.7%**
Milestones: Continue direct funding of Corps and Reclamation O&M power activities.	Milestones: Continue direct funding of Corps and Reclamation O&M power activities.	The increase addresses inflation and the rise in labor costs.
Fish & Wildlife Costs $268,620	**$268,250**	**$-369/-0.1%**
Milestones: Continue implementing both ongoing and new projects that support ESA-listed species and other measures called for under the current CRS BiOps, the 2018 Fish Accord extensions, the Washington Estuary Agreement, the Kalispel Agreement, the Southern Idaho Agreement, and the Willamette Agreement.	Milestones: Continue implementing both ongoing and new projects that support ESA-listed species and other measures called for under the current CRS BiOps, the 2018 Fish Accord extensions, the Washington Estuary Agreement, the Kalispel Agreement, the Willamette Agreement, and the Southern Idaho Agreement.	The decrease in the costs reflect funding associated with the BiOps, 2018 Fish Accord extension commitments, and Northwest Power Act activities. in the costs reflect funding associated with the BiOps, 2018 Fish Accord extension commitments, and Northwest Power Act activities.

FY 2024 Estimate	FY 2025 Estimate	Explanation of Changes FY 2025 vs FY 2024 Estimate
Residential Exchange Program $266,663	**$266,696**	**$33/0.0%**
Milestones: Continue to provide REP benefits.	Milestones: Continue to provide REP benefits.	No change in scheduled amount of REP payments payable to IOUs prescribed by REP.
NW Power & Conservation Council $11,942	**$11,942**	**$0/0.0%**
Milestones: Continue support of the NPCC activities, as directed under the Northwest Power Act, including regional power plan development and maintenance, and fish and wildlife program activities.	Milestones: Continue support of the NPCC activities, as directed under the Northwest Power Act, including regional power plan development and maintenance, and fish and wildlife program activities.	No change in the scheduled amount of the NPCC.
Energy Efficiency & Renewable Resources $151,233	**$152,096**	**$862/0.6%**
Milestones: Continue close-out of the legacy conservation resource acquisition contracts, which support Bonneville's contractual obligation to serve customer loads. Continue to support utility incentive programs. Continue to support regional energy efficiency programs. Continue supporting energy efficiency at direct serve Federal agencies.	Milestones: Continue close-out of the legacy conservation resource acquisition contracts, which support Bonneville's contractual obligation to serve customer loads. Continue to support utility incentive programs. Continue to support regional energy efficiency programs. Continue supporting energy efficiency at direct serve Federal agencies.	**$-489/-3.9%** The increase reflects higher funding while continuing emphasis on the energy efficiency program consistent with the Power Plan. The increase reflects higher funding while continuing emphasis on the energy efficiency program consistent with the Power Plan.

Funding Schedule by Activity

Funding ($K)

Transmission Services - Operating Expenses	FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate	FY 2025 vs FY 2024 $	FY 2025 vs FY 2024 %
Engineering	$ 119,538	$ 90,663	$ 92,115	$ 1,452	1.6%
Operations	$ 232,130	$ 242,749	$ 251,486	$ 8,738	3.6%
Maintenance	$ 213,858	$ 243,473	$ 251,102	$ 7,629	3.1%
Total, Transmission Services - Operating Expenses	**$ 565,525**	**$ 576,885**	**$ 594,704**	**$ 17,819**	**3.1%**
Evolving Grid Projects	$ 359	$ 988	$ 1,615	$ 627	63.4%
Total, Transmission Services - Operating Expenses + EGP	**$ 565,884**	**$ 577,873**	**$ 596,319**	**$ 18,446**	**3.2%**

Outyears ($K)

Transmission Services - Operating Expenses	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate	FY 2029 Estimate
Engineering	92,115	97,736	100,376	103,000	105,604
Operations	251,486	257,716	266,134	274,479	282,755
Maintenance	251,102	258,481	266,529	274,513	282,433
Total, Transmission Services - Operating Expenses	**594,704**	**613,933**	**633,039**	**651,992**	**670,792**
Evolving Grid Projects	$ 1,615	$ 1,710	$ 1,779	$ 1,949	$ 2,027
Total, Transmission Services - Operating Expenses + EGP	**$ 596,319**	**$ 615,643**	**$ 634,818**	**$ 653,941**	**$ 672,819**

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Transmission Services – Operating Expense

Overview

Under the Transmission Services – Operating Expense category are four subcategories: the transmission system services of **Engineering, Operations, Maintenance, and Evolving Grid Projects** for Bonneville's electric transmission system and associated power system control and communication facilities. Primary goals of this program are:

1. Maintain the safety and reliability of the transmission system;
2. Increase the focus on meeting customers' needs;
3. Optimize the transmission system;
4. Provide open access and non-discriminatory transmission service; and
5. Improve Bonneville's cost effectiveness.

Explanation of Changes

Bonneville's budget includes $596.3 million in FY 2025 for Transmission Services operating expense, which is a 3.2 percent increase over the FY 2024 forecasted level. The increase continues the operation and maintenance of Bonneville's transmission assets.

The FY 2025 budget increases the levels for Engineering ($1.5 million), Operations ($8.7 million), Maintenance ($7.6 million), and Evolving Grid Projects ($627 thousand). Spending in each subcategory is discussed on the following pages.

Engineering

Overview

Funding allocated under the Engineering subcategory allows continued efforts to identify best methods for improving system reliability and maintenance practices and continued cost reduction efforts by identifying opportunities for low-cost reinforcement and voltage support of the existing transmission system.

Engineering
($K)

FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$119,538	$90,663	$92,115

Continued investments in Engineering include the following.

Continuous Activity (*all years*):

- Research and development (R&D): Conduct research focused on technologies related to business challenges that Bonneville faces including reliability, energy efficiency, and integration of renewable energy resources. Technologies of interest are identified in Bonneville's Technology Roadmaps. A portfolio of research is selected every year through Bonneville's Portfolio Decision Framework.
- System development planning and analysis: Continue providing technical support and asset planning to deploy the asset management approach to sustain existing assets and expand the system to meet agency objectives.
- Technical support: Provide technical support activities, such as transmission system planning and studies to optimize portions of the system. Provide support for non-wires solutions studies and pilot projects.
- Capital-to-expense adjustments: Conduct annual analysis of Bonneville's outstanding capital work orders to assess whether they should be expensed. As obsolete inventory is identified and disposed of it is expensed.
- Regulatory fees: WECC dues and loop flow payments, Department of Commerce/National Telecommunications and Information Administration licensing costs for radio frequencies, DOE Radio Spectrum staff and contractor support, and NERC Critical Infrastructure Protection (CIP) compliance program costs. Includes membership in a regional transmission planning organization.
- Reimbursable transactions: Enter into written agreements with Federal and non-federal entities that have work or services to be performed by Bonneville staff at the expense of the benefiting entities. The projects must be beneficial, under agreed-upon criteria, to Bonneville operations and to the Federal or non-federal entity involved or otherwise be aligned with or supportive of Bonneville's strategic objectives. Additionally, these activities generally contribute to more efficient or reliable construction of the Federal transmission system or otherwise enhance electric service to the region.
- Leased and other costs: Includes leases, lease purchases, and other costs of financing transmission, delivery, and voltage support facilities when such arrangements are operationally feasible and cost effective to deliver power. Leases and lease purchases enable Bonneville to continue to invest in infrastructure to support a safe and reliable system for the transmission of power. Other costs included are the accrued interest costs associated with Large Generator Interconnection Agreements (LGIA).

Operations

Overview

The following activities are funded under Operations.

Operations
($K)

FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$232,130	$242,749	$251,486

Substation Operations: Perform operations functions necessary to provide electric service to customers and to protect the Federal investment in electric equipment and other facilities. Includes equipment adjustments, switching lines and equipment during emergencies or maintenance, isolating damaged equipment, restoring service to customers, inspecting equipment, and reading meters.

Power System Dispatching and Supporting Functions: Perform central dispatching, control, and monitoring of the electric operation of the Federal transmission system. Also includes load, frequency, and voltage control of Federal generating plants, and coordinating long- and short-term outages of system equipment. In addition, provides technical engineering support of dispatching function and provides all technical and systems support for Dittmer Control Center (DCC) and Munro Control Center (MCC).

Marketing and Sales: Provide management and direction of transmission rates and provide business strategy in marketing of transmission and ancillary products and services of Transmission Services. Involve customers and constituents in the process of product and rate development. Maintain accurate and complete historical records of current and past legacy transmission agreements. Provide guidance for current and future transmission contract negotiations. Provide financial analysis of market strategies. Monitor and report on the financial health of Transmission Services. Support cost management by effective reporting and analysis of current expenditures. Ensure official budget submittals reflect current management financial strategies and adequately fund transmission programs.

Transmission Scheduling: Provide non-discriminatory, open access to the Bonneville transmission system consistent with Bonneville's Open Access Transmission Tariff (OATT). Schedule transmission capacity to eligible Bonneville customers, which include customers acquiring services under Use of Facilities (UFT), Formula Power Transmission (FPT), Integration of Resources (IR), and Part II or Part III of the OATT. Manage the reservations and scheduling of all transmission services associated with the OATT. Update practices, policies, and commercial systems to accommodate a large diversity of resources, including wind.

Continued investments in Operations include the following.

Continuous Activity (*all years*):

- Continue to operate within parameters of NERC and WECC.
- Continue support of increased compliance activities related to the reliability of the transmission system, including cyber security.
- Continue developing facilities, policies, procedures, and implementing systems to support integrating the diversity of resources into the transmission grid.
- Continue preparation for increased complexity of transmission scheduling, power system operations, and dispatching, including congestion management and outage scheduling.
- Continue developing the Dittmer Scheduling Center and Munro Scheduling Center facilities to support continuous real time scheduling operations from both facilities.
- Continue developing a long-term approach to optimize transmission availability through streamlined, cost-effective, and sustainable processes.
- Continue to address succession planning issues across key functions.
- Continue development and implementation of business systems and tools.

Maintenance

Overview

In all aspects of maintenance, Bonneville is continuing the use of reliability centered maintenance (RCM) practices. The use of RCM practices is focused on improving system reliability, increasing availability, and meeting new and existing compliance regulations at lowest lifecycle costs. In addition, Bonneville is deploying asset management to optimize maintain/replace decision making. Maintenance costs are expected to increase as Bonneville addresses the aging transmission system, meets reliability standards, including vegetation management, and adheres to environmental constraints associated with construction, enhancement, and maintenance of the system. The Bonneville transmission system encompasses 15,179 circuit miles on over 11,860 rights-of-way miles (many of these miles are through rugged, inaccessible terrain).

Maintenance
($K)

FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$213,858	$243,473	$251,102

Continued investments in Maintenance include the following:

Continuous Activity (*all years*):

- Continue to improve performance to meet System Average Interruption Frequency Index (SAIFI) and System Average Interruption Duration Index (SAIDI) targets.
- Continue refining processes and procedures for monitoring and tracking compliance activities related to the reliability of the transmission system.
- Continue to improve system availability performance through new maintenance procedures and work practices.
- Continue to develop and implement work practices and procedures for implementation of a new specialty crew using bare-hand live line practices for maintenance of high-voltage transmission lines.
- Continue increased emphasis on replacement of line hardware (life extension programs for insulators, connectors, dampers, and fiber optic cable hardware).
- Continue to prepare for the impact of an expected high attrition rate among Bonneville's aging workforce by recruiting apprentices and replacements for critical minimum crew size workload positions.
- Increase outage-scheduling planning and coordination to increase customer satisfaction and system availability.
- Maintain vegetation management levels to ensure system reliability.
- Continue access road work to provide reliable access to facilities and ensure environmental compliance.
- Continue improving environmental stewardship.

Transmission Line Maintenance:

Maintain and repair 15,179 circuit miles of high voltage transmission lines, of which over 4,734 circuit miles are 500 kV transmission extra-high voltage (EHV). Maintenance of EHV lines is two and one-half times more labor-intensive than maintenance of lower transmission voltages, although more efficient in transmission of power. This responsibility includes maintaining transmission rights-of-way to ensure system reliability, safety, and environmental compliance. Adopt work practices that improve system availability, reliability, and compliance.

Right-of-Way Maintenance:

Maintain over 11,860 miles of Bonneville rights-of-way. This responsibility includes vegetation management, danger tree management, and access road maintenance to ensure system reliability, safety, and environmental compliance. Adopt procedures and processes that improve system availability, reliability, environmental compliance, and reliability compliance. Continue to deploy new technologies such as LiDAR (Light Detection and Ranging) to reliably and cost-effectively manage vegetation.

Substation Maintenance:

Maintain and repair the transmission system power equipment located in Bonneville's 259 substations. Work includes inspections, diagnostic testing, and predictive and condition-based maintenance.

System Protection Maintenance:

Maintain relaying metering and remedial action scheme equipment used to control and protect the electrical transmission system and to meter energy transfers for the purpose of revenue billing. Additionally, field-engineering services provide technical advice and assure the correct operation of power system relaying and special control systems used to support interregional energy transmission capabilities.

Power System Control Maintenance:

Test, repair, and provide field engineering support of Bonneville's highly complex equipment, communications, and control systems, including seven major microwave systems, fiber optic systems, and other critical communications and control equipment that support the power system.

Non-Electric Plant Maintenance:

Maintain and manage Bonneville's non-electric facilities. This includes site, building, and building utility maintenance; custodial services; station utility; and other maintenance service activities, as well as facilities asset management on Bonneville-owned or Bonneville-leased non-electric facilities.

Maintenance Standards and Engineering:

Establish, monitor, and update system maintenance standards, policies, and procedures, and review and update long-range plans for maintenance of the electric power transmission system.

Evolving Grid Projects

Overview

The Evolving Grid Projects are a group of 10 strategic capital projects needed across our service territory to eliminate chokepoints on BPA's transmission system and enable renewable generation projects access to our Transmission system and neighboring states utilities to market their production.

Evolving Grid Projects
($K)

FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$359	$988	$1,615

Continued investments into Evolving Grid assets require hiring additional personnel to support the work. These costs represent the additional cost of personnel above what was estimated in the BP-22 and BP-24 IPR processes.

Transmission Services – Operating Expense: Activities, Milestones, and Explanation of Changes ($K)

FY 2024 Estimate	FY 2025 Estimate	Explanation of Changes FY 2025 vs FY 2024 Estimate
Transmission Services - Operating Expense $577,873	**$596,319**	**$18,446/3.2%**
Engineering $90,663	**$92,115**	**$1,452/1.6%**
Milestones: Continue efforts to identify best methods for improving system reliability and maintenance practices. Continue cost reduction efforts by identifying opportunities for low-cost reinforcement and voltage support of the existing transmission system.	Milestones: Continue efforts to identify best methods for improving system reliability and maintenance practices. Continue cost reduction efforts by identifying opportunities for low-cost reinforcement and voltage support of the existing transmission system.	The increase reflects continued emphasis on system reliability standards compliance and research and development.
Operations $242,749	**$251,486**	**$8,738/3.6%**
Milestones: Continue to operate within parameters of NERC and WECC. Continue support of increased compliance activities related to the reliability of the transmission system, including cyber security.	Milestones: Continue to operate within parameters of NERC and WECC. Continue support of increased compliance activities related to the reliability of the transmission system, including cyber security.	The increase reflects continued emphasis on reliability compliance activities, resource integration activities, key strategic initiative, security, and control center systems support.
Maintenance $243,473	**$251,102**	**$7,629/3.1%**
Milestones: Continue to improve performance to meet System Average Interruption Frequency Index (SAIFI) and System Average Interruption Duration Index (SAIDI) targets.	Milestones: Continue to improve performance to meet System Average Interruption Frequency Index (SAIFI) and System Average Interruption Duration Index (SAIDI) targets.	The increase reflects implementation of facilities asset management plans, continued implementation of live-line crew, NERC/WECC compliance activities related to land rights and vegetation management, continuing maintenance program activities, including system protection, right-of-way, line maintenance, and performance improvements.
Evolving Grid Projects $988	**$1,615**	**$627/63.4%**

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Interest, Pension, and Post-retirement Benefits Operating Expense

Funding ($K)

Interest, Pension, & Post-Retirement Benefits	FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate	FY 2025 vs FY 2024 $	FY 2025 vs FY 2024 %
BPA Bond Interest (Net)	$ 182,140	$ 125,375	$ 143,203	$ 17,828	14.2%
BPA Appropriation Interest	$ -	$ -	$ -	$ -	0.0%
Corps of Engineers Appropriation Interest	$ 39,574	$ 32,802	$ 21,911	$ (10,890)	-33.2%
Lower Snake River Comp Plan Interest	$ 186	$ 169	$ 93	$ (76)	-45.1%
Bureau of Reclamation Appropriation Interest	$ 1,265	$ 1,264	$ 1,200	$ (65)	-5.1%
Bond Premiums Paid/Discounts (not capitalized)	$ (4,984)	$ 11,649	$ 1,164	$ (10,485)	-90.0%
Subtotal, Interest - Operating Expense	**$ 218,181**	**$ 171,259**	**$ 167,570**	**$ (3,689)**	**-2.2%**
Additional Pension and Post-Retirement Benefits	$ 39,103	$ 37,780	$ 38,314	$ 534	1.4%
Total, Interest, Pension, & Post-Retirement Benefits	**$ 257,284**	**$ 209,039**	**$ 205,884**	**$ (3,155)**	**-1.5%**

Outyears ($K)

Interest, Pension, & Post-Retirement Benefits	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate	FY 2029 Estimate
BPA Bond Interest (Net)	$ 143,203	$ 164,210	$ 169,202	$ 174,166	$ 178,336
BPA Appropriation Interest	$ -	$ -	$ -	$ -	$ -
Corps of Engineers Appropriation Interest	$ 21,911	$ 14,878	$ 16,597	$ 15,039	$ 10,819
Lower Snake River Comp Plan Interest	$ 93	$ 88	$ 88	$ 88	$ 88
Bureau of Reclamation Appropriation Interest	$ 1,200	$ 1,200	$ 1,200	$ 1,200	$ 408
Bond Premiums Paid/Discounts (not capitalized)	$ 1,164	$ 2,966	$ 8,284	$ 25,733	$ 17,860
Subtotal, Interest - Operating Expense	**$ 167,570**	**$ 183,342**	**$ 195,371**	**$ 216,226**	**$ 207,511**
Additional Pension and Post-Retirement Benefits	$ 38,314	$ 39,237	$ 40,157	$ 41,072	$ 41,980
Total, Interest, Pension, & Post-Retirement Benefits	**$ 205,884**	**$ 222,579**	**$ 235,527**	**$ 257,299**	**$ 249,492**

Interest, Pension and Post-retirement Benefits Operating Expense

Overview

Interest expense provides for interest due on bonds issued to the U.S. Treasury and appropriations repayment responsibilities. The appropriation repayments relate to capital investment in FCRPS hydroelectric generating and transmission facilities of Bonneville, the Corps, and Reclamation. Investments were financed by Congressional appropriations and Bonneville borrowings from the U.S. Treasury. Bonneville repays these amounts through revenue raised in its power sales and transmission services revenues.

Background: Interest, Pension and Post-retirement Benefits Operating Expense

Since initially receiving U.S. Treasury borrowing authority in 1974 under the Transmission Act, all of Bonneville's U.S. Treasury borrowing has been at market rates. As of October 1, 1996, all of Bonneville's repayment obligations on FCRPS appropriated investment (Corps and Reclamation FCRPS investment and Bonneville investment financed with appropriations prior to the Transmission Act that were unpaid as of September 30, 1996) were restructured and assigned new current-market interest rates. The Bonneville Appropriations Refinancing Act of 1996 (Refinancing Act) called for re-setting (reducing) the unpaid principal of FCRPS appropriations and reassigning (increasing) interest rates. New principal amounts were established as of the beginning of FY 1997 at the present value of the principal and annual interest payments Bonneville would make to the U.S. Treasury for these obligations in the absence of the legislation, plus $100.0 million. The new principal amounts were assigned prevailing market interest rates as of October 1, 1996. Bonneville's outstanding appropriations repayment obligations at the end of FY 1996 were $6.7 billion with a weighted average interest rate of 3.4 percent. The refinancing reduced the principal amount to $4.1 billion with a weighted average interest rate of 7.1 percent. Implementation of the refinancing took place in 1997 after audited actual financial data were available. Pursuant to the legislation, Bonneville submitted its calculations and interest rate assignments implementing the Refinancing Act to the U.S. Treasury for its review and approval. The U.S. Treasury approved the implementation calculations in July 1997. The Refinancing Act also calls for all future FCRPS appropriations to be assigned prevailing U.S. Treasury yield curve interest rates. Bonneville's outstanding appropriations may be prepaid prior to their stated maturities.

Interest estimates are a function of costs of U.S. Treasury borrowing to Bonneville, repayment status of outstanding FCRPS investments, and projected additions to FCRPS plant in service. These estimates may change over time depending on forecasted market conditions. The interest cost estimates include the impact of Bonneville's appropriation refinancing legislation.

Federal employees associated with the operation of the FCRPS participate in either the Civil Service Retirement System or the Federal Employees Retirement System. Employees may also participate in the Federal Employees Health and Benefit Program and the Federal Employee Group Life Insurance Program. As a Federal agency, all post-retirement activity is managed by the Office of Personnel Management; therefore, neither the assets of the plans or the accumulated plan benefits are recorded by Bonneville. Since 1997, Bonneville has made additional annual contributions to the General Fund of the U.S. Treasury (receipt account 892889) related to the Federal post-retirement benefit programs provided to employees associated with the operation of the FCRPS.

Capital Transfers

Funding ($K)

Capital Transfers	FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate	FY 2025 vs FY 2024 $	FY 2025 vs FY 2024 %
BPA Bond Amortization [1]	$ 616,900	$ 386,212	$ 424,301	$ 38,089	9.9%
Bureau of Reclamation Appropriation Amortization	$ 5,441	$ 1,723	$ -	$ (1,723)	-100.0%
BPA Appropriation Amortization	$ -	$ -	$ -	$ -	0.0%
Corps of Engineers Appropriation Amortization	$ 117,940	$ 275,310	$ 209,015	$ (66,294)	-24.1%
Lower Snake River Comp Plan Amortization	$ 378	$ 1,767	$ 122	$ (1,646)	-93.1%
Total, Capital Transfers	**$ 740,659**	**$ 665,012**	**$ 633,438**	**$ (31,574)**	**-4.7%**

Outyears ($K)

Capital Transfers	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate	FY 2029 Estimate
BPA Bond Amortization [1]	$ 424,301	$ 676,532	$ 614,879	$ 721,208	$ 824,390
Bureau of Reclamation Appropriation Amortization	$ -	$ -	$ -	$ 24,557	$ 0
BPA Appropriation Amortization	$ -	$ -	$ -	$ -	$ -
Corps of Engineers Appropriation Amortization	$ 209,015	$ -	$ 51,524	$ 136,902	$ 20,688
Lower Snake River Comp Plan Amortization	$ 122	$ -	$ -	$ -	$ -
Total, Capital Transfers	**$ 633,438**	**$ 676,532**	**$ 666,403**	**$ 882,667**	**$ 845,079**

[1] Bonneville "Bond(s)" in this FY 2025 Budget refers to all bonds issued by Bonneville to and advances received from the U.S. Treasury. This reference is consistent with section 13(a) of the Transmission Act (P.L. 93-454), which defines Bonneville bonds as all bonds, notes, and other evidence of indebtedness issued and sold by Bonneville to the U.S. Treasury.

Capital Transfers

Overview

This activity conveys funds to the U.S. Treasury for repayment of certain FCRPS costs not included in the Associated Projects budget. Since capital transfers are cash transactions, they are not considered budget obligations.

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Additional Tables

BONNEVILLE POWER ADMINISTRATION
TOTAL OBLIGATIONS/OUTLAYS

Current Services
(in millions of dollars)

FISCAL YEAR

BP-1 SUMMARY[1/3/]	2023		2024		2025		2026	2027	2028	2029
	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Oblig.	Oblig.	Oblig.
1 Residential Exchange Program[9/]	267	267	267	267	267	267	273	280	286	292
2 Power Services[2/]	2,834	2,834	1,416	1,416	1,498	1,498	1,536	1,575	1,613	1,654
3 Transmission Services	1,189	1,189	1,228	1,228	1,349	1,349	1,532	1,670	1,657	1,416
4 Conservation & Energy Efficiency	137	137	151	151	152	152	156	159	163	167
5 Fish & Wildlife	260	260	310	310	310	310	304	297	303	310
6 Interest/ Pension[4/]	257	257	209	209	206	206	223	236	257	249
7 Associated Project Cost - Capital	207	207	270	270	276	276	282	288	295	302
8 Capital Equipment	16	16	23	23	22	22	24	23	23	24
9 Planning Council	12	12	12	12	12	12	12	13	13	13
10 Projects Funded in Advance	25	25	46	46	55	55	56	57	57	57
11 Capitalized Bond Premiums	0	0	0	0	0	0	0	0	0	0
12 Power and Transmission Services Financed by Revenues/Reserves	40	40	89	89	89	89	104	103	119	119
13 **TOTAL OBLIGATIONS/OUTLAYS**[3/]	**5,244**	**5,244**	**4,022**	**4,022**	**4,236**	**4,236**	**4,502**	**4,699**	**4,785**	**4,602**

REVENUES AND REIMBURSEMENTS

Current Services
(in millions of dollars)

FISCAL YEAR

BP-1 SUMMARY	2023		2024		2025		2026	2027	2028	2029
	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Oblig.	Oblig.	Oblig.
14 Revenues[5/]	4,000	4,000	4,074	4,074	4,250	4,250	4,287	4,308	4,342	4,367
15 Project Funded in Advance	25	25	46	46	55	55	56	57	57	57
16 Power and Transmission Services Financed by Revenues/Reserves	40	40	89	89	89	89	104	103	119	119
17 **TOTAL**	**4,065**	**4,065**	**4,209**	**4,209**	**4,395**	**4,395**	**4,447**	**4,468**	**4,517**	**4,543**
18 **BUDGET AUTHORITY (NET)**[6/]	**991**		**320**		**460**		**564**	**683**	**439**	**225**
19 **OUTLAYS (NET)**[6/7/8]		**522**		**(177)**		**(159)**	**66**	**231**	**268**	**59**

These notes are an integral part of this table.

1/ This FY 2025 budget includes capital and expense estimates based on final spending proposals from Bonneville's BP-24 IPR process and the increased expenditures for Transmission Evolving Grid Projects.

Capital funding levels reflect external factors such as the significant changes affecting West Coast power and transmission markets, along with planned infrastructure investments designed to address the long-term needs of the region.

Budget estimates included in this budget are subject to change due to rapidly changing economic and institutional conditions in the evolving electric utility industry.

2/ Power Services doesn't include Fish & Wildlife, Residential Exchange Program, Planning Council, Conservation & Energy Efficiency and Associated Project Costs which have been shown separately for display purposes.

3/ This budget has been prepared in accordance with PAYGO. Under PAYGO all Bonneville budget estimates are treated as mandatory and are not subject to the discretionary caps included in the Budget Control Act of 2011. These estimates support activities that are separate from discretionary activities and accounts. Thus, any changes to Bonneville estimates cannot be used to affect any other budget categories which have their own dollar caps. Because Bonneville's obligations are and will be incurred under pre-existing legislative authority, Bonneville is not subject to a "pay-as-you-go" test regarding its revision of current-law funding estimates.
For BP-1 table, the CJ reflects forecasted outlays while the yearend GTAS reflects the actual outlay in the Budget Appendix.

4/ See Interest Expense, Pension and Post-retirement Benefits and Capital Transfers section of this budget for a complete discussion of these cost estimates.

5/ Revenues, included in the Net Outlay formulation, are calculated consistent with cash management goals and assume a combination of adjustments. Assumed adjustments include the use of a combination of tools, including upcoming rate adjustment mechanisms, a net revenue risk adjustment, debt service refinancing strategies and/or short-term financial tools to manage net revenues and cash. Some of these potential tools will reduce costs rather than generate revenue, causing the same Net Outlay result. Adjustments for depreciation and 4(h)(10)(C) credits of the Northwest Power Act are also assumed.

6/ Bonneville received $48.7 million of additional budget authority in FY 2007 to accommodate the work necessary to relocate the radio spectrum consistent with the Commercial Spectrum Enhancement Act (P.L. 108-494). In accordance with Federal law, Bonneville plans to return the forecasted unused balance of approximately $8.2 million to the U.S. Treasury as soon as the National Telecommunications Information Administration notifies the Federal Communications Commission that the DOE relocation effort is complete.

7/ Net Outlay estimates are based on current cost savings to date and anticipated cash management goals. They are expected to follow anticipated management decisions throughout the rate period that, along with actual market conditions, will impact revenues and expenses. Actual Net Outlays are volatile and are reported in Report on Budget Execution and Budgetary Resources (SF-133). Actual Net Outlays could differ from estimates due to changing market conditions, streamflow variability, continued restructuring of the electric industry, and other reasons.

8/ FY 2023 Net Outlays are calculated using Bonneville's FY 2023 Actuals. FY 2024 is based off of rate case and FY 2025 to 2029 Net Outlays are based on BP-24 IPR assumptions, an escalation factor from using the FY 2023 Whitebook Loads and Resources Report, and the increased expenditures for Transmission Evolving Grid Projects.

9/ REP benefits were fixed through Sept. 30, 2028, pursuant to a settlement. This value is a placeholder and does not reflect an estimate of the REP benefits BPA may be required to pay under federal law. Actual REP benefits for this year may be higher or lower depending upon the outcome of settlement negotiations and applicable legal processes.

EXPENSED OBLIGATIONS/OUTLAYS [1,4/]
Current Services
(in millions of dollars)
FISCAL YEAR

BP-2	2023		2024		2025		2026	2027	2028	2029
	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Oblig.	Oblig.	Oblig.
1 Residential Exchange Program	267	267	267	267	267	267	273	280	286	292
2 Power Services [2/]	2,834	2,834	1,416	1,416	1,498	1,498	1,536	1,575	1,613	1,654
3 Transmission Services	566	566	578	578	596	596	616	635	654	673
4 Conservation & Energy Efficiency	137	137	151	151	152	152	156	159	163	167
5 Fish & Wildlife	245	245	269	269	268	268	275	282	288	295
6 Interest/ Pension [3/]	257	257	209	209	206	206	223	236	257	249
7 Planning Council	12	12	12	12	12	12	12	13	13	13
8 TOTAL EXPENSE	4,319	4,319	2,902	2,902	2,999	2,999	3,090	3,178	3,274	3,343
9 Projects Funded in Advance	25	25	46	46	55	55	56	57	57	57
10 Power and Transmission Services Financed by Revenues/Reserves	40	40	89	89	89	89	104	103	119	119

CAPITAL OBLIGATIONS/OUTLAYS [1/]
Current Services
(in millions of dollars)
FISCAL YEAR

BP-2 continued	2023		2024		2025		2026	2027	2028	2029
	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Oblig.	Oblig.	Oblig.
11 Transmission Services	623	623	650	650	753	753	916	1,035	1,003	743
12 Associated Project Cost	207	207	270	270	276	276	282	288	295	302
13 Fish & Wildlife	15	15	41	41	41	41	29	16	15	15
14 Capital Equipment	16	16	23	23	22	22	24	23	23	24
15 Capitalized Bond Premiums		0	0	0	0	0	0	0	0	0
16 **TOTAL CAPITAL INVESTMENTS**	**861**	**861**	**985**	**985**	**1,093**	**1,093**	**1,251**	**1,361**	**1,336**	**1,083**
17 **TREASURY BORROWING AUTHORITY TO**										
18 **FINANCE CAPITAL OBLIGATIONS [4/]**	**861**		**985**		**1,093**		**1,251**	**1,361**	**1,336**	**1,083**

These notes are an integral part of this table.

[1/] This FY 2025 budget includes capital and expense estimates based on final spending proposals from Bonneville's BP-24 IPR process and the increased expenditures for Transmission Evolving Grid Projects.

Capital funding levels reflect external factors such as the significant changes affecting West Coast power and transmission markets, along with planned infrastructure investments designed to address the long-term needs of the region.

Budget estimates included in this budget are subject to change due to rapidly changing economic and institutional conditions in the evolving electric utility industry.

[2/] Power Services doesn't include Fish & Wildlife, Residential Exchange Program, Planning Council, Conservation & Energy Efficiency and Associated Project Costs which have been shown separately for display purposes.

[3/] See Interest Expense, Pension and Post-retirement Benefits and Capital Transfers section of this budget for a complete discussion of these cost estimates.

[4/] This budget has been prepared in accordance with PAYGO. Under PAYGO all Bonneville budget estimates are treated as mandatory and are not subject to the discretionary caps included in the Budget Control Act of 2011. These estimates support activities that are separate from discretionary activities and accounts. Thus, any changes to Bonneville estimates cannot be used to affect any other budget categories which have their own dollar caps. Because Bonneville's obligations are and will be incurred under pre-existing legislative authority, Bonneville is not subject to a "pay-as-you-go" test regarding its revision of current-law funding estimates.

For BP-1 table, the CJ reflects forecasted outlays while the yearend GTAS reflects the actual outlay in the Budget Appendix.

PROGRAM & FINANCING SUMMARY

Current Services

(in millions of dollars)

Identification Code: 89-4045-0-3-271

		2023	2024	est. 2025	2026	2027	2028	2029
Program by activities:								
	Operating expenses:							
0.01	Power Services	2,347	941	1,010	1,038	1,065	1,091	1,121
0.02	Residential Exchange Program [10/]	267	267	267	273	280	286	292
	Associated Project Costs:							
0.05	Bureau of Reclamation	162	154	157	161	165	169	172
0.06	Corps of Engineers	261	260	270	276	282	289	295
0.07	Colville Settlement	26	22	22	23	23	24	24
0.08	Spokane Settlement	6	6	6	6	6	6	6
0.19	U.S. Fish & Wildlife Service	31	33	33	33	34	35	35
0.20	Planning Council	12	12	12	12	13	13	13
0.21	Fish & Wildlife	245	269	268	275	282	288	295
0.23	Transmission Services	566	578	596	616	635	654	673
0.24	Conservation & Energy Efficiency	137	151	152	156	159	163	167
0.25	Interest	218	171	168	183	195	216	208
0.26	Pension and Health Benefits [1/]	39	38	38	39	40	41	42
0.91	**Total operating expenses [2/]**	**4,319**	**2,901**	**2,998**	**3,090**	**3,178**	**3,274**	**3,343**
	Capital investment:							
1.01	Power Services	207	270	276	282	288	295	302
1.02	Transmission Services	623	650	753	916	1,035	1,003	743
1.04	Fish & Wildlife	15	41	41	29	16	15	15
1.05	Capital Equipment	16	23	22	24	23	23	24
1.06	Capitalized Bond Premiums	0	0	0	0	0	0	0
1.07	**Total Capital Investment [3/]**	**861**	**985**	**1,093**	**1,251**	**1,361**	**1,336**	**1,083**
2.01	Projects Funded in Advance	25	46	55	56	57	57	57
2.02	Power and Transmission Services Financed by Revenues/Reserves	40	89	89	104	103	119	119
10.00	**Total obligations [4/]**	**5,244**	**4,021**	**4,235**	**4,502**	**4,699**	**4,785**	**4,602**

These notes are an integral part of this table.

[1/] See Interest Expense, Pension and Post-retirement Benefits and Capital Transfers section of this budget for a complete discussion of these cost estimates.

[2/] Assumes expense obligations, not accrued expenses.

Power Services doesn't include Fish & Wildlife, Residential Exchange Program, Planning Council, Conservation & Energy Efficiency and Associated

[3/] Assumes capital obligations, not capital expenditures.

[4/] This FY 2025 budget includes capital and expense estimates based on final spending proposals from Bonneville's BP-24 IPR process and the increased expenditures for Transmission Evolving Grid Projects.

For purposes of this table, this FY 2025 budget reflects, for FY 2023, forecast third party financing expense only for PFIA.

Capital funding levels reflect external factors such as the significant changes affecting West Coast power and transmission markets, along with planned infrastructure investments designed to address the long-term needs of the region.

Budget estimates included in this budget are subject to change due to rapidly changing economic and institutional conditions in the evolving electric utility industry.

Refer to 16 USC Chapters 12B, 12G, 12H, and Bonneville's other organic laws, including P.L. 100-371, Title III, Sec. 300, 102 Stat. 869, July 19, 1988, regarding Bonneville's ability to obligate funds.

Program and Financing (continued)
Current Services
(in millions of dollars)

		2023 est.	2024	2025	2026	2027	2028	2029
Financing:								
1000	Unobligated balance available, start of year. [5/]	9	8	8	0	0	0	0
1050	Unobligated balance available, end of year.[5/]	8	8	8	0	0	0	0
1200	Appropriation[6/]							
1236	Appropriations applied to repay debt[6/]							
1900	**Budget authority (gross)**	**5,243**	**4,529**	**4,855**	**5,022**	**5,163**	**4,970**	**4,782**
Budget Authority:								
1400	Permanent Authority: Authority to borrow from Treasury (indefinite)[7/]	722	985	1,093	1,251	1,361	1,336	1,083
1600	Contract Authority	1,933						
1800	Spending authority from off-setting collections	4,385	4,209	4,395	4,447	4,468	4,517	4,543
1825	Portion applied to debt reduction	(394)	(665)	(633)	(677)	(666)	(883)	(845)
1850	**Spending authority from offsetting collections (adjusted)**	**2,588**	**3,544**	**3,762**	**3,770**	**3,801**	**3,635**	**3,698**
900	Total obligations	5,244	4,022	4,236	4,502	4,699	4,785	4,602
4110	Outlays (gross)	5,244	4,022	4,236	4,502	4,699	4,785	4,602
Adjustments to budget authority and outlays:								
	Deductions for offsetting collections:							
4120	Federal funds	(56)	(90)	(90)	(90)	(90)	(90)	(90)
4121	Interest on Federal Securities	(69)	(5)	(8)	(11)	(12)	(14)	(13)
4123	Non-Federal sources	(4,260)	(4,114)	(4,297)	(4,357)	(4,378)	(4,427)	(4,453)
4130	Total, offsetting collections	(4,385)	(4,209)	(4,395)	(4,458)	(4,480)	(4,531)	(4,556)
4160	**Budget authority (net)**	**991**	**320**	**460**	**564**	**683**	**439**	**225**
4170	**Outlays (net)[8/9/]**	**522**	**(177)**	**(159)**	**66**	**231**	**268**	**59**

These notes are an integral part of this table.

[5/] Reflects estimated cost for radio spectrum fund.

[6/] This entry reflects a unique mechanism developed by U.S. Treasury and implemented by U.S. Treasury and BPA to apply earned BPA fish credits to the repayment of BPA bonded debt owed to the U.S . Treasury. This entry does not reflect a tax-payer appropriation.

[7/] The Permanent Authority: Authority to borrow (indefinite) from the U.S. Treasury amounts reflect both Bonneville's capital program financing needs and either the use of, or creation of, deferred borrowing. Deferred borrowing is created when, as a cash and debt management decision, Bonneville uses cash from revenues to liquidate capital obligations in lieu of borrowing at that time from the U.S. Treasury. This temporary use of cash on hand instead of borrowed funds creates the ability in future years to borrow money, when fiscally prudent. The FY 1989 Energy and Water Development Appropriations Act (P.L. 100-371 0f 7/19/88) confirmed that Bonneville has authority to incur obligations in excess of U.S. Treasury borrowing authority and cash in the BPA fund.
Net Outlay estimates are based on current cost savings to date and anticipated cash management goals. They are expected to follow anticipated management decisions throughout the rate period that, along with actual market conditions, will impact revenues and expenses. Actual Net Outlays are volatile and are reported in Report on Budget Execution and Budgetary Resources (SF-133). Actual Net Outlays could differ from estimates due to changing market conditions, streamflow variability, continued restructuring of the electric industry, and other reasons.

Revenues, included in the Net Outlay formulation, are calculated consistent with cash management goals and assume a combination of adjustments. Assumed adjustments include the use of a combination of tools, including upcoming rate adjustment mechanisms, a net revenue risk adjustment, debt service refinancing strategies and/or short-term financial tools to manage net revenues and cash. Some of these potential tools will reduce costs rather than generate revenue, causing the same Net Outlay result. Adjustments for depreciation and 4(h)(10)(C) credits of the Northwest Power Act are also assumed.

[8/] This budget has been prepared in accordance with PAYGO. Under PAYGO all Bonneville budget estimates are treated as mandatory and are not subject to the discretionary caps included in the Budget Control Act of 2011. These estimates support activities that are separate from discretionary activities and accounts. Thus, any changes to Bonneville estimates cannot be used to affect any other budget categories which have their own dollar caps. Because Bonneville's obligations are and will be incurred under pre-existing legislative authority, Bonneville is not subject to a "pay-as-you-go" test regarding its revision of current-law funding estimates.
For BP-1 table, the CJ reflects forecasted outlays while the yearend GTAS reflects the actual outlay in the Budget Appendix.

[9/] FY 2023 Net Outlays are calculated using Bonneville's FY 2023 Actuals. FY 2024 is based off of rate case and FY 2025 to 2029 Net Outlays are based on BP-24 IPR assumptions, an escalation factor from using the FY 2023 Whitebook Loads and Resources Report, and the increased expenditures for Transmission Evolving Grid Projects.

[10/] REP benefits were fixed through Sept. 30, 2028, pursuant to a settlement. This value is a placeholder and does not reflect an estimate of the REP benefits BPA may be required to pay under federal law. Actual REP benefits for this year may be higher or lower depending upon the outcome of settlement negotiations and applicable legal processes.

BONNEVILLE POWER ADMINISTRATION
BPA STATUS of U.S. TREASURY BORROWING
CURRENT SERVICES

BP-4A

Fiscal Year

	2023				2024			
	Net Capital Obs	Net Capital Obs Subject to BA	Net Capital Expend.	Bonds Out-Standing	Net Capital Obs	Net Capital Obs Subject to BA	Net Capital Expend.	Bonds Out-Standing
Start-of-Year: Total	4,119	3,577	5,018	7,672	4,363	3,821	5,262	7,916
Plus: Annual Increase								
Cum.-Annual Treasury Borrowing	861	861	861	861	985	985	985	985
Treasury Borrowing (Cash)								
Less:								
BPA Bond Amortization	617	617	617	617	386	386	386	386
Net Increase/(Decrease):	244	244	244	244	599	599	599	599
Cum. - End-of-Year: 1974 Act	**4,363**		**5,262**		**4,962**		**5,861**	
End-of-Year: 1980 Act	**0**		**0**		**0**		**0**	
End-of-Year: ARRA	**0**		**0**		**0**		**0**	
Cum.-End-of-Year: Total	4,363	3,821	5,262	7,916	4,962	4,420	5,861	8,515
Total Remaining Treasury Borrowing Amount				5,784				5,185
Total Legislated Treasury Borrowing Amount				13,700				13,700

These notes are an integral part of this table.

In any given year, Bonneville may issue lower principal amount of bonds to the U.S. Treasury than forecast depending on net revenues, borrowing costs, and other cash management factors. In such cases, Bonneville accumulates a deferred borrowing balance that it accesses as necessary in the future.

Capital funding levels reflect external factors such as the significant changes affecting West Coast power and transmission markets, along with planned infrastructure investments designed to address the long-term needs of the region.

In this FY 2025 budget, Bonneville "bond(s)" refers to all bonds issued by Bonneville to and advances received from the U.S. Treasury. This reference is consistent with section 13 (a) of the Transmission Act, which defines Bonneville bonds as all bonds, notes, and other evidences of indebtednesses issued and sold by Bonneville to the U.S. Treasury.

As in the past, Bonneville may pursue future restructuring of total debt as opportunities arise.

Budget estimates included in this budget are subject to change due to rapidly changing economic and institutional conditions in the evolving electric utility industry.

Cumulative advance amortization payments as of the end of FY 2023 are $7 Billion.

Total includes BPA's self-financing activities. In addition, BPA has negotiated with the U.S. Treasury access to a $750 million short term note as part of the $17.7 billion borrowing authority.

Section 40110 of the Infrastructure Investment and Jobs Act of 2021, Public Law 117-58, enacted on November 15, 2021, provided the Bonneville Administrator with $10 billion in additional permanent borrowing authority "…to assist in the financing, acquisition and replacement of the Federal Columbia Power System and to implement the authority of the Administrator of the Bonneville Power Administration…" Section 40110 specifies that the "obligation"…of the $10 billion in additional borrowing authority…shall not exceed $6 billion by fiscal year 2028. BPA is authorized by Congress to have outstanding at any time up to $13.7 billion of bonds through fiscal year 2027. Beginning in fiscal year 2028, an additional $4 billion will become available to have outstanding for a total of $17.7 billion.

These notes are an integral part of this table.

BONNEVILLE POWER ADMINISTRATION
BPA STATUS of U.S. TREASURY BORROWING
CURRENT SERVICES
(in millions of dollars)

BP-4B

	2025				2026			
	Net Capital Obs	Net Capital Obs Subject to BA	Net Capital Expend.	Bonds Out-Standing	Net Capital Obs	Net Capital Obs Subject to BA	Net Capital Expend.	Bonds Out-Standing
Start-of-Year: Total	4,962	4,420	5,861	8,515	5,630	5,088	6,529	9,183
Plus: Annual Increase								
Cum.-Annual Treasury Borrowing	1,093	1,093	1,093	1,093	1,251	1,251	1,251	1,251
Treasury Borrowing (Cash)								
Less:								
Total BPA Bond Amortization	424	424	424	424	677	677	677	677
Net Increase/(Decrease):								
Total	668	668	668	668	575	575	575	575
Cum. - End-of-Year: 1974 Act	**5,630**		**6,529**		**6,205**		**7,104**	
End-of-Year: 1980 Act	**0**		**0**		**0**		**0**	
End-of-Year: ARRA	**0**		**0**		**0**		**0**	
Cum.-End-of-Year: Total	5,630	5,088	6,529	9,183	6,205	5,663	7,104	9,758
Total Remaining Treasury Borrowing Amount				4,517				3,942
Total Legislated Treasury Borrowing Amount				13,700				13,700

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Total includes BPA's self-financing activities. In addition, BPA has negotiated with the U.S. Treasury access to a $750 million short term note as part of the $17.7 billion borrowing authority.

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BONNEVILLE POWER ADMINISTRATION
BPA STATUS of U.S. TREASURY BORROWING
CURRENT SERVICES
(in millions of dollars)

BP-4C Fiscal Year

	2027				2028			
	Net Capital Obs	Net Capital Obs Subject to BA	Net Capital Expend.	Bonds Out-Standing	Net Capital Obs	Net Capital Obs Subject to BA	Net Capital Expend.	Bonds Out-Standing
Start-of-Year: Total	6,205	5,663	7,104	9,758	6,951	6,409	7,850	10,504
Plus: Annual Increase								
Cum.-Annual Treasury Borrowing	1,361	1,361	1,361	1,361	1,336	1,336	1,336	1,336
Treasury Borrowing (Cash)								
Less:								
Total BPA Bond Amortization	615	615	615	615	721	721	721	721
Net Increase/(Decrease):								
Total	746	746	746	746	615	615	615	615
Cum. - End-of-Year: 1974 Act	**6,951**		**7,850**		**7,566**		**8,465**	
End-of-Year: 1980 Act	**0**		**0**		**0**		**0**	
End-of-Year: ARRA	**0**		**0**		**0**		**0**	
Cum.-End-of-Year: Total	6,951	6,409	7,850	10,504	7,566	7,024	8,465	11,119
Total Remaining Treasury Borrowing Amount				3,196				6,581
Total Legislated Treasury Borrowing Amount				13,700				17,700

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Capital funding levels reflect external factors such as the significant changes affecting West Coast power and transmission markets, along with planned infrastructure investments designed to address the long-term needs of the region.

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Cumulative advance amortization payments as of the end of FY 2023 are $7 Billion.

Total includes BPA's self-financing activities. In addition, BPA has negotiated with the U.S. Treasury access to a $750 million short term note as part of the $17.7 billion borrowing authority.

Section 40110 of the Infrastructure Investment and Jobs Act of 2021, Public Law 117-58, enacted on November 15, 2021, provided the Bonneville Administrator with $10 billion in additional permanent borrowing authority "…to assist in the financing, acquisition and replacement of the Federal Columbia Power System and to implement the authority of the Administrator of the Bonneville Power Administration…" Section 40110 specifies that the "obligation"…of the $10 billion in additional borrowing authority…shall not exceed $6 billion by fiscal year 2028. BPA is authorized by Congress to have outstanding at any time up to $13.7 billion of bonds through fiscal year 2027. Beginning in fiscal year 2028, an additional $4 billion will become available to have outstanding for a total of $17.7 billion.

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BONNEVILLE POWER ADMINISTRATION
BPA STATUS of U.S. TREASURY BORROWING
CURRENT SERVICES
(in millions of dollars)

BP-4D

	Fiscal Year 2029			
	Net Capital Obs	Net Capital Obs Subject to BA	Net Capital Expend.	Bonds Out-Standing
Start-of-Year: Total	7,566	7,024	8,465	11,119
Plus: Annual Increase				
Cum.-Annual Treasury Borrowing	1,083	1,083	1,083	1,083
Treasury Borrowing (Cash)				
Less:				
Total BPA Bond Amortization	824	824	824	824
Net Increase/(Decrease):				
Total	259	259	259	259
Cum. - End-of-Year: 1974 Act	**7,825**		**8,724**	
End-of-Year: 1980 Act	**0**		**0**	
End-of-Year: ARRA	**0**		**0**	
Cum.-End-of-Year: Total	7,825	7,283	8,724	11,378
Total Remaining Treasury Borrowing Amount				6,322
Total Legislated Treasury Borrowing Amount				17,700

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Capital funding levels reflect external factors such as the significant changes affecting West Coast power and transmission markets, along with planned infrastructure investments designed to address the long-term needs of the region.

In this FY 2025 budget, Bonneville "bond(s)" refers to all bonds issued by Bonneville to and advances received from the U.S. Treasury. This reference is consistent with section 13 (a) of the Transmission Act, which defines Bonneville bonds as all bonds, notes, and other evidences of indebtednesses issued and sold by Bonneville to the U.S. Treasury.

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Budget estimates included in this budget are subject to change due to rapidly changing economic and institutional conditions in the evolving electric utility industry.

Cumulative advance amortization payments as of the end of FY 2023 are $7 Billion.

Total includes BPA's self-financing activities. In addition, BPA has negotiated with the U.S. Treasury access to a $750 million short term note as part of the $17.7 billion borrowing authority.

Section 40110 of the Infrastructure Investment and Jobs Act of 2021, Public Law 117-58, enacted on November 15, 2021, provided the Bonneville Administrator with $10 billion in additional permanent borrowing authority "…to assist in the financing, acquisition and replacement of the Federal Columbia Power System and to implement the authority of the Administrator of the Bonneville Power Administration…" Section 40110 specifies that the "obligation"…of the $10 billion in additional borrowing authority…shall not exceed $6 billion by fiscal year 2028. BPA is authorized by Congress to have outstanding at any time up to $13.7 billion of bonds through fiscal year 2027. Beginning in fiscal year 2028, an additional $4 billion will become available to have outstanding for a total of $17.7 billion.

These notes are an integral part of this table.

BONNEVILLE POWER ADMINISTRATION
POTENTIAL THIRD PARTY FINANCING TRANSPARENCY

(in millions of dollars)

BP-5

		Fiscal Year						
Transmission Services - Capital		**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
Main Grid	Requirements	51	39	39	45	40	28	23
Area & Customer Services		59	39	44	39	45	52	49
Upgrades & Additions		73	152	147	100	42	47	58
System Replacements		441	365	351	369	408	417	404
Projects Funded in Advance		25	46	55	56	57	57	57
Revenue Financing		40	55	55	70	70	85	85
Total, Transmission Services - Capital		688	696	692	680	662	687	676
Associated Project Costs - Capital								
Associated Project Costs	Requirements	207	270	276	282	288	295	302
Projects Funded in Advance[1/]		0	0	0	0	0	0	0
Revenue Financing		0	34	34	34	33	34	34
Total, Associated Project Costs - Capital		207	304	310	315	321	328	336
Federal and Non-Federal Funding								
Projects Funded in Advance	Sources	25	46	55	56	57	57	57
U.S. Treasury Borrowing Authority		871	953	946	939	926	958	955
Scenario								
Projects Funded in Advance[1/]	Scenario	0	0	0	0	0	0	0
Third Party Financing		156	149	145	138	134	136	133
Alternate Treasury Borrowing Authority		715	805	801	800	792	822	821

These notes are an integral part of this table.

1/ In this instance, Projects Funded in Advance represents prepayment of Power customers' bills reimbursed by future credits and third party non-federal financing for Conservation initiatives. Also this category includes those facilities and/or equipment where Bonneville retains control or ownership which are funded or financed by a third party, revenue, or with Power or Transmission reserves, either in total or in part.

The table above shows both the potential use of U.S. Treasury borrowing authority for transmission capital projects based on this FY 2025 budget and the use adjusted for potential third-party financing to fund appropriate capital expenditures when feasible in lieu of U.S. Treasury borrowing. Estimates included in this FY 2025 budget are uncertain and may change due to revised capital investment plans, changing economic conditions, and an evolving financial market environment. The estimates of third-party financing included in the table show a reduction in the use of U.S. Treasury borrowing and do not reflect the actual notional third party financing commitment Bonneville may enter into in that particular year. The difference of reduction in use of U.S. Treasury borrowing and the actual notional third party financing commitment is primarily due to the difference in the timing of financing transactions between U.S. Treasury and third-party financing for capital projects with multi-year construction schedules.

Bonneville's Third Party Financing for Transmission Services consists primarily of lease-purchase agreements, which are capitalized obligations that enable Bonneville to acquire the use of transmission facilities over time. Bonneville also undertakes the construction and installation of facilities from funds that customers advance to Bonneville for construction of BPA-owned facilities that assist the customers in obtaining necessary transmission service from Bonneville. These customers receive monetary payment credits in bills for transmission services from Bonneville up to the amount of funds advanced to Bonneville, plus interest.

Bonneville's historical Third Party Financing amounts may vary over time due to re-assignment of certain lease-purchase agreements to Treasury Financing.

Bonneville Status of U.S. Treasury Borrowing with Potential Third Party Financing & PFIA Scenario

With the potential use of third party financing assumed in the scenario above, Bonneville's total remaining U.S. Treasury Borrowing Amount would be extended to the following amounts. See BP-4 BPA Status of Treasury Borrowing- Current Services.

	Fiscal Year						
	2023	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
Start-of-Year: Total Bonds Outstanding	7,672	7,916	8,366	8,889	9,326	9,938	10,417
Plus:							
U.S. Treasury Borrowing (Cash)	861	985	1,093	1,251	1,361	1,336	1,083
Less:							
Potential Third Party Financing & PFIA	156	149	145	138	134	136	133
BPA Bond Amortization	617	386	424	677	615	721	824
Net Increase/(Decrease) Bonds Outstanding:	244	450	523	437	613	478	125
Cum.-End-of-Year: Total	7,916	8,366	8,889	9,326	9,938	10,417	10,542
Total Remaining U.S. Treasury Borrowing Amount	5,784	5,334	4,811	4,374	3,762	7,283	7,158
Total Legislated U.S.Treasury Borrowing Amount	13,700	13,700	13,700	13,700	13,700	17,700	17,700

U.S. TREASURY PAYMENTS

(in millions of dollars)

		FISCAL YEAR						
		2023	2024	2025	2026	2027	2028	2029
A.	**INTEREST ON BONDS & APPROPRIATIONS**							
	Bonneville Bond Interest							
1	Bonneville Bond Interest (net)	182	125	143	164	169	174	178
2	AFUDC [1/]	-	33	32	31	29	27	25
	Appropriations Interest							
3	Bonneville	-	-	-	-	-	-	-
4	Corps of Engineers [2/]	40	33	22	15	17	15	11
5	Lower Snake River Comp. Plan	0	0	0	0	0	0	0
6	Bureau of Reclamation [3/]	1	1	1	1	1	1	0
7	Bond Premiums paid/Discounts (not capitalized)	(5)	12	1	3	8	26	18
8	**Total Bond and Approp. Interest**	**218**	**204**	**200**	**214**	**224**	**243**	**233**
B.	**ASSOCIATED PROJECT COST**							
9	Bureau of Reclamation Irrigation Assistance	13	8	14	20	6	11	4
10	Bureau of Rec. O & M [4/]	-	-	-	-	-	-	-
11	Corps of Eng. O & M [4/]	5	-	-	-	-	-	-
12	L. Snake River Comp. Plan O & M [4/]	-	-	-	-	-	-	-
13	COE Approp CRFM Studis Expense	5						
14	**Total Assoc. Project Costs**	**23**	**8**	**14**	**20**	**6**	**11**	**4**
C.	**CAPITAL TRANSFERS**							
	Amortization							
15	Bonneville Bonds [6/]	617	386	424	677	615	721	824
16	Bureau of Reclamation Appropriations	5	2	-	-	-	25	0
17	Corps of Engineers Appropriations	118	275	209	-	52	137	21
18	Lower Snake River Comp. Plan	0	2	0	-	-	-	-
19	Bonneville Appropriations	-	-	-	-	-	-	-
20	**Total Capital Transfers [/8]**	**741**	**665**	**633**	**677**	**666**	**883**	**845**
D.	**OTHER PAYMENTS**							
21	Unfunded Post-Retirement Liability [5/]	39	38	38	39	40	41	42
22	**TOTAL TREASURY PAYMENTS**	**1,021**	**915**	**885**	**950**	**937**	**1,179**	**1,124**

These notes are an integral part of this table.

1/ This interest cost is capitalized and included in BPA's Transmission System Development, System Replacements, and Associated Projects Capital programs. AFUDC is financed through the sale of bonds.

2/ Includes interest on construction funding for Corp of Engineers (Corps) fish bypass facilities at Corps dams in the Columbia River Basin, including Lower Monumental, Ice Harbor, and The Dalles.

3/ Includes payments paid by Reclamation to the U.S. Treasury on behalf of Bonneville.

4/ Costs for power O&M is funded directly by Bonneville as follows (in millions):

FISCAL YEAR	2023	2024	2025	2026	2027	2028	2029
Bureau of Reclamation	162	154	157	161	165	169	172
Corps of Engineers	261	260	270	276	282	289	295
Subtotal Bureau and Corps	423	414	427	437	447	457	467
Lower Snake River Comp. Plan	31	33	33	33	34	35	35
Total	454	447	460	470	481	492	503

5/ See Interest Expense, Pension and Post-retirement Benefits and Capital Transfers section of this budget for a complete discussion of these cost estimates.

6/ In this FY 2025 budget, Bonneville "bond(s)" refers to all bonds issued by Bonneville to and advances received from the U.S. Treasury. This reference is consistent with section 13 (a) of the Transmission Act, which defines Bonneville bonds as all bonds, notes, and other evidences of indebtednesses issued and sold by Bonneville to the U.S. Treasury.

7/ Does not include Treasury bond premiums on refinanced Treasury bonds.

8/ FY 2023 data reflects BPA's FY 2023 Actuals.

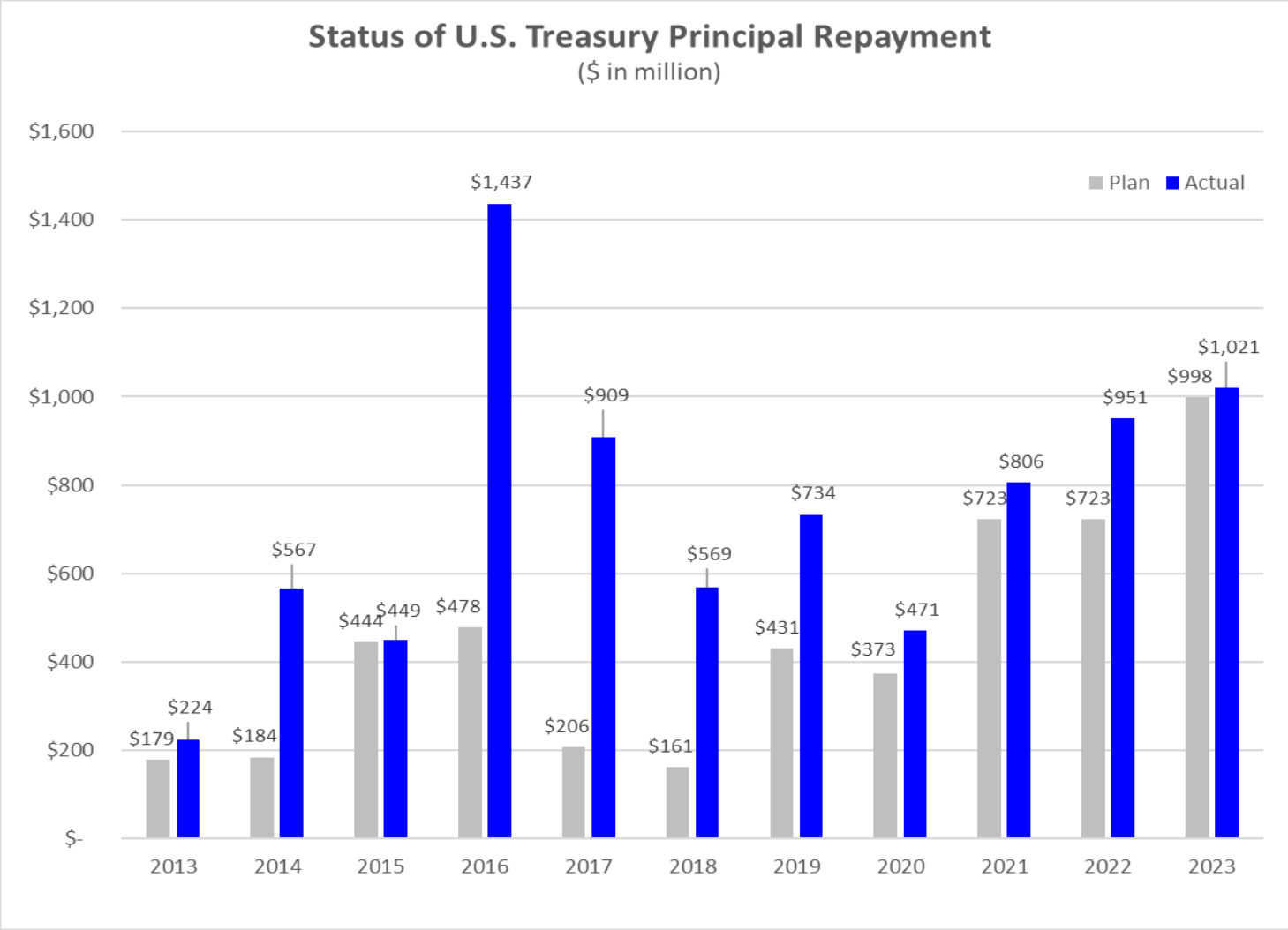


Chart Notes

[1/] This chart displays principal repayment only.

[2/] U.S. Treasury payment outyear estimates for planned amortization of principal are based on rate case estimates when available and are planned amortization for future rate case periods. These estimates may change due to revised capital investment plans, actual U.S. Treasury borrowing, and advanced amortization payments. Bonneville's FY 2023 payment to the U.S. Treasury was approximately $1.021 billion. This was the 40th consecutive year that Bonneville made its scheduled payments to the U.S. Treasury on time and in full. The payment included $741 million in principle, which included $426 million in early retirement of higher interest rate U.S. Treasury debt, $218 million for interest, $13 million in irrigation assistance payments, and $39 million in pension and post-retirement benefits.

[3/] FYs 2002-2012 payments include portions of advance amortization amounts consistent with Bonneville's capital strategy plan and the Bonneville /Energy Northwest debt optimization program.

[4/] Advance amortization due to sale of transmission facilities includes $12.7 million in FY 2003, $5.3 million in FY 2006, $2.0 million in FY 2011, $0.4 million in FY 2013 and $0.4 million in FY 2014, and $0.6 million in FY 2017.

[5/] The cumulative balance of advance amortization payments as of the end of FY 2023 was in excess of $7 billion.

[6/] FYs 2014-2023 include advance amortization under the Regional Cooperation Debt initiative with Energy Northwest (EN) under which EN extended maturities on Bonneville-backed debt which enabled the early amortization of higher cost appropriations and bonds.

OBJECT CLASSIFICATION STATEMENT

(in millions of dollars)

		ESTIMATES				
		2023		**2024**		**2025**
11.1	Full-time permanent	350		268		282
11.3	Other than full-time permanent	5		4		4
11.5	Other personnel compensation	131		100		106
11.9	**Total personnel compensation**	**486**		**372**		**392**
12.1	Civilian personnel benefits	207		159		167
13.0	Benefits for former personnel	-		-		-
21.0	Travel and transportation of persons	13		10		10
22.0	Transportation of things	1		1		1
23.1	Rental payments to GSA	0		0		0
23.2	Rents, other	39		30		31
23.3	Communication, utilities & misc. charges	13		10		10
25.1	Consulting Services	175		134		141
25.2	Other Services	3,753		2,876		3,029
25.5	R & D Contracts	3		4		4
26.0	Supplies and materials	45		34		36
31.0	Equipment	103		79		83
32.0	Lands and structures	59		45		48
41.0	Grants, subsidies, contributions	61		47		49
43.0	Interest and dividends	289		221		233
99.0	**Total obligations**	**5,244**		**4,022**		**4,236**

Estimate of Receipts
(in millions of dollars)

	Fiscal Year						
	2023	2024	2025	2026	2027	2028	2029
Reclamation Interest	1	1	1	1	1	1	0
Reclamation Amortization	5	2	0	0	0	25	0
Reclamation O&M	0	0	0	0	0	0	0
Reclamation Irrig. Assist.	13	8	14	20	6	11	4
Revenues Collected by Reclamation	-14	-5	-7	-7	-1	-7	2
Distributed in Treasury Account (credit)							
Colville Settlement (credit)	-5	-5	-5	-5	-5	-5	-5
Total 1/ Reclamation Fund	**1**	**1**	**3**	**10**	**1**	**25**	**1**
Corps O&M	5						
COE Approp CRFM Studies Expense	5						
CSRS	39	38	38	39	40	41	42
Total 2/ Repayments on miscellaneous costs	**49**	**38**	**38**	**39**	**40**	**41**	**42**

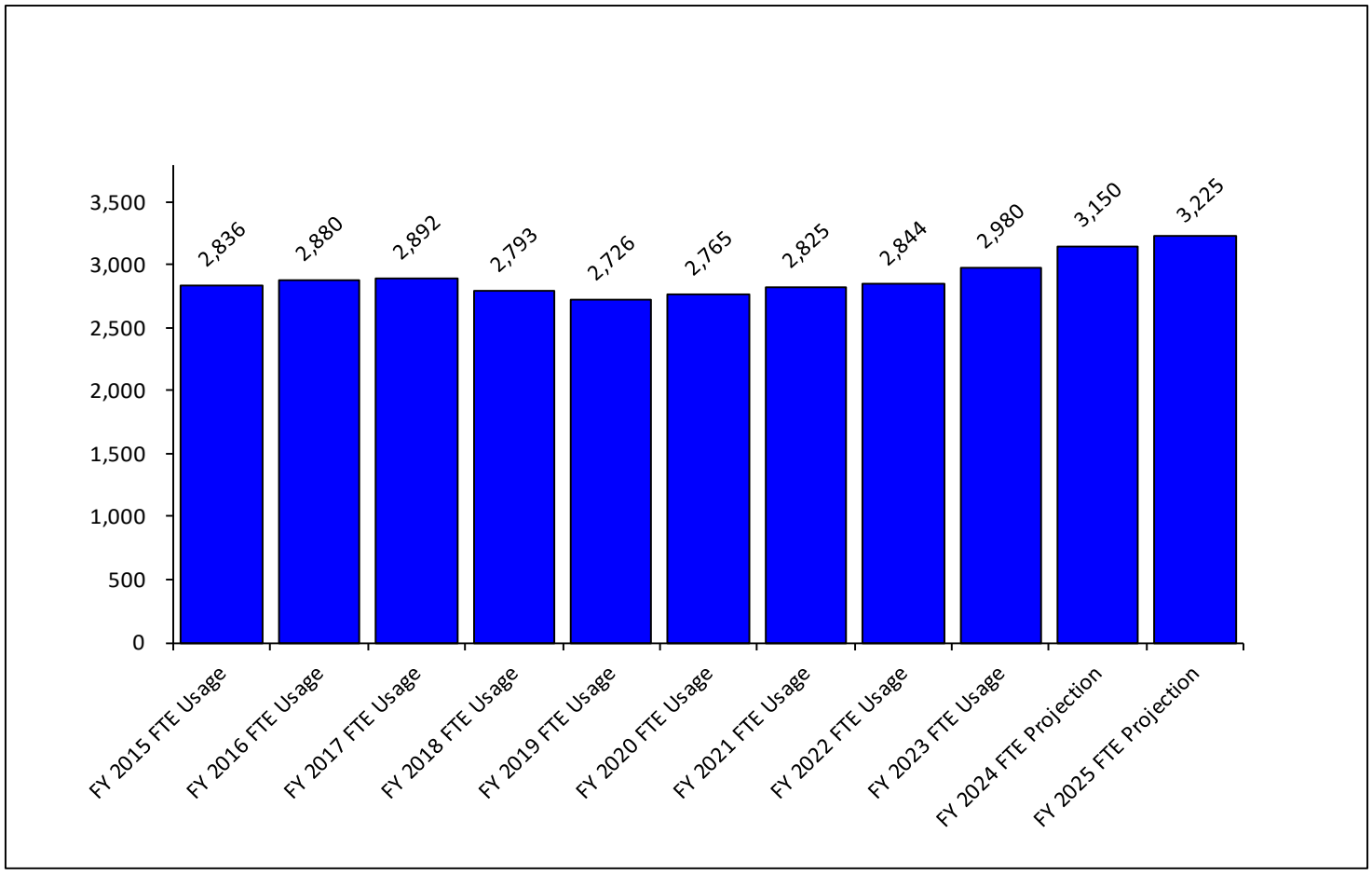
1/ Includes amortization of appropriations and irrigation assistance, and interest costs for Reclamation. The cost of power O&M for Reclamation is no longer included in Proprietary Receipts due to Direct Funding by Bonneville. Represents transfer to Account #895000.26

2/ The costs of power O&M for the Corps and Lower Snake River Comp. Plan are no longer included in Proprietary Receipts due to Direct Funding by Bonneville. Represents transfers to Account #892889, Repayments on misc. recoverable costs, not otherwise classified. Costs for power O&M is funded directly by Bonneville as follows (in millions).

	2023	2024	2025	2026	2027	2028	2029
Bureau of Reclamation	162	154	157	161	165	169	172
Corps of Engineers	261	260	270	276	282	289	295
Lower Snake River Comp. Plan	31	33	33	33	34	35	35
Total	**454**	**447**	**460**	**470**	**481**	**492**	**503**

See Interest Expense, Pension and Post-retirement Benefits and Capital Transfers section of this budget for a complete discussion of these cost estimates.

BONNEVILLE FTE



These notes are an integral part of this chart.

1. Actual FTE data is consistent with DOE personnel reports.

2. FTE outyear data are estimates and may change. Bonneville is facing a dynamic and changing transmission marketplace and operations, and it is important to continue to attract and retain skilled individuals to meet the growing demands of a competitive and rapidly changing industry. Accordingly, FTE estimates may need to be adjusted in the future.

3. As of 9/30/2023, DOE HR staff has reported FY 2023 BPA's FTE projection at 2,980.

Total Cost of BPA Fish & Wildlife Actions

COST ELEMENT	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
CAPITAL INVESTMENTS [1/]												
BPA FISH AND WILDLIFE	57.5	52.1	37.4	21.4	16.0	5.4	30.7	22.3	40.2	41.9	16.1	14.6
BPA SOFTWARE DEVELOPMENT COSTS	0.4	0.0	0.1	1.4	1.2	1.4	0.8	0.0	0.0	0.0	0.0	0.0
ASSOCIATED PROJECTS (FEDERAL HYDRO)	114.5	103.6	101.7	81.4	34.1	58.9	51.8	55.5	106.6	66.7	10.4	4.7
TOTAL CAPITAL INVESTMENTS	**172.3**	**155.7**	**139.2**	**104.1**	**51.4**	**65.7**	**83.2**	**77.9**	**146.7**	**108.6**	**26.5**	**19.3**
PROGRAM EXPENSES												
BPA DIRECT FISH AND WILDLIFE PROGRAM	248.9	239.0	231.8	258.2	258.1	254.7	258.7	240.4	238.1	253.6	249.4	260.9
FISH & WILDLIFE SOFTWARE EXPENSE COSTS		0.2	0.3	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.2	1.0
SUPPLEMENTAL MITIGATION PROGRAM EXPENSES [2/]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
REIMBURSABLE/DIRECT-FUNDED PROJECTS [3/]												
O & M LOWER SNAKE RIVER HATCHERIES	22.0	28.7	31.0	30.9	28.6	26.0	31.4	26.7	31.9	30.7	33.0	34.9
O & M CORPS OF ENGINEERS	41.1	39.2	47.8	46.4	48.2	46.8	47.5	48.9	46.3	48.3	47.4	46.0
O & M BUREAU OF RECLAMATION	5.3	5.6	6.6	2.6	6.0	7.0	5.5	8.7	5.8	6.5	7.2	6.5
NW POWER AND CONSERVATION COUNCIL ALLOCATED @ 50%	4.6	5.0	4.9	4.9	5.4	5.4	5.5	5.6	5.6	5.5	6.0	5.9
SUBTOTAL (REIMB/DIRECT-FUNDED)	73.0	78.5	90.3	84.9	88.2	85.2	89.9	89.9	89.6	91.0	93.6	93.3
TOTAL OPERATING EXPENSES	**321.9**	**317.70**	**322.40**	**343.17**	**346.34**	**339.90**	**348.65**	**330.30**	**327.66**	**344.60**	**343.23**	**355.20**
PROGRAM RELATED FIXED EXPENSES [4/]												
INTEREST EXPENSE	80.6	89.1	83.4	89.2	85.6	58.6	41.0	39.7	32.5	29.3	29.4	30.3
AMORTIZATION EXPENSE	30.2	35.7	38.7	41.3	42.5	42.5	43.4	45.1	46.7	47.4	56.0	54.9
DEPRECIATION EXPENSE	20.7	18.6	19.2	20.1	20.1	20.3	20.8	21.0	21.1	22.0	22.0	22.1
TOTAL FIXED EXPENSES	**131.5**	**143.4**	**141.3**	**150.6**	**148.2**	**121.4**	**105.1**	**105.8**	**100.3**	**98.7**	**107.4**	**107.3**
GRAND TOTAL PROGRAM EXPENSES	**453.4**	**461.1**	**463.7**	**493.7**	**494.6**	**461.3**	**453.7**	**436.1**	**428.0**	**443.3**	**450.6**	**462.5**
FORGONE REVENUES AND POWER PURCHASES												
FOREGONE REVENUES	152.2	135.5	122.7	195.8	76.6	9.6	2.9	174.4	33.4	190.6	251.9	89.3
BPA POWER PURCH. FOR FISH ENHANCEMENT	38.5	85.8	196.2	67.5	50.3	(20.5)	24.3	177.6	150.0	110.6	237.9	879.3
TOTAL FOREGONE REVENUES AND POWER PURCHASES	**190.7**	**221.3**	**318.9**	**263.3**	**126.9**	**(10.9)**	**27.2**	**352.0**	**183.4**	**301.2**	**489.8**	**968.6**
TOTAL PROGRAM EXPENSES, FOREGONE REVENUES, & POWER PURCHASES	**644.1**	**682.4**	**782.6**	**757.0**	**621.5**	**450.4**	**480.9**	**788.1**	**611.5**	**744.5**	**940.5**	**1431.1**
CREDITS												
4(h)(10)(C)	(77.0)	(84.1)	(103.9)	(77.7)	(72.6)	(53.7)	(70.1)	(98.2)	(95.5)	(90.6)	(112.3)	(257.7)
FISH COST CONTINGENCY FUND	-	-	-	-	-	-	-	-	-			-
TOTAL CREDITS	**(77.0)**	**(84.1)**	**(103.9)**	**(77.7)**	**(72.6)**	**(53.7)**	**(70.1)**	**(98.2)**	**(95.5)**	**(90.6)**	**(112.3)**	**(257.7)**

This information has been made publicly available by BPA on 3/25/2008. The figures shown are consistent with audited actuals that contain Agency approved financial information, except for forgone revenues and power purchases which are estimates and do not contain Agency approved financial information

1/ Capital Investments include both BPA's direct Fish and Wildlife Program capital investments, funded by BPA's Treasury borrowing, and "Associated Projects", which include capital investments at Corps of Engineers' and Bureau of Reclamation projects, funded by appropriations and repaid by BPA. The negative amount in FY 1997 reflects a decision to reverse "plant-in-service" investment that was never actually placed into service. The annual expenses associated with these investments are included in "Program-Related Fixed Expenses", below.

2/ Includes High Priority and Action Plan Expenses and other supplemental programs.

3/ "Reimbursable/Direct-Funded Projects" includes the portion of costs BPA pays to or on behalf of other entities that is determined to be for fish and wildlife purposes.

4/ "Fixed Expenses" include depreciation, amortization and interest on investments on the Corps of Engineers' projects, and amortization and interest on the investments associated with BPA's direct Fish and Wildlife Program.

DEPARTMENT OF ENERGY

Funding by Site

TAS_0302 - Southeastern Power Administration (SEPA) - FY 2025

(Dollars in Thousands)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget
Undesignated LPI			
Purchase Power and Wheeling - SEPA	92,687	86,019	89,816
Program Direction - SEPA	8,273	8,449	9,127
Total Undesignated LPI	**100,960**	**94,468**	**98,943**
Total Funding by Site for TAS_0302 - Southeastern Power Administration (SEPA)	**100,960**	**94,468**	**98,943**

DEPARTMENT OF ENERGY

Funding by Site

TAS_0303 - Southwestern Power Administration (SWPA) - FY 2025

(Dollars in Thousands)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget
Southwestern Power Administration Office			
Operation And Maintenance - SWPA	15,517	16,759	0
Construction - SWPA	16,035	13,806	0
Purchase Power And Wheeling - SWPA	93,000	120,000	0
Program Direction - SWPA	38,250	39,172	0
Subtotal, SWPA	162,802	189,737	0
Total Southwestern Power Administration Office	**162,802**	**189,737**	**0**
Undesignated LPI			
Operation And Maintenance - SWPA	0	0	16,910
Construction - SWPA	0	0	3,681
Purchase Power And Wheeling - SWPA	0	0	120,000
Program Direction - SWPA	0	0	42,300
Subtotal, SWPA	0	0	182,891
Total Undesignated LPI	**0**	**0**	**182,891**
Total Funding by Site for TAS_0303 - Southwestern Power Administration (SWPA)	**162,802**	**189,737**	**182,891**

DEPARTMENT OF ENERGY

Funding by Site

TAS_5068 - Western Area Power Administration - FY 2025

(Dollars in Thousands)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget
Western Area Power Administration Office			
Operation And Maintenance - CROM	85,229	126,131	170,617
Construction And Rehabilitation - CROM	47,189	0	0
Purchase Power And Wheeling - CROM	715,824	715,824	688,345
Program Direction - CROM	277,287	285,323	319,946
Construction, Rehabilitation, Operation, and Maintenance (CROM) - WP	1,125,529	1,127,278	1,178,908
Total Western Area Power Administration Office	**1,125,529**	**1,127,278**	**1,178,908**
Total Funding by Site for TAS_5068 - Western Area Power Administration	**1,125,529**	**1,127,278**	**1,178,908**

DEPARTMENT OF ENERGY

Funding by Site

TAS_5178 - Falcon and Amistad Operating and Maintenance Fund - FY 2025

(Dollars in Thousands)

	FY 2023 Enacted	FY 2024 Annualized CR	FY 2025 President's Budget
Western Area Power Administration Office			
Falcon And Amistad Operation And Maintenance	7,928	7,928	8,210
Total Western Area Power Administration Office	**7,928**	**7,928**	**8,210**
Total Funding by Site for TAS_5178 - Falcon and Amistad Operating and Maintenance Fund	**7,928**	**7,928**	**8,210**

Sec. 301.

(a) No appropriation, funds, or authority made available by this title for the Department of Energy shall be used to initiate or resume any program, project, or activity or to prepare or initiate Requests For Proposals or similar arrangements (including Requests for Quotations, Requests for Information, and Funding Opportunity Announcements) for a program, project, or activity if the program, project, or activity has not been funded by Congress.

(b)

(1) Unless the Secretary of Energy notifies the Committees on Appropriations of both Houses of Congress at least 3 full business days in advance, none of the funds made available in this title may be used to—

(A) make a grant allocation or discretionary grant award totaling $1,000,000 or more;

(B) make a discretionary contract award or Other Transaction Agreement totaling $1,000,000 or more, including a contract covered by the Federal Acquisition Regulation;

(C) issue a letter of intent to make an allocation, award, or Agreement in excess of the limits in subparagraph (A) or (B); or

(D) announce publicly the intention to make an allocation, award, or Agreement in excess of the limits in subparagraph (A) or (B).

(2) The Secretary of Energy shall submit to the Committees on Appropriations of both Houses of Congress within 15 days of the conclusion of each quarter a report detailing each grant allocation or discretionary grant award totaling less than $1,000,000 provided during the previous quarter.

(3) The notification required by paragraph (1) and the report required by paragraph (2) shall include the recipient of the award, the amount of the award, the fiscal year for which the funds for the award were appropriated, the account and program, project, or activity from which the funds are being drawn, the title of the award, and a brief description of the activity for which the award is made.

(c) The Department of Energy may not, with respect to any program, project, or activity that uses budget authority made available in this title under the heading "Department of Energy--Energy Programs", enter into a multiyear contract, award a multiyear grant, or enter into a multiyear cooperative agreement unless—

(1) the contract, grant, or cooperative agreement is funded for the full period of performance as anticipated at the time of award; or

(2) the contract, grant, or cooperative agreement includes a clause conditioning the Federal Government's obligation on the availability of future year budget authority and the Secretary notifies the Committees on Appropriations of both Houses of Congress at least 3 days in advance.

(d) Except as provided in subsections (e), (f), and (g), the amounts made available by this title shall be expended as authorized by law for the programs, projects, and activities specified in the "Final Bill" column in the "Department of Energy" table included under the heading "Title III--Department of Energy" in the explanatory statement described in section 4 (in the matter preceding division A of this consolidated Act).

(e) The amounts made available by this title may be reprogrammed for any program, project, or activity, and the Department shall notify the Committees on Appropriations of both Houses of Congress at least 30 days prior to the use of any proposed reprogramming that would cause any program, project, or activity funding level to increase or decrease by more than $5,000,000 or 10 percent, whichever is less, during the time period covered by this Act.

(f) None of the funds provided in this title shall be available for obligation or expenditure through a reprogramming of funds that—

(1) creates, initiates, or eliminates a program, project, or activity;

(2) increases funds or personnel for any program, project, or activity for which funds are denied or restricted by this Act; or

(3) reduces funds that are directed to be used for a specific program, project, or activity by this Act.

(g)

(1) The Secretary of Energy may waive any requirement or restriction in this section that applies to the use of funds made available for the Department of Energy if compliance with such requirement or restriction would pose a substantial risk to human health, the environment, welfare, or national security.

(2) The Secretary of Energy shall notify the Committees on Appropriations of both Houses of Congress of any waiver under paragraph (1) as soon as practicable, but not later than 3 days after the date of the activity to which a requirement or restriction would otherwise have applied. Such notice shall include an explanation of the substantial risk under paragraph (1) that permitted such waiver.

(h) The unexpended balances of prior appropriations provided for activities in this Act may be available to the same appropriation accounts for such activities established pursuant to this title. Available balances may be merged with funds in the applicable established accounts and thereafter may be accounted for as one fund for the same time period as originally enacted.

(i) Subsections (d), (e), and (f) shall not apply to funds made available in this Act for applied energy research, development, demonstration, and commercial application that are utilized pursuant to section 1001 of the Energy Policy Act of 2005 (42 U.S.C. 16391). Administration and selection of awards pursuant to such section will be in coordination with the offices that oversee the appropriations accounts to which the relevant funding was originally appropriated.

Sec. 302. Funds appropriated by this or any other Act, or made available by the transfer of funds in this Act, for intelligence activities are deemed to be specifically authorized by the Congress for purposes of

section 504 of the National Security Act of 1947 (50 U.S.C. 3094) during fiscal year 2024 until the enactment of the Intelligence Authorization Act for fiscal year 2023.

Sec. 303. None of the funds made available in this title shall be used for the construction of facilities classified as high-hazard nuclear facilities under 10 CFR Part 830 unless independent oversight is conducted by the Office of Enterprise Assessments to ensure the project is in compliance with nuclear safety requirements.

Sec. 304. None of the funds made available in this title may be used to approve critical decision-2 or critical decision-3 under Department of Energy Order 413.3B, or any successive departmental guidance, for construction projects where the total project cost exceeds $100,000,000, until a separate independent cost estimate has been developed for the project for that critical decision.

Sec. 305. Notwithstanding section 161 of the Energy Policy and Conservation Act (42 U.S.C. 6241), upon a determination by the President in this fiscal year that a regional supply shortage of refined petroleum product of significant scope and duration exists, that a severe increase in the price of refined petroleum product will likely result from such shortage, and that a draw down and sale of refined petroleum product would assist directly and significantly in reducing the adverse impact of such shortage, the Secretary of Energy may draw down and sell refined petroleum product from the Strategic Petroleum Reserve. Proceeds from a sale under this section shall be deposited into the SPR Petroleum Account established in section 167 of the Energy Policy and Conservation Act (42 U.S.C. 6247), and such amounts shall be available for obligation, without fiscal year limitation, consistent with that section.

Sec. 306. No funds shall be transferred directly from "Department of Energy--Power Marketing Administration--Colorado River Basins Power Marketing Fund, Western Area Power Administration" to the general fund of the Treasury in the current fiscal year.

Sec. 307. None of the funds made available in this title may be used to support a grant allocation award, discretionary grant award, or cooperative agreement that exceeds $100,000,000 in Federal funding unless the project is carried out through internal independent project management procedures.

Sec. 308. From the unobligated balances of amounts made available to the Department of Energy to carry out activities to improve the resilience of the Puerto Rican electric grid under Public Law 117-328, thirty-five hundredths of one percent of the amounts made available under that section shall be transferred no later than September 30, 2025, to the Office of Inspector General of the Department of Energy to carry out the provisions of the Inspector General Act of 1978, to remain available until expended: Provided, That any amounts so transferred that were previously designated by the Congress as an emergency requirement pursuant to the Balanced Budget and Emergency Deficit Control Act of 1985 or a concurrent resolution on the budget are designated by the Congress as an emergency requirement pursuant to section 251(b)(2)(A)(i) of the Balanced Budget and Emergency Deficit Control Act of 1985: Provided further, That such amounts shall be available only if the President designates such amount as an emergency requirement pursuant to section 251(b)(2)(A)(i).

TITLE V—GENERAL PROVISIONS

SEC. 501. None of the funds appropriated by this Act may be used in any way, directly or indirectly, to influence congressional action on any legislation or appropriation matters pending before Congress, other than to communicate to Members of Congress as described in 18 U.S.C. 1913. SEC.

502. None of the funds made available by this Act may be used in contravention of Executive Order No. 12898 of February 11, 1994 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations).

SEC. 503. (a) None of the funds made available in this Act may be used to maintain or establish a computer network unless such network blocks the viewing, downloading, and exchanging of pornography.

(b) Nothing in subsection (a) shall limit the use of funds necessary for any Federal, State, Tribal, or local law enforcement agency or any other entity carrying out criminal investigations, prosecution, or adjudication activities.