Grid Deployment
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 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, $106,600,000, to remain available until expended: Provided, That of such amount, $13,100,000 shall be available until September 30, 2025, for program direction.

Explanation of Changes

The FY 2024 Request establishes a new appropriation account for the Grid Deployment Office. The Energy and Water Development and Related Agencies Appropriation Act, 2023, appropriations for the Electricity account support both the Grid Deployment Office and the Office of Electricity. Of the $350,000,000 appropriated in FY 2023 for the Electricity account, $64,707,000 supports the Grid Deployment Office. Within those amounts, of the $23,000,000 provided for program direction, $5,207,000 supports Grid Deployment Office program direction.

Public Law Authorizations

- Public Law 95–91, "Department of Energy Organization Act", 1977
- Public Law 109-58, "Energy Policy Act of 2005"
- Public Law 110-140, "Energy Independence and Security Act, 2007"
- Public Law 114-94, "Fixing America's Surface Transportation Act," 2015
- Public Law 116-260, Division Z, "Energy Act of 2020"
- Public Law 117-58, Division D, "Infrastructure Investment and Jobs Act," 2021
- Public Law 117-169, Subtitle D, "Inflation Reduction Act," 2022

Grid Deployment Office
($K)

FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)	FY 2024 Request vs FY 2023 Enacted (%)
11,000	64,707	106,600	+41,893	+64.7%

Overview

The Grid Deployment Office (GDO) works to provide electricity to everyone, everywhere by maintaining and investing in critical generation facilities to ensure resource adequacy and improving and expanding transmission and distribution systems to make sure all communities have access to reliable, affordable electricity. 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 priorities are to develop and deploy innovative grid modernization solutions to address local, state, regional and national electricity system needs, and ensure the availability of clean, firm generation capacity, like hydropower and nuclear energy.

Through the Building a Better Grid Initiative[a], 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, the office brings together community 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, Power Marketing Administrations, and other offices.

GDO fully utilizes its unique tools and authorities for coordination, planning, financing, and permitting to drive transmission investment. These tools and authorities are critical to overcoming transmission challenges and addressing opportunities including, but not limited to:

- Insufficient transmission capacity—especially transmission that facilitates transfer of power across regions
- Increasingly vulnerable aging and poorly maintained transmission and distribution infrastructure
- Energy supply disruptions and climate and extreme weather impacts to infrastructure investments
- Transmission permitting challenges, such as long timelines for permitting and environmental reviews
- Transmission interconnection-specific challenges, such as with offshore wind
- Transmission cost allocation issues
- Market failures for grid investments
- Integration of grid-scale renewable energy resources
- Implications of energy interdependencies to improve the alignment and integration of generation, distribution, and transmission planning, with appropriate consideration for flexibility-providing resources including energy storage
- Increasing electrification of transportation and other new and emerging sectors
- Affordability, evolving customer expectations and behaviors, electricity access, and equity issues

Investments in the distribution system must accompany transmission deployment to modernize, harden, and expand the grid. GDO provides technical assistance to inform the formulation and implementation of policies, programs, and strategies for electricity system planning, design, and operation for all levels of a decarbonized grid. In addition, GDO will carry out the provisions provided through the Infrastructure Investment and Jobs Act (IIJA) and the Inflation Reduction Act (IRA). 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.

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

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

- Planning – modernize distribution and transmission planning processes to drive the development of highest-need grid projects that provide largest long-term benefits to consumers.
- Financing – deploy IIJA and IRA authorities and coordinate existing financial tools within the Department to help accelerate interregional transmission builds and enhance the resilience of the grid.
- Permitting – coordinate with States and Federal permitting agencies to help facilitate and streamline siting and permitting processes.
- Coordination – early, frequent, and collaborative engagement with government entities, including States, Territories, American Indian Tribes, and Alaska Natives, and other 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, integrating energy justice principles.

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.

Highlights and Major Changes in the FY 2024 Budget Request

Transmission Planning and Permitting ($56,500,000; +$13,500,000) supports innovative efforts in transmission reliability and clean energy analysis and programs in addition to energy infrastructure and risk analysis to enhance grid resilience. The FY 2024 Request focuses on assisting states and regions with implementing the results of the National Transmission Planning Study[a], which will identify pathways necessary for large-scale transmission system buildout that meets regional and national interests. The National Transmission Planning Study will also expand its geographic scope from the 48 contiguous states to include Alaska, Hawaii, and the U.S. Territories.

Distribution and Markets ($36,750,000; +$20,250,000) works 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. In FY 2024, the Request establishes two new activities: EV Grid Planning and Markets, which supports grid management and integration for EV deployment and related technologies into the distribution market, and Territory, Tribal, and Rural Community Development, which provides technical assistance to ensure that communities have access to clean, reliable, and affordable electricity.

Hydropower Incentives ($250,000; +$250,000) invests in flexible hydropower assets, building upon the IIJA's hydropower incentives program. The FY 2024 Request supports the development of analytics for follow-up monitoring of the impact of hydropower incentives for the modernization and maintenance of existing U.S. hydropower assets.

FY 2022 Key Accomplishments

National Transmission Planning Study: Assembled a multi-laboratory team to develop transmission planning scenarios and completed an initial analysis of 192 scenarios. These scenarios examined combinations of four transmission development architectures; two electricity demand forecasts; three emission reduction trajectories; and 14 modeling sensitivities (covering uncertainty in transmission, storage, and generation capital costs; fuel prices; siting constraints; distributed energy resource adoption; advanced technology availability; and climate change impacts).

Offshore Wind Transmission: Worked across DOE and other agencies to host a series of collaborative roundtable workshops to discuss grid interconnection, integration, and interoperability of offshore wind transmission infrastructure. GDO hosted six workshops bringing together leaders from Tribal Nations, State Energy Offices, Public Utility Commissions, Regional Transmission Organizations, and Electric Reliability Organizations in the Atlantic region, as well as Federal representatives. Leaders and experts from nearly 150 organizations participated in conversations to inform policy, economic, technical, siting, and permitting needs for offshore wind transmission.

[a] https://www.energy.gov/gdo/national-transmission-planning-study

Transmission Needs Study: Completed the analysis and drafting of the National Transmission Needs Study, the DOE's triennial state of the grid report. This is the first report since 2007 to explicitly discuss needs for new transmission solutions on the power grid to meet our reliability, economic, and clean energy goals. The Needs Study includes over ten different analyses from over 80 different data sources. The Needs Study serves as a primary tool for the Department to engage with States, Indian Tribes, grid reliability coordinators, industry, and other stakeholders to understand and address their needs for reliable power delivery. As requested by Congress, this is also the very first state of the grid report to consider future needs of the power system.

Geospatial Energy Mapper:[a] Formerly known as the Energy Zones Mapping Tool, the Geospatial Energy Mapper (GEM), rebranded and relaunched as an interactive web-based tool that allows users to locate areas with high suitability for clean power generation and potential energy transmission corridors in the United States. GEM uses more than 300 geographic information system data layers for mapping and nearly 100 layers for modeling. The database contains more than 100 environmental data layers to ensure that protected lands, imperiled species, and other environmental factors are taken into account when determining the suitability of certain areas for clean energy resource development.

[a] https://gem.anl.gov/

Grid Deployment Office
Funding by Congressional Control ($K)

	FY 2022 Enacted	FY 2022 Enacted (Comparable)[a]	FY 2023 Enacted	FY 2023 Enacted (Comparable)[ab]	FY 2024 Request[a]	FY 2024 Request vs FY 2023 Enacted ($)	FY 2024 Request vs FY 2023 Enacted (%)
Transmission Planning and Permitting	0	8,000	0	43,000	56,500	+13,500	+31.4%
Distribution and Markets	0	0	0	16,500	36,750	+20,250	+122.7%
Hydropower Incentives	0	0	0	0	250	+250	N/A
Program Direction	0	3,000	0	5,207	13,100	+7,893	+151.6%
Total, Grid Deployment Office	**0**	**11,000**	0	**64,707**	**106,600**	**+41,893**	**+64.7%**
Federal Full Time Equivalent Employees (FTEs)	**0**	**7**	**0**	**19**	**48**	**+29**	**+152.6%**
Additional FECM FTEs at NETL supporting GDO[c]	0	1	0	2.5	5	+2.5	+100.0%
Total GDO-funded FTEs	0	8	0	21.5	53	+31.5	+146.5%

[a] The FY 2024 Budget Request to Congress proposes to split the Electricity appropriation account into two accounts: Electricity and Grid Deployment. Had the proposed FY 2024 structure been in place in FY 2022 and FY 2023, the $11 million shown under the Electricity account in FY 2022 and the $64.7 million in FY 2023 would have appeared in Grid Deployment. The Comparability Matrix on the next page shows details for the prior and proposed budget structures.
[b] 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.
[c] GDO funds FTEs at the Office of Fossil Energy and Carbon Management's (FECM) National Energy Technology Laboratory (NETL) who are FECM employees but support GDO activities. The FTEs are included in FECM's FTE totals and not in the GDO FTE totals shown on the "Federal Full Time Equivalent Employees (FTEs)" line.

Comparability Matrix

The table below show the funding allocation for GDO for the FY 2023 Enacted and FY 2024 Request under the prior and the proposed budget structures.

FY 2023 Enacted Comparability Matrix
($K)

	FY 2024 Proposed Budget Structure				
	Grid Deployment Office				
	Transmission Planning and Permitting	Distribution and Markets	Hydropower Incentives	Program Direction	**Total**
FY 2023 Budget Structure					
Grid Planning and Development	16,000	0	0	0	**16,000**
Grid Technical Assistance	25,000	0	0	0	**25,000**
Wholesale Electricity Market Technical Assistance and Grants	0	16,500	0	0	**16,500**
Interregional and Offshore Transmission Planning	2,000	0	0	0	**2,000**
Program Direction	0	0	0	5,207	**5,207**
Total	**43,000**	**16,500**	**0**	**5,207**	**64,707**

FY 2024 Request Comparability Matrix
($K)

	FY 2024 Proposed Budget Structure				
	Grid Deployment Office				
	Transmission Planning and Permitting	Distribution and Markets	Hydropower Incentives	Program Direction	**Total**
FY 2023 Budget Structure					
Grid Planning and Development	22,000	0	0	0	**22,000**
Grid Technical Assistance	26,500	0	0	0	**26,500**
Wholesale Electricity Market Technical Assistance and Grants	0	19,000	0	0	**19,000**
Interregional and Offshore Transmission Planning	8,000	0	0	0	**8,000**
New GDO Programs in FY 2024	0	17,750	250	0	**18,000**
Program Direction	0	0	0	13,100	**13,100**
Total	**56,500**	**36,750**	**250**	**13,100**	**106,600**

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[a]	FY 2022 IIJA Funding	FY 2023 IIJA Funding	FY 2024 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	GDO
Transmission Facilitation Program – Revolving Fund (40106) Borrowing authority: $2.5 billion	N/A (revolving fund)	N/A (revolving fund)	N/A (revolving fund)	GDO
Transmission Facilitation Program – Administration (40106) Total funding: $50 million	10,000	10,000	10,000	GDO
Smart Grid Investment Matching Grant Program (40107) Total funding: $3 billion	600,000	600,000	600,000	GDO
Modeling and Assessing Energy Infrastructure Risk (40125(d)) Total funding: $50 million	50,000	0	0	GDO
Total, Electricity	**1,660,000**	**1,610,000**	**1,610,000**	
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	GDO
Total, Clean Energy Demonstrations	**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	GDO
Hydroelectric Efficiency Improvement Incentives (40332) Total funding: $75 million	75,000	0	0	GDO

[a] 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	GDO
Total, Energy Efficiency and Renewable Energy	**476,800**	**276,800**	**0**	
Nuclear Energy				
Civil Nuclear Credit Program (40323) Total funding: $6 billion	1,200,000	1,200,000	1,200,000	GDO
Total, Nuclear Energy	**1,200,000**	**1,200,000**	**1,200,000**	
Total, Grid Deployment Office IIJA Coordination	**4,336,800**	**4,086,800**	**3,810,000**	

- **Preventing Outages and Enhancing the Resilience of the Electric Grid / Hazard Hardening (40101**): The goal of this investment is to strengthen and modernize America's power grid against wildfires, extreme weather, and other natural disasters. FY 2024 funding will support awards for competitive grants for industry and formula grants for states, territories, and American Indian Tribes.
- **Transmission Facilitation Program – Revolving Fund (40106):** The goal of this $2.5 billion revolving fund program is to provide federal support to overcome the financial hurdles in the development of new large-scale transmission lines and upgrades to existing transmission as well as the connection of microgrids in select states and U.S. territories. In FY 2024, the revolving fund will support an additional application cycle and the issuance of project awards.
- **Transmission Facilitation Program – Administration (40106):** IIJA authorizes funding for administrative expenses to carry out the Transmission Facilitation Program. FY 2024 funding will support Federal salaries, support services contractors, transmission project viability assessments (market, financial, engineering, and legal), capacity re-marketing contracts, and environmental reviews.
- **Smart Grid Investment Matching Grant Program (40107):** The goal of this investment is to promote a broader suite of grid enhancing technologies that will increase the capacity of the existing transmission system; prevent faults that may lead to wildfires or other system disturbances; integrate ever increasing-renewable resources; and deploy technologies that are better able monitor and analyze the impact of transportation and building electrification on the grid. FY 2024 funding will support awards for grant applications.
- **Modeling and Assessing Energy Infrastructure Risk (40125(d)):** The goal of this investment will increase the functional preservation of electric grid operations or natural gas and oil operations in the face of threats and hazards through modeling, analysis, and assessments. FY 2024 funding will continue to support activities to secure energy networks.
- **Program Upgrading Our Electric Grid and Ensuring Reliability and Resiliency (40103(b)):** The goal of this investment is to demonstrate innovative approaches to transmission, storage, and distribution infrastructure to harden and enhance grid resilience and reliability. FY 2024 funding will support awards to states, Tribal nations, state regulators, and local governments.
- **Hydroelectric Production Incentives (40331):** The goal of this program is to provide incentive payments to qualified hydroelectric facilities for electricity generated and sold, with an emphasis on communities with inadequate electric service. FY 2024 funding will support providing incentive payments to qualified hydroelectric facilities.
- **Hydroelectric Efficiency Improvement Incentives (40332):** The goal of this program is to provide incentive payments to owners or operators of existing hydroelectric facilities for capital improvements that can increase efficiency of a hydroelectric facility by at least 3%. FY 2024 funding will support providing incentive payments to qualified facilities.
- **Maintaining and Enhancing Hydroelectricity Incentives (40333):** The goal of this program is to provide incentive payments to enhance existing hydropower facilities through capital improvements directly related to three main areas: grid resiliency, dam safety, and environmental improvements. FY 2024 funding will support providing incentive payments to qualified hydroelectric facilities.
- **Civil Nuclear Credit Program (40323):** The goal of this program is to oversee a $6 billion investment to prevent premature retirement of existing zero-carbon nuclear plants. FY 2024 funding will support continuing the awards cycles to allocate credits.

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)	115,000	GDO
Total, Grid Deployment Office IRA Coordination	**2,975,000**	

- **Transmission Facility Financing (50151):** The goal of this program is to provide direct loans for the construction or modification of electric transmission facilities designated by the Secretary to be necessary in the national interest under section 216(a) of the Federal Power Act.
- **Grants to Facilitate the Siting of Interstate Electricity Transmission Lines (50152):** The goal of this program is to support states and local communities in the siting and permitting of interstate and offshore electricity transmission lines. Additionally, this program includes grants for economic development for communities that may be affected by the construction and operation of transmission projects. FY 2024 funding will support activities to award Transmission Siting and Economic Development Grants.
- **Interregional and Offshore Wind Electricity Transmission Planning, Modeling and Analysis (50153):** The goal of this investment is to conduct planning, modeling, and analysis for interregional electricity transmission and transmission of electricity that is generated by offshore wind. FY 2024 funding will support continuing efforts to advance interregional transmission planning and will expand the geographic scope of offshore wind transmission activities to include the Gulf of Mexico.
- **Environmental Reviews (50301):** The goal of this program is to facilitate timely and efficient environmental reviews and authorizations.

Future Years Energy Program
($K)

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Grid Deployment	106,600	109,000	112,000	115,000	117,000

In the FY 2012 Consolidated Appropriations Act (P.L. 112-74), Congress directed the Department to include a future-years energy program (FYEP) in subsequent requests that reflects the proposed appropriations for five years. This FYEP shows outyear funding for each account for FY 2024 - FY 2028. The outyear funding levels use the growth rates from and match the outyear account totals published in the FY 2024 President's Budget. Actual future budget request levels will be determined as part of the annual budget process.

Grid Deployment Office priorities in the outyears include the following:

- Planning – modernize distribution and transmission planning processes to drive the development of highest-need grid projects that provide largest long-term benefits to consumers.
- Financing – deploy the Infrastructure and Investment Jobs Act (IIJA) and the Inflation Reduction Act (IRA) authorities and coordinate existing financial tools within the Department to help accelerate buildout of interregional nation's transmission and distribution system and enhance the resilience of the grid.
- Permitting – coordinate with States and Federal permitting agencies to help facilitate and streamline siting and permitting processes.
- Coordination – early, frequent, and collaborative engagement with government entities, including States, Territories, American Indian Tribes, and Alaska Natives, and other 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, integrating energy justice principles.

Transmission Planning and Permitting

Overview

The Transmission Planning and Permitting (TPP) program supports innovative efforts in transmission reliability and clean energy analysis and programs, and 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 and a strong distribution system is critical for consumer resilience. The growing deployment of renewable and clean energy resources, already underway and expected to continue, including 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 identifies long-term, flexible, and interregional solutions that will meet national interests. Improved transmission planning alone is not enough, however, to achieve the objectives above. States and regions face challenges with siting and permitting and require technical assistance to overcome those institutional barriers. For example, siting and permitting of interstate and inter-regional high-voltage transmission generally requires action by many different authorities governing the federal, state, local, and Tribal lands, as well as private lands, that transmission facilities will pass through.

TPP addresses transmission planning and permitting challenges to ensure a resilient, reliable, clean, and equitable electricity system. Modernizing transmission planning and improving permitting can provide greater certainty to drive investment to the highest-need transmission projects and enable development of the projects with the largest long-term benefit for consumers.

Highlights of the FY 2024 Budget Request

<u>Interregional Planning and Development</u>

In FY 2024, TPP will focus on the National Transmission Planning Study (NTP Study) and supports other inter and intra-regional planning and development efforts.

GDO's NTP Study will identify longer-term transmission needs and potential solutions to those needs that can provide broad-scale benefits to electric customers, inform regional and interregional transmission planning processes, and inform interregional and national strategies to accelerate decarbonization while maintaining system reliability. In FY 2023, the NTP Study will refine and model several scenarios, informed by robust stakeholder engagement and defined by transmission, demand, and generation drivers. The results of the scenario study will:

- Link several long-term and short-term power system models to test a number of transmission buildout scenarios
- Inform existing planning processes
- Test transmission options that lie outside of current planning
- Prove a wide range of economic, reliability, and resilience indicators for each transmission scenario

In FY 2024, TPP will assist regional planning bodies in implementing the results of the NTP Study through further analysis, modeling, or other planning activities. The study will be particularly informative for interregional and inter-interconnect transmission expansion, which utility planning does not typically address. The NTP Study results will also be one of several analyses the Department will rely on to guide the application of funding for programs identified in the Infrastructure Investment and Jobs Act (IIJA) and Inflation Reduction Act (IRA). The geographic scope of the current NTP Study includes the 48 contiguous states. In FY 2024, the NTP Study will initiate efforts to expand the study to include Alaska, Hawaii, and the U.S. Territories. With robust modeling and stakeholder engagement, the results and recommendations of the NTP Study will facilitate the building of new transmission that makes the future power grid more economical, clean, reliable, and resilient.

TPP will continue efforts in the National Interest Electric Transmission Corridor (NIETC) designation process in FY 2024. The consultation process for designating a NIETC started in FY 2023. The Department can designate a NIETC after taking into

consideration the National Electric Transmission Needs Study (Transmission Needs Study), which was conducted in FY 2022 and released in FY 2023. The Transmission Needs Study identified 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 transportation electrification; and insufficient transfer capacity across regions. In FY 2023, TPP will develop a process for NIETC designation on a transmission route-specific, applicant-driven basis to facilitate the efficient consideration of projects seeking a FERC-issued permit. Particular consideration will be given to proposed NIETCs that, to the greatest degree possible, overlap with or utilize existing highway, rail, utility, and Federal land rights-of-way. TPP will prioritize engaging with stakeholders early and often, ensuring that impacted communities are considered when designating a NIETC.

In addition to the NTP Study and NIETC designation, TPP will work with states and regions to improve transmission planning processes through analysis, modeling, and convenings in FY 2024.

Offshore Wind Planning and Development

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

- Identifies a coordinated generation and transmission pathway to enable offshore wind deployment
- Improves onshore grid reliability and resilience and minimizes congestion and curtailment
- Aligns with near-term and long-term State and Federal decarbonization goals and utility resource needs
- Seeks to minimize environmental and community impacts, institutionalizes energy justice and equity in transmission planning, promotes ocean co-use, and aligns with Tribal equities
- Identifies potential system benefits, cost allocation approaches, and cost efficiencies to maximize the utility of existing points of interconnection and future shared transmission infrastructure

The FY 2024 request will provide technical assistance to encourage OSW electricity transmission and forward-looking transmission development for OSW integration. The request will expand the geographic scope from the Atlantic Coast to include the Pacific and Gulf Coasts. TPP will issue a funding opportunity announcement (FOA) for grants that will provide technical assistance to help future-proof the transmission system and reduce the overbuild risk for developers specifically to facilitate offshore wind deployment.

Within the Department, 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

TPP 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 driven and impacted by the modernization of the North American grid. TPP expects increased demand for transmission technical assistance as issues surrounding permitting and siting of transmission infrastructure, State and interregional utility analytical needs, and macro-economic benefit determinations continue to grow in complexity and urgency.

The FY 2024 Request prioritizes providing permitting technical assistance to facilitate the completion of transmission projects. TPP will conduct analyses, facilitate convenings, and develop new or enhanced tools to help spur transmission siting and permitting in order to achieve a clean, resilient, and reliable electric grid. Additionally in FY 2024, TPP will partner with other Federal agencies, national and regional associations, and industry to identify regulatory hurdles in Federal siting and permitting processes, collaborate to remove those identified barriers, and provide robust grid technical assistance to accelerate Federal transmission infrastructure development.

Other technical assistance areas 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
- Finding solutions to address aging and poorly maintained transmission infrastructure
- Exploring different approaches to climate resilience planning support to mitigate future risks
- Identifying interregional transmission needed to accommodate increases in demand, such as electrification of transportation and new or growing industries
- Modeling ways to achieve grid-scale renewable energy and distributed energy resource integration
- Identifying investment options to meet established and emerging grid needs and analysis for grid investment decision making
- In coordination with the Office of Cybersecurity, Energy Security, and Emergency Response, assisting stakeholders in addressing cybersecurity issues in transmission infrastructure

In FY 2024, TPP will also 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:

- Conducting environmental reviews and technical analyses needed for Federal authorization of transmission projects that cross U.S. international borders and exports of electric energy
- Coordinating Federal permitting by other agencies of new transmission infrastructure that involves Federal authorizations, as required by Section 216(h) of the Federal Power Act
- Evaluating 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

In addition to the regulatory and statutory actions above, TPP will review projects funded through IIJA and IRA that require review under the National Environmental Policy Act.

Transmission Planning and Permitting
Funding ($K)

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)	FY 2024 Request vs FY 2023 Enacted (%)
Transmission Planning and Permitting					
Interregional Planning and Development	3,000	16,000	22,000	+6,000	+37.5%
Offshore Wind Planning and Development	0	2,000	8,000	+6,000	+300.0%
Technical Assistance	5,000	25,000	26,500	+1,500	+6.0%
Total, Transmission Planning and Permitting	**8,000**	**43,000**	**56,500**	**+13,500**	**+31.4%**

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

	FY 2024 Request vs FY 2023 Enacted
• Expands National Transmission Planning Study to include Alaska, Hawaii, and the U.S. Territories	+6,000
• Increases technical assistance to states for offshore wind transmission planning	+6,000
• Increases technical assistance to states and expands benefit analysis as transmission development accelerates	+1,500
Total, Transmission Planning and Permitting	**+13,500**

Activities and Explanation of Changes

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Transmission Planning and Permitting $43,000,000	**$56,500,000**	**+$13,500,000**
Interregional Planning and Development $16,000,000	*$22,000,000*	*+$6,000,000*

• The NTP Study:
  ○ Work 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
  ○ Develop alternative approaches to national transmission planning
  ○ Develop new transmission planning models to vet transmission scenarios
• In consultation with key stakeholders, develop a process to designate NIETCs and make designations, as appropriate
• Convene and lead several regional workshops to develop interregional transmission plans
• As an outcome of the regional workshops, develop a robust set of resources to support transmission planners and other stakeholders in advancing interregional transmission planning processes
	• Provide assistance to implement results of NTP Study to regional planning bodies
	• Expand geographic scope of NTP Study from the 48 contiguous states to include Alaska, Hawaii, and the U.S. Territories.
	• Help inform selection of funding applications for IIJA or IRA programs, such as the Transmission Facilitation Program
		• Expands geographic scope of NTP Study from the 48 contiguous states to include Alaska, Hawaii, and the U.S. Territories

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Offshore Wind Planning and Development $2,000,000	*$8,000,000*	*+$6,000,000*
• Issue FOA/grants to facilitate transmission development to connect OSW • Conduct planning, modeling, and analysis on OSW electricity topics informed by stakeholders and industry groups • Conduct five stakeholder workshops and codified a radial and network-ready strategy for OSW development in the Northeast	• Provide technical assistance to OSW stakeholders on the Atlantic, Pacific, and Gulf coasts	• Increase to provide technical assistance to states as IRA funding accelerates planning, modeling, and analysis
Technical Assistance $25,000,000	*$26,500,000*	*+$1,500,000*
• Issue FOAs/grants to States to pilot innovative approaches to facilitate transmission development • Expand suite of tools for transmission development, such as tools for transmission data analytics, expanded benefit analysis, seams modeling, renewable zones, or investment decision making • Provide technical assistance for energy justice and ensure energy justice considerations are built into new models • As part of a joint initiative with USDA, provide technical assistance for rural electric utilities to support the transition to carbon pollution-free electricity by 2035 • Conduct environmental reviews and technical analyses needed for Federal authorization of transmission projects that cross U.S. international borders	• Identify regulatory barriers and overcome challenges to accelerate transmission development by providing permitting technical assistance • Assist other Federal agencies to provide grid technical assistance for Federal transmission projects • Expand suite of tools for transmission development, focusing on siting and permitting • Conduct environmental reviews and technical analyses needed for IIJA projects and/or Federal authorization of transmission projects that cross U.S. international borders	• Increase to provide technical assistance to states and expand benefit analysis as transmission development accelerates • Transfers rural electrification technical assistance activities, enacted in FY 2023, from Transmission Planning and Permitting to Distribution and Markets in FY 2024

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 response have the potential to improve efficiency and momentarily support intermittent 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-duration 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.

Highlights of the FY 2024 Budget Request

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.

Most Regional Transmission Organizations (RTOs) and Independent System Operators (ISOs) operate day-ahead and real-time electricity markets, and ancillary services markets.[a] This includes day-ahead, real-time, and ancillary services markets. Areas where current markets need to evolve include resource adequacy, capacity markets, and ancillary services markets. These areas need to evolve to better ensure grid reliability, to better value reliability, to maintain transmission system operation.

Funding will continue to support activities initiated in FY 2023 to address electricity market expansion and the value of organized markets in alignment with clean energy integration. Specifically, the Department plans on engaging regulators in a new vision, Dynamic Resource Adequacy, where short- and long-term signals minimize the cost of resource adequacy throughout all meaningful time periods (e.g., seconds, minutes, hours, days, months, seasons, and years, depending on the issue). Building blocks for realizing this vision include translating maturing tools into simulations that help regulators envision future electricity markets and business structures.

Priorities for FY 2024 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 on short run operational responses, financial viability of needed resources, and long-term investment in all regions.
- Develop options for modifying economic-based incentives and/or requiring specific actions to minimize resource adequacy cost while ensuring reliability.
- Quantify the operational, system, and cost/revenue 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.

FY 2024 activities also include helping states and regions identify appropriate transitional mixes of generation and load to ensure sufficient firm resources. Electricity markets have driven the system to offer the lowest costs, with the consequence

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

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 and regions find cost-effective paths to provide extra market incentives and requirements to address issues associated with more extreme events and less firm generation. DOE's activities in this area will include:

- Evaluating load as a coequal partner in setting price and ultimately reducing the costs of resource adequacy. Load is critical to flexibility, reliability, and even resilience. A key component in a functioning market is the ability of demand to respond to price. For the technology used in the low- and zero-carbon grid to deliver its full benefits at the lowest cost, load must be a far more significant agent than it has proven to be to date. For example, future cooling loads and EV loads will dramatically change modeling assumptions and increase the need for load management programs.
- Identifying successful load management and demand response programs (e.g., virtual power plants, rates, electric vehicle charging incentives) and characterize why they have been successful. Activities will include sharing case studies among states, local governments, utilities, and consumer groups.
- Aiding states in preparing roadmaps to achieve more flexible load, including design of programs, applicable incentives, and outreach programs. This will be more critical with the integration of EVs and industrial electrification.

EV Grid Planning and Markets

This subprogram will support the grid management and integration for EV deployment and related technologies into the distribution market. EVs can play an important part in balancing the energy on the grid by serving as distributed sources of stored energy, a concept called "vehicle-to-grid." By drawing on a multitude of batteries plugged into the Smart Grid throughout its service territory, a utility can potentially inject extra power into the grid during critical peak times, avoiding brownouts and rolling blackouts. EVs also have the potential to help keep isolated parts of the grid operating during blackouts. They could also help integrate variable power sources into the grid, including wind and solar power. For balancing authorities, distribution utilities, and market operators, the greatest needs are to establish a market and to develop the associated managed charging infrastructure to enable the continued growth of EVs. FY 2024 funding will support deployment studies and analyses to enable markets, energy storage, and EV integration in the distribution system.

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. GDO's FY 2024 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. This opportunity is specifically open to low-income, energy-burdened communities that are also experiencing either direct environmental justice impacts, or direct economic impacts from a shift away from historical reliance on fossil fuels. Additionally, work will support technical assistance to rural utilities (in partnership with U.S. Department of Agriculture) and Tribal and territorial studies for deploying microgrids and enabling clean energy development while ensuring resource adequacy.

Distribution and Markets

Funding ($K)

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)	FY 2024 Request vs FY 2023 Enacted (%)
Distribution and Markets					
Wholesale Markets Technical Assistance and Grants	0	16,500	19,000	+2,500	+15.2%
EV Grid Planning and Markets	0	0	5,000	+5,000	N/A
Territory, Tribal, and Rural Community Development	0	0	12,750	+12,750	N/A
Total, Distribution and Markets	**0**	**16,500**	**36,750**	**+20,250**	**+122.3%**

Distribution and Markets
Explanation of Major Changes ($K)

	FY 2024 Request vs FY 2023 Enacted
• Increases the number of grants available to assist States and ISO/RTOs to explore wholesale market challenges and opportunities	+2,500
• Increases support for the development of a partnership program with communities and utilities to deploy distribution-level market solutions such as distribution system storage and vehicle-to-grid solutions	+5,000
• Increase due to the transfer of rural electrification technical assistance activities, enacted in FY 2023, from Transmission Planning and Permitting to Distribution and Markets and an expansion of tools and technology solutions for territories and rural communities	+12,750
Total, Distribution and Markets	**+20,250**

Distribution and Markets

Activities and Explanation of Changes

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Distribution and Markets $16,500,000	**$36,750,000**	**+$20,250,000**
Wholesale Markets Technical Assistance and Grants $16,500,000	*$19,000,000*	*+2,500,000*
• Initiate at least one major study on wholesale market challenges and potential solutions • Award at least three grants to States and ISO/RTOs for evaluating new markets and market improvements	• Conduct at least one major study on wholesale market challenges and potential solutions • Award at least three to four grants to States and ISO/RTOs for evaluating new markets and market improvements	• Increases grant opportunities to assist States and ISO/RTOs
EV Grid Planning and Markets $0	*$5,000,000*	*+$5,000,000*
N/A	• Partner with communities and utilities to deploy distribution-level market solutions such as distribution system storage and vehicle-to-grid solutions	• New program established in FY 2024
Territory, Tribal, and Rural Community Development $0	*$12,750,000*	*+$12,750,000*
N/A	• Provide assistance to U.S. territories, Tribal communities, remote and rural areas, and other disadvantaged communities for a resilient, clean, and equitable grid • Fund the Department's Communities LEAP initiative	• New program established in FY 2024 and transfers rural electrification technical assistance activities, requested in FY 2023, from Transmission Planning and Permitting to Distribution and Markets in FY 2024

Hydropower Incentives

Overview

The U.S. hydropower fleet, which currently provides almost seven percent of the electricity to the Nation's grid[a], offers short and long-term flexibility to support and complement the deployment of generation sources of variable renewable energy. 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 FY 2022, hydroelectricity accounted for about 6.3% of U.S. utility-scale electricity generation and 29.4% of utility-scale renewable electricity generation[b]. 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[c], 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[d]. Retrofitting existing dams and adding generation at non-powered dams can increase renewable energy production. DOE's landmark 2016 Hydropower Vision report estimated that almost 5 GW of renewable energy could be developed at non-powered dams by FY 2050 utilizing existing water infrastructure with minimal environmental impacts[e]. However, due in part to lack of adequate financing[f] and a lengthy and uncertain regulatory process[g], 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:

- 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.
- 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%.
- 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.

In FY 2023, GDO established the Hydropower Incentives Program to implement the IIJA's hydropower incentives provisions and engaged or will engage in the following activities:

- Conducted a public workshop and one-on-one feedback sessions with prospective applicants with respect to the EPAct 2005 Sections 243 and 247 Request for Information.
- Initiated the ninth solicitation period since FY 2014 for incentives under EPAct Section 242.

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[a] https://www.energy.gov/sites/default/files/2021/01/f82/us-hydropower-market-report-full-2021.pdf
[b] https://www.eia.gov/energyexplained/hydropower/
[c] https://www.eia.gov/todayinenergy/detail.php?id=30312#
[d] https://www.energy.gov/sites/default/files/2021/01/f82/us-hydropower-market-report-full-2021.pdf
[e] https://www.energy.gov/sites/default/files/2018/02/f49/Hydropower-Vision-021518.pdf
[f] https://www.energy.gov/sites/default/files/2021/01/f82/us-hydropower-market-report-full-2021.pdf
[g] https://www.nrel.gov/docs/fy22osti/79242.pdf

- Issued guidance and will open the first solicitation for hydroelectric incentives under EPAct 2005 Section 243.
- Issued draft and final guidance, conducted a public workshop for applicants, and will open the first solicitation for hydroelectric incentives under EPAct 2005 Section 247.

In FY 2024, GDO's Hydropower Incentives Program will continue its efforts under the IIJA provisions, including:

- Reviewing applications and awarding incentive payments to qualified projects.
- Initiating a formal rulemaking to codify the applicant guidance for EPAct 2005 Section 242.

Highlights of the FY 2024 Budget Request

Once the EPAct 2005 hydropower incentives have been distributed, follow-up monitoring and analysis are 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:

- Develop an annual report that summarizes the types of projects and level of funding that were approved under both EPAct 2005 Sections 247 and 243.
- 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 area 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.
- Develop modeling and analytics with respect to hydroelectric generation efficiency improvements across the U.S. hydropower fleet supported by EPAct 2005 Section 243, including distribution and characteristics of funded projects (e.g., type of hydropower project, capacity, age, ownership, location, type of improvement, realized efficiency vs estimated, most successful estimation methods, cost effectiveness, and cumulative efficiency gains).

Hydropower Incentives
Funding ($K)

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Request ($)	FY 2024 Request vs FY 2023 Request (%)
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 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Hydropower Incentives $0	**$250,000**	**+$250,000**
	• Develop analytics for monitoring the impact of hydropower incentives on the modernization and maintenance of existing U.S. hydropower assets.	• New program in 2024

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.

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 the National Energy Technology Laboratory (NETL). While GDO funds NETL staff within its budget, the NETL Federal employees are included within the full-time equivalent (FTE) total for the Office of Fossil Energy and Carbon Management (FECM) account.

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 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, such as rent, supplies, copying, graphics, mail, printing, and telephones. It also includes office safety requirements, equipment upgrades and replacements, commercial credit card purchases using simplified acquisition procedures where possible, security clearance expenses, and other needs.

Highlights of the FY 2024 Budget Request

The FY 2024 Program Direction Request reflects increased staffing to support the new and expanded program activities requested for GDO in FY 2024.

Program Direction
Funding ($K)

	FY 2022 Enacted	FY 2022 Enacted (Comparable)[a]	FY 2023 Enacted	FY 2023 Enacted (Comparable)[a]	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)	FY 2024 Request vs FY 2023 Enacted (%)
Program Direction Summary							
Washington Headquarters							
Salaries and Benefits	0	1,960	0	3,360	8,490	+5,130	+152.7%
Travel	0	50	0	30	70	+40	+133.3%
Support Services	0	363	0	1,111	3,000	+1,889	+170.0%
Other Related Expenses	0	297	0	235	599	+364	+154.9%
Total, Washington Headquarters	**0**	**2,670**	**0**	**4,736**	**12,159**	**+7,423**	**+156.7%**
National Energy Technology Laboratory							
Salaries and Benefits	0	232	0	442	884	+442	+100.0%
Travel	0	30	0	4	7	+3	+75.0%
Support Services	0	51	0	0	0	-	-
Other Related Expenses	0	17	0	25	50	+25	+100%
Total, National Energy Technology Laboratory	**0**	**330**	**0**	**471**	**941**	**+470**	**+99.8%**
Total Program Direction							
Salaries and Benefits	0	2,192	0	3,802	9,374	+5,572	+146.6%
Travel	0	80	0	34	77	+43	+126. 5%
Support Services	0	414	0	1,111	3,000	+1,889	+170.0%
Other Related Expenses	0	314	0	260	649	+389	+149.6%
Total, Program Direction	**0**	**3,000**	**0**	**5,207**	**13,100**	**+7,893**	**+151.6%**

[a] The FY 2024 Budget Request to Congress proposes to split the Electricity appropriation account into two accounts: Electricity and Grid Deployment. To allow an apples-to-apples comparison to the FY 2024 Request, the comparable amounts for FY 2022 and 2023 include a portion of the Electricity appropriation's Program Direction funding equivalent to what would have been in the GDO had the proposed structure been in place since FY 2022.

	FY 2022 Enacted	FY 2022 Enacted (Comparable)[a]	FY 2023 Enacted	FY 2023 Enacted (Comparable)[a]	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)	FY 2024 Request vs FY 2023 Enacted (%)
Federal FTEs	**0**	**7**	**0**	**19**	**48**	**+29**	**+152.6%**
Additional FECM FTEs at NETL supporting GDO[b]	0	1	0	2.5	5	+2.5	+100.0%
Total GDO-funded FTEs	**0**	**8**	**0**	**21.5**	**53**	**+31.5**	**+146.5%**
Support Services and Other Related Expenses							
Support Services							
Technical Support	0	220	0	577	1,659	+1,082	+187.5%
Management Support	0	194	0	534	1,341	+807	+151.1%
Total, Support Services	**0**	**414**	**0**	**1,111**	**3,000**	**+1,889**	**+170.0%**
Other Related Expenses							
Other Services	0	16	0	196	492	+296	+151.0%
EITS Desktop Services	0	62	0	64	157	+93	+145.3%
WCF[c]	0	236	0	0	0	-	-
Total, Other Related Expenses	**0**	**314**	**0**	**260**	**649**	**+389**	**+149.6%**

[b] GDO funds FTEs at FECM's NETL that support GDO activities. The FTEs are included in FECM's FTE totals and not in the GDO FTE totals shown on the "Federal FTEs" line.
[c] WCF 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. IIJA Program Direction will pay FY 2023 WCF and IIJA/IRA Program Direction will pay for FY 2024 WCF.

Program Direction

Activities and Explanation of Changes

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Program Direction $5,207,000	**$13,100,000**	**+7,893,000**
$3,802,000	*$9,374,000*	*+$5,572,000*
• 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 53 FTEs at HQ and NETL that provide executive management, programmatic oversight, and analysis for the effective implementation of the GDO program.	• Supports the 2024 Federal pay increase and 31.5 new FTE's
$34,000	*$77,000*	*+$43,000*
• 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 new FTE's
$1,111,000	*$3,000,000*	*+$1,889,000*
• 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 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 Presidential Management Fellows and IPA assignments.	• Reflects increase for support service contracts for new and expanded program activities
$260,000	*$649,000*	*+389,000*
• Other Related Expenses include EITS desktop services 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 and other needs.	• Other Related Expenses include EITS desktop services 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 and other needs.	• Other Related Expenses increase due to the number of new FTEs