DEpartment Of ENergy Fy 2024 SUstainability StRategic Plan

***U.S. Department of Energy,   
Sustainability Performance Office***

# DOE Sustainability Strategic Plan for FY24 Executive Summary

#### Strategic Plan Summary

|  |
| --- |
| The Department of Energy (DOE) has made significant progress in sustainability by advancing innovative and cost-effective policies, programs, plans, and solutions to enhance its use of clean energy, reduce greenhouse gas emissions (GHG), and achieve the sustainability goals articulated in Executive Order (E.O.) 14057. To meet these goals, DOE is employing a suite of strategies to increase the use of carbon-pollution free electricity (CFE), transition to a zero emissions vehicle (ZEV) fleet, and implement building electrification and energy efficiency projects to meet the net-zero buildings emissions goals.  In FY 2024, DOE will advance its strategic goals by:   * Increasing its use of CFE through strategic partnerships with utility providers and other government agencies, updating procurement requirements to prioritize clean energy, and launching a new initiative to promote the development of large-scale clean energy projects on DOE leased land.   + In FY 2024 and FY 2025, DOE has plans for five on-site solar CFE projects. DOE will also be identifying parties with proven experience to implement clean electricity projects generating 200 Megawatt (MW) or larger on potentially thousands of acres of DOE land. * Issuing a DOE Buildings Roadmap to set the course for achieving energy efficiency and electrification in conjunction with carbon-pollution free energy, as part of its net-zero strategy. DOE will also improve tracking systems and prioritize the implementation of efficiency and conservation measures, implement a new sustainability budget crosscut, and identify new opportunities to make efficiency gains across the building portfolio using other financing mechanisms. These strategies will help DOE further improve upon the 53 percent reduction in GHG emissions achieved since FY 2008. * Identifying sites with vehicles that can be transitioned to ZEVs. The Department will conduct detailed analyses to identify acquisition opportunities and right-size its fleet. DOE will utilize strategic partnerships, interagency coordination, innovative tools, award programs, and financial incentives to encourage ZEV adoption.   + In FY 2024 and FY 2025, DOE will acquire approximately 1,190 light-duty (LD) ZEVs, for a total LD inventory of 1,913 ZEVs by the end of FY 2025. |
|  |
|  |

#### Agency Summary Progress Targets

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Metric** | **Annual Progress Targets** | | | | | | | |
| **FY 23** | **FY 24** | **FY 25** | **FY 26** | **FY 27** | **FY 28** | **FY 29** | **FY 30** |
| **Carbon Pollution-Free Electricity** |  | | | | | | | |
| CFE as % of annual electricity usage | **51.3%** | **51.7%** | **53.2%** | **59.7%** | **62.7%** | **74.4%** | **97.7%** | **100%** |
| **Zero Emission Fleet Vehicles** |  | | | | | | | |
| ZEV as % of Light Duty Vehicle Acquisitions | **56%** | **59%** | **70%** | **80%** | **100%** | **100%** | **100%** | **100%** |
| Cumulative EVSE ports installed  by end of FY | **715** | **1,273** | **2,305** | **3,339** | **4,439** | **4,897** | **5,998** | **7,158** |
| **Net-Zero Emission Buildings** |  | | | | | | | |
| % Progress Towards  2030 EUI target | **19%** | **24%** | **30%** | **39%** | **57%** | **75%** | **93%** | **100%** |
| Cumulative % of GSF Progress  meeting the Federal BPS | **0%** | **1%** | **2%** | **5%** | **6%** | **8%** | **8%** | **11%** |
| Performance Contract Investment Amount Awards in the FY ($) | **5.1M** | **67M** | **119M** | **171M** | Optional | Optional | Optional | Optional |

## Agency Approval

**Prior to Initial Submission:** Chief Sustainability Review and Approval

|  |  |  |
| --- | --- | --- |
|  | CSO has approved the annual progress targets established in these plans | Ingrid Kolb, Director, Office of Management, and DOE’s Chief Sustainability Officer |

**After Receiving CEQ and OMB Approval of Targets:** Agency Sign Off

|  |  |  |
| --- | --- | --- |
|  | Agency has approved the annual progress targets established in these plans | David M. Turk, Deputy Secretary |

# 

# DOE Carbon Pollution-Free Electricity Strategic Plan for FY24

## Section 1: CFE Progress Target Planning

|  |  |
| --- | --- |
| **CFE Targets established by E.O. 14057** | 100 percent net annual CFE use by FY 2030  50 percent 24/7 CFE by FY 2030. |
| **CFE Annual Progress Targets** | Agencies will set net annual CFE Progress Targets beginning with FY 2023. |
| **Objective of CFE Strategic Plans for FY24** | Agencies will set annual CFE Progress Targets for FY 2023 – FY 2030 and identify CFE initiatives and plans for FY 2024. |

### A. Strategy Overview

|  |
| --- |
| DOE’s FY 2024 CFE Strategic Plan builds upon and enhances the strategies and performance targets identified in the DOE’s FY 2023 CFE Strategic Plan.  DOE continues to increase its use of clean energy and the pace of DOE’s efforts is increasing, including improved energy efficiency and electricity demand response; greater deployment of onsite CFE generation and storage; and increased CFE procurement. DOE has the lead responsibility for two CFE initiativescollaborating with the serving utilities in coordination with other agencies located in the same utility service territory and providing a coordinated approach to leveraging the government’s procurement power to increase the availability of CFE.  In addition, Secretary Granholm recently launched a new DOE CFE initiative, *Cleanup to Clean Energy,* to increase clean energy production by potentially utilizing thousands of acres of DOE land for developers to provide new emissions-free electricity projects that could be exported to the national grid. In implementing these strategies, DOE is collaborating with multiple stakeholders, including other federal agencies, tribal nations, utilities, and regulators.  Attainment of the CFE goals continues to pose both challenges and opportunities at sites that face limited funding, competing priorities, and increased electricity demand due to greater electrification and program growth. These challenges are especially complex for sites with energy intensive operations (e.g., high performance computers, light sources, accelerators, radioactive waste vitrification) and mission growth.  Information on the Department’s CFE strategic plan is provided below and in the accompanying Supplemental Workbook. |

### 

### B. Targets and Plans

To meet E.O. 14057’s goal of 100 percent annual CFE by FY 2030, the agency will develop near-term annual CFE Progress Targets.

|  |  |  |
| --- | --- | --- |
| **Goal Area** | **CFE Categories** | **Request from agencies** |
| **Total annual CFE** | 1. Grid-supplied CFE: | CFE provided as part of the standard electricity grid mix from an electricity supplier for FY 2023 through FY 2030 |
| 1. Onsite CFE: | CFE generated on federal sites and lands for FY 2023 through FY 2030 |
| 1. Purchased CFE: | CFE procured from an electricity supplier, either through “bundled” procurements (CFE procured with the associated energy attribute credits (EACs), including electricity resulting from CFE Procurement Initiatives) or “unbundled” procurements (“purchased EACs” or CFE EACs procured without the associated electricity) for FY 2023 through FY 2030. |
| 1. Legacy CFE from EPAct 7.5% cap: | Electricity that complies with EPAct 2005’s Renewable Energy requirements but does not comply with CFE requirements for FY 2023 through FY 2030. |

**CFE Use Targets in Megawatt (MWh)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Metric** | | **(MWh)** | | | | | | | | |
| **FY 22 (actual)** | **FY 23** | **FY 24** | **FY 25** | **FY 26** | **FY 27** | **FY 28** | **FY 29** | **FY 30** |
| **1** | **Total annual CFE *(a+b+c+d)*** | 2,234,089 | 2,584,793 | 2,638,814 | 2,745,533 | 3,117,592 | 3,299,236 | 3,944,304 | 5,231,584 | 5,409,225 |
| *a* | *Grid-supplied CFE* | 1,835,680 | 1,879,653 | 1,924,679 | 2,012,860 | 2,105,081 | 2,188,490 | 2,275,203 | 2,402,646 | 2,537,227 |
| *b* | *Onsite CFE* | 11,305 | 8,925 | 8,925 | 13,720 | 128,853 | 152,072 | 208,644 | 221,697 | 199,587 |
| *c* | *Purchased CFE* | 14,503 | 318,615 | 322,544 | 331,968 | 492,306 | 564,285 | 1,063,008 | 2,205,692 | 2,266,718 |
| *d* | *Legacy CFE from EPAct 7.5% cap* | 372,601 | 377,600 | 382,666 | 386,985 | 391,352 | 394,389 | 397,449 | 401,549 | 405,693 |
| **2** | **Total annual electricity usage** | 4,968,012 | 5,034,666 | 5,102,214 | 5,159,794 | 5,218,024 | 5,258,518 | 5,299,326 | 5,353,993 | 5,409,224 |
| **Annual Progress Target:**  **CFE as % of annual electricity usage** | | 45 | 51.3 | 51.7 | 53.2 | 59.7 | 62.7 | 74.4 | 97.7 | 100 |

**CFE Year on Year Increase (%)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Metric** | | **YoY increase in CFE (%)** | | | | | | | | |
| **FY 22A** | **FY 23** | **FY 24** | **FY 25** | **FY 26** | **FY27** | **FY 28** | **FY 29** | **FY 30** |
| **1** | **Total annual CFE *(a+b+c+d)*** | 11 | 16 | 2 | 4 | 14 | 6 | 20 | 33 | 3 |
| *A* | *Grid-supplied CFE* | 10 | 2 | 2 | 5 | 5 | 4 | 4 | 6 | 6 |
| *B* | *Onsite CFE* | N/A | -21 | 0 | 54 | 839 | 18 | 37 | 6 | -10 |
| *C* | *Purchased CFE* | N/A | 2097 | 1 | 3 | 48 | 15 | 88 | 107 | 3 |
| *D* | *Legacy CFE from EPAct 7.5% cap* | 7 | 1.3 | 1.3 | 1.1 | 1.1 | 0.8 | 0.8 | 1 | 1 |
| **2** | **Change in annual electricity usage** | 7 | 1.3 | 1.3 | 1.1 | 1.1 | .8 | 0.8 | 1 | 1 |
| **Annual Progress Milestone:**  **Change in % of annual electricity usage** | | 1.5 | 6.3 | 0.4 | 1.5 | 6.5 | 3.0 | 11.7 | 23.3 | 2.3 |

**CFE Procurement Plans**

In this section, detail how the agency plans to achieve the CFE Progress Targets outlined above through internal procurement efforts. Specifically, include details on the agency’s strategy and specific planned actions to procure CFE across each of the four procurement categories (Grid-supplied CFE, Onsite CFE, Purchased CFE, Legacy CFE from EPAct 7.5% cap).

##### i. Grid Supplied CFE Strategy and Plan

|  |
| --- |
| To increase grid supplied CFE, DOE is pursuing several strategies and plans, including: (1) Participating in DOD’s Defense Logistics Agency Energy (DLA Energy) Retail Electric Choice Market initiative being implemented in Texas. The Department’s Strategic Petroleum Reserve (SPR)-Bryan Mound site is providing DLA Energy with its CFE requirements as part of a procurement action involving multiple agencies in the Electric Reliability Council of Texas (ERCOT) region; (2) Collaborating with the General Services Administration (GSA) on a strategy to increase CFE procurement in the Pennsylvania-New Jersey- Maryland (PJM) interconnection region and other markets; (3) Revising its procurement requirements to increase CFE procurement; (4) Updating its procurement policies and training to increase awareness of DOE’s authority to purchase CFE; and (5) Implementing a CFE Procurement Community of Practice (CoP) with procurement officials to identify strategies and solutions to meet the 100 percent CFE goal by 2030. In addition, DOE recently launched the *Cleanup to Clean Energy* initiative to supply additional CFE to the grid, through utilizing federal land for use by developers for commercial scale CFE projects. |

##### ii. Onsite CFE Strategy and Plan

|  |
| --- |
| Onsite clean electricity generation provides approximately 2 percent of CFE available to DOE sites with most projects being small scale (i.e., 5-20MW) and using wind and solar technologies. To expand the Department’s capacity to generate and store onsite CFE, the Department will leverage its over two million acres of land to expand the number of onsite CFE projects, both small scale and commercial scale (i.e., 200MW). Planning activities will include the potential for onsite CFE generation and storage projects. Consideration will be given to the availability of land to support onsite CFE projects, the available supply of CFE, and the resilience needs of individual sites. In addition, planning will consider the environmental/ecological effects of proposed onsite generation. To significantly expand the pace, scale, and scope of DOE onsite efforts, in FY 2023, DOE launched its *Cleanup to Clean Energy* initiative to make DOE acreage available for developers to build and operate commercial scale CFE generation on DOE lands for CFE export to the Nation’s grid. If successful, this first-of-its kind initiative could be a game changer in significantly increasing DOE’s and the Nation’s CFE generation and use. |

##### iii. Purchased CFE Strategy and Plan

|  |
| --- |
| The Department continues to pursue several strategies related to purchased CFE. Strategies include: (1) CFE procurements through DOE-lead initiatives including the National Renewable Energy Laboratory (NREL) with Xcel Energy, and the Oak Ridge National Laboratory (ORNL)/Y-12 National Security Complex (Y-12) with Tennessee Valley Authority (TVA); (2) Collaboration with DLA and GSA in the retail choice market to enhance CFE procurements, including in ERCOT region and PJM; (3) Collaboration with utilities in vertically integrated markets for participation in CFE/green tariff programs; (4) Using performance contracting achieve CFE goals. For example, the National Energy Technology Laboratory (NETL) is using a power purchase agreement (PPA) with First Energy to purchase CFE across 2 sites in Pennsylvania, and West Virginia. This action will achieve the CFE goals well ahead of schedule – by 2026. NETL has also provided other Federal agencies with their PPA language to help in pursuing CFE goals; (5) Working with other Independent Operators. SPR’s Project Management Office is pursuing programs associated with the Midcontinent Independent System Operator via contractual CFE/green tariffs provided by Entergy Louisiana (Geaux Green Option Rider) and Entergy Texas (Green Future Option Tariff). In addition, where appropriate, DOE will pursue unbundled EAC purchases to assist in meeting the 100 percent CFE goal by 2030. |

##### iv. Legacy CFE Strategy and Plan

|  |
| --- |
| DOE continues to implement targets under section 203 of EPAct 2005 by encouraging and prioritizing on-site renewables on Federal or Tribal land. Since 2012, DOE has promoted purchasing of renewable energy from tribes with its procurement policy. When the above options are not feasible or available, then DOE has relied on procurement of Renewable Energy Credits. |

### C. Implementation Strategies

Implementation of E.O. 14057 includes opportunities for agencies to benefit from “whole-of-government” CFE Procurement Initiatives for purchased CFE. These include:

* FY 2024 Vertically Integrated Initiatives
* FY 2024 Retail Choice Contracts
* Existing CFE Utility Tariff Offerings identified by DOE’s Federal Energy Management Program (FEMP)

|  |
| --- |
| The Department continues its engagement in the whole of government CFE Pathfinder pilots in Colorado and Tennessee. Building upon the signing of a CFE Memorandum of Understanding (MOU) between DOE/NREL and Xcel Energy, the Department will be implementing the joint CFE roadmap to ensure 100 percent CFE prior to 2030 for the NREL and other Federal facilities that are part of Xcel Energy’s service territory. ORNL and Y-12 signed an MOU with TVA to achieve 100 percent CFE, and to provide CFE to other federal facilities. The Department will also be pursuing CFE utility tariffs and retail choice contracts, such as in the ERCOT region. DOE’s Western Area Power Administration (WAPA) will utilize the agreement with Xcel Energy for its two Colorado facilities that are not already 100%. WAPA will also explore its ability to support other Federal entities in the purchase of PPA’s. |

## **Section 2:** CFE Strategic Budget Coordination

### A. Estimated Electricity Budget

As available, provide details on the agency’s FY 2023 budget, the FY 2024 President’s budget, and future budget plans related to electricity and CFE procurement. If the agency does not have access to FY 2023 data, please provide FY 2022 data and highlight any expected changes between FY 2022 and FY 2023. If the agency knows its annual electricity budget for CFE, please provide these details in addition.

|  |  |  |  |
| --- | --- | --- | --- |
| **Metric** | **FY23**  **Enacted** | **FY24**  **Requested** | **FY25**  **Planned** |
| Total annual electricity budget ($) | 331,000,000 | 333,000,000 | 335,000,000 |
| *Annual electricity budget for CFE ($)* | 154,000,000 | 164,000,000 | 174,000,000 |

### B. Budget Planning Updates

Provide details on the agency’s budgetary plans to achieve its CFE Progress Targets.

|  |
| --- |
| DOE’s program budgets do not breakdown the specific funds for electricity or CFE procurement. DOE’s annual electricity cost was approximately $249 million in FY 2021. DOE estimates that the cost in FY 2023 will be about $330 million. DOE projects an increase in electricity consumption by 2030, with accompanying increases in projected costs attributed to larger mission-related needs. Projections of required budgets to meet the 100 percent CFE goals are difficult to estimate due to uncertainty in the cost and availability of CFE across the Nation between now and 2030. |

## **Section 3:** CFE Challenges

### A. FY 2024 Challenges

Provide details on the top one to three challenges that the agency faces on CFE procurement. If challenges listed in the agency’s FY23 CFE Strategic Plan remain relevant, the agency may discuss them here, but should provide updated information.

**Issue 1*:*** Cost and Limited Availability of Grid Supplied CFE

|  |  |
| --- | --- |
| **Scope** | Absence of grid supplied CFE availability across the nation will impact CFE electricity availability and usage (MWh) across the DOE complex, particularly for DOE programs with increasing mission and electricity consumption. |
| **Timing** | This issue will impact DOE sites through 2030 and impact DOE’s ability to make progress towards annual CFE targets beginning in 2023. |
| **Plan** | Planning activities will include analyzing the generation sources for electricity currently purchased by each site as well as any requirements regarding electricity sources in current contracts. Procurements that meet CFE goals will be identified. DOE programs will also identify any green or CFE pricing or tariff programs available to their respective sites, and taking into consideration the price premium, switch to these pricing or tariffs programs. |
| **Implementation timeline** | The transition to 100 percent CFE will be an ongoing activity within the Department with incremental annual progress building upon a three-prong strategy including: energy efficiency and demand response; expanded onsite CFE generation and storage; and increased CFE procurement. |
| **Additional assistance** | Assistance will be useful from DLA Energy, GSA, and the Federal Energy Management Program (FEMP) to ensure CFE procurement opportunities are identified and utilized, and to understand the price premium of CFE in different retail markets. The Office of Management and Budget’s (OMB) support for increased budget requests for additional CFE will be needed. |

## **Section 4: Integrated CFE Management**

### A. Organizational Change Management

Share details of how the agency is organizing internally and educating staff to support its CFE goals*.*

|  |
| --- |
| The Department’s Senior Procurement Executive issued guidance to the heads of contracting activities, and the DOE acquisition community to align and clarify DOE’s authority and responsibility to procure CFE and embedded that direction in the new DOE Sustainability Order.  DOE monthly hosts a Procurement CFE CoP meetings that provide regular updates from DOE’s FEMP and the Sustainability Performance Office (SPO) and presentations from various groups highlighting strategies to increase CFE in DOE utility contracts.  DOE has also conducted several Energy Savings Performance Contract (ESPC) Brown Bag Sessions in March and April 2023 for hundreds of participants within the DOE Acquisition Community. The Brown Bag Sessions discussed how ESPC impacts onsite clean energy development, State and Local Governments, Department goals, Department requirements, contract performance benefits, and Department responsibility as it pertains to ESPCs. |

### B. Environmental Justice Planning

Share details of how the agency is integrating environmental justice (EJ) into CFE procurement.

|  |
| --- |
| DOE is engaging with disadvantaged communities pursuant to OMB guidance (Interim Implementation Guidance for the Justice40 Initiative, M-21-28), including Tribal communities with CFE near Federal facilities or who otherwise might be affected by increased CFE procurement by DOE. As one example, the *Cleanup to Clean Energy* initiative will lease DOE lands for the development of commercial scale CFE projects. To ensure that investments in the clean energy economy reach Tribal lands, DOE will apply the Indian Energy Purchase Preference established by Title V of the Energy Policy Act of 2005, and foster the development of CFE projects, improved awareness of the Preference, and encourage partnerships for CFE development. In addition, in accordance with the NEPA requirements, DOE will assess the benefits and potential impacts of CFE projects on decreasing or mitigating negative environmental exposures and burdens in surrounding communities, particularly tribal communities and those designated as disadvantaged or with environmental justice concerns. |

### C. Interagency Collaboration and CFE Opportunities

Share details on the agency’s needs for interagency support. If applicable, expand on current or planned collaboration alignment with other agencies.

|  |
| --- |
| Opportunities for potential interagency support and/or collaboration that could support the DOE in attaining CFE goals, include:   * Exchange of Best Practices: to address opportunities for enhancing onsite generation and procurement of CFE with an emphasis on successful actions that were taken and how they were funded including the use of alternative funding mechanisms (e.g., ESPCs, AFFECT funding, BIL or IRA grants or assistance, etc.). * Targeting Utilities with Multiple Service Territories Serving Federal Sites: to maximize national deployment of CFE, agencies could prioritize their outreach to those key utilities that serve multiple federal agencies across the Nation. * Partnering with DLA, GSA, and WAPA on future PPAs to ensure CFE is procured, where available and feasible. |

Provide details on potential or desired internal or external collaboration or coordination that could help the agency reach its CFE goals. This could include support, assistance, interagency collaboration, external partnerships, or other ways to accelerate the agency’s CFE progress.

**Opportunity 1:**CFE Interagency-Utility Collaboration

|  |  |
| --- | --- |
| **Scope** | Enhancing interagency coordination and engagement with the key utilities that serve multiple agencies could significantly foster the identification of successful approaches, identification of major issues and barriers, and sharing of best practices to increase the pace of CFE deployment. |
| **Timing** | This effort should commence immediately and build upon the existing interagency engagements including those with utilities. |
| **Additional assistance** | CEQ is in the best position to use its convening power to foster ongoing coordination and collaboration. |

## Section 5: **Points of Contact and Plan Approval**

For the Sept 1st submission, the **agency CSO must review and sign off on each strategic plan**.

After submission, CEQ and OMB will schedule agency Strategic Plan Reviews to meet with agency Sustainability staff, listed below, to discuss the details of the strategic plans.

**The head of the agency does not need to approve these initial plans for the Sept 1st submissions.**

**Strategic Plan Key Contacts**

|  |
| --- |
| Points of Contact Responsible for Developing this Plan  - Craig Zamuda, Director, Office of Sustainability Performance, Office of Management  The Following Were Responsible for Approving This Plan  - Ingrid Kolb, Director, Office of Management, and DOE’s Chief Sustainability Officer  - David M. Turk, Deputy Secretary |

**Coordination with Budget Office**

|  |  |  |
| --- | --- | --- |
|  | Plan has been shared with the Agency Budget office | Katherine Donley, Director, Office of Budget |

**Chief Sustainability Review and Approval**

|  |  |  |
| --- | --- | --- |
|  | CSO has reviewed and approved the plan | Ingrid Kolb, Director, Office of Management, and DOE’s Chief Sustainability Officer |

**ATTACHMENT: Supplemental FY24 CFE Strategic Plan Workbook**



# DOE Zero-Emission Fleet Strategic Plan for FY 2024

## Section 1: ZEV and EVSE Progress Targets

|  |  |
| --- | --- |
| **ZEV Targets set in E.O. 14057** | 100 percent ZEV acquisitions by 2035, including 100 percent LD ZEV acquisitions by 2027. |
| **ZEV Progress Milestone set in Implementing Instructions** | ZEV annual acquisition targets. |
| **Objective ZEV Strategic Plans for FY 2024** | Agencies will set annual ZEV procurement Progress Targets for FY 2024 – FY 2035 and identify ZEV initiatives and plans for FY 2024. |

### A. Strategy Overview

|  |
| --- |
| DOE is actively working to meet the E.O. 14057 ZEV goals by annually identifying sites with significant numbers of vehicles and strategizing how those vehicles can be replace with ZEVs. DOE conducts regularly scheduled meetings with sites and program offices to educate fleet staff on E.O. 14057 goals, vehicle availability, and strategies to increase ZEV/electric vehicle service equipment (EVSE) acquisitions. DOE annually conducts a Vehicle Allocation Methodology (VAM) covering over 20 percent of its fleet, to identify ZEV replacement opportunities and right size and right type the fleet. |

### B. Targets and Plans

#### i. ZEV Progress Targets (ZEV number and percent ZEV acquisition)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Metric | 2022 Actual | 2023 Projected | 2024 Targets | 2025 Targets | 2026 Targets | 2027 Targets | 2028 Targets | 2029 Targets | 2030 Targets | 2031 Targets | 2032 Targets | 2033 Targets | 2034 Targets | 2035 Targets |
| LD ZEVs Added | 213 | 494 | 558 | 632 | 722 | 903 | 903 | 903 | 903 | 903 | 903 | 903 | 903 | 903 |
| ZEV % of LD Acquisitions | 27% | 56% | 59% | 70% | 80% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| MD and HD ZEVs Added | 1 | 22 | 60 | 229 | 256 | 283 | 315 | 351 | 389 | 431 | 480 | 533 | 592 | 658 |
| ZEV % of MD and HD Acquisitions | 0% | 4% | 8% | 35% | 39% | 43% | 48% | 53% | 59% | 66% | 73% | 81% | 90% | 100% |
| Total ZEVs Added | 214 | 516 | 618 | 861 | 978 | 1,186 | 1,218 | 1,254 | 1,292 | 1,334 | 1,383 | 1,436 | 1,495 | 1,561 |
| Total ZEV Acquisition % | 14% | 33% | 40% | 55% | 63% | 76% | 78% | 80% | 83% | 85% | 89% | 92% | 96% | 100% |

#### ii. EVSE Deployment Progress Targets

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Added EVSE power level | 2022 Actual | 2023 Proj. | 2024 Targets | 2025 Targets | 2026 Targets | 2027 Targets | 2028 Targets | 2029 Targets | 2030 Targets | 2031 Targets | 2032 Targets | 2033 Targets | 2034 Targets | 2035 Targets |
| L1 Ports Added | 4 | 124 | 147 | 142 | 72 | 72 | 41 | 64 | 64 | 55 | 41 | 15 | 4 | 0 |
| L2 Ports Added | 30 | 11 | 411 | 890 | 962 | 1,028 | 204 | 979 | 1,035 | 991 | 898 | 671 | 601 | 560 |
| DCFC Ports Added | 0 | 8 | 0 | 0 | 0 | 0 | 213 | 58 | 61 | 58 | 53 | 39 | 35 | 33 |

#### iii. ZEV & EVSE Inventory

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2022 Actual | 2023 Proj. | 2024 Targets | 2025 Targets | 2026 Targets | 2027 Targets | 2028 Targets | 2029 Targets | 2030 Targets | 2031 Targets | 2032 Targets | 2033 Targets | 2034 Targets | 2035 Targets |
| Estimated Total ZEVs in Inventory\* | 261 | 777 | 1,416 | 2,277 | 3,255 | 4,441 | 5,659 | 6,913 | 8,205 | 9,538 | 10,922 | 12,428 | 13,853 | 15,414 |
| Estimated Cumulative EVSE Ports Installed | 572 | 715 | 1,273 | 2,305 | 3,339 | 4,439 | 4,897 | 5,998 | 7,158 | 8,262 | 9,254 | 9,979 | 10,619 | 11,212 |

*\*This should be an estimate based on the annual acquisition numbers listed in table B above, and in the out years, accounting for ZEVs aging out of the fleet (i.e., this number should not be greater than the total fleet size).*

### C. Implementation Strategies

#### i. Overview of EVSE Short & Long-Term Deployment Approaches

Provide an overview of your agency/department’s short and long-term approach to ZEV charging infrastructure. Please include how this effort is being managed (e.g., via a formal Program Management Office, central management, etc.) and how EVSE efforts are being aligned with ZEV procurement to ensure adequate charging is in place to support the planned ZEV acquisitions.

|  |
| --- |
| DOE’s programs and sites are encouraged to utilize FEMP tools to identify short- and long-term approaches to ZEV charging infrastructure. Additionally, DOE has provided a Fleet Services Contractor to aid in EVSE planning at the site level. The DOE Headquarters (HQ) Fleet Management team has provided informational training to Facilities and Real Property points of contact to aid in EVSE planning. The DOE HQ Fleet Management team is considering standing up an EVSE focus group to help sites work through their EVSE planning and provide feedback of the pros and cons that early adopters have faced. |

#### ii. Planning Tools

If the DOE-developed ZEV Workbook tool was used to develop the above plan and targets, please affirm here. If it was not used, describe what tools and processes were used.

|  |
| --- |
| The DOE-developed ZEV Workbook tool was used to develop the above acquisition plan and targets**.** |

## Section 2: ZEV Strategic Budget Coordination

### A. Estimated Budget

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Budget category (in Millions) | 2022  Actual | FY23  Enacted | FY24  Requested | FY25  Planned |
| ZEV procurement $ | $1.303 | $0 | $6.82 | $4.1 |
| EVSE procurement & installation $ | $0.311 | $2.0 | $19.40 | $4.9 |

|  |  |  |
| --- | --- | --- |
| EVSE per Port Budget Estimate Used in Agency Budget Estimates (inclusive of installation) | | |
| EVSE Power Level | $ per Port | Source of Estimate |
| Level 1 Charging Port (if incorporated in plan) | $3,000 | 25 ports: Equip + Install Cost for L1 only FY20-22 in FAST |
| Level 2 Charging Port | $10,000 | 254 ports: Equip + Install Cost for L2 only FY20-22 in FAST |
| DC Fast Charging Port (if incorporated in plan) | $120,000 | 21CTP report: Average of 50kW and 150kW DCFC |

### B. Budget Planning Update

For FY 2022 and FY 2023, provide funding sources (specific internal accounts, external funding, etc.) that were utilized and in what amounts. Also provide the additional funding sources the agency plans to utilize in FY 2024 and beyond.

|  |
| --- |
| FY 2022, funding from DOE’s budget request was used to cover the additional incremental costs of ZEVs. In FY 2023, $2M in funding was secured via the agency’s direct budget request. This funding was distributed though DOE’s Green Fleet Awards. DOE awarded seven sites with the largest amount of ZEV acquisitions with a proportional amount of this funding. FY 2024 and beyond funding from DOE’s budget request will be used to secure additional ZEV and EVSE. DOE requested $9M for FY 2025 which would allow DOE to order 340 ZEVs and install at least 800 new ZEV charging ports to help accommodate the transition to a 100 percent ZEV LD fleet by 2027. |

## Section 3: ZEV and EVSE Challenges

In this section, please include at least one of the top challenges for ZEV deployment in subsection A and one of the top challenges for EVSE deployment in section B, but no more than three per section. If challenges listed in the agency’s FY23 ZEV Strategic Plan remain relevant, the agency may discuss them here, but should provide updated information.

Please do not list general concerns around funding and appropriations or related to ZEV supply chain issues. If there are specific funding related issues (*e.g*., color of money issues) or supply chain issues (*e.g*., unmet demand for a particular type of ZEV essential to an agency mission), those more specific issues may be included below.

### A. ZEV Deployment Challenges

***Issue 1*:ZEV Availability**

|  |  |
| --- | --- |
| **Scope** | In FY 2023, approximately 110 out of 494 ZEV orders were cancelled (DOE is still awaiting updated figures from GSA). LD options are limited. In addition, the fluidity in the ordering process has resulted in skepticism at the site level about the ability to deliver vehicles in a timely manner without possible mission impacts. |
| **Timing** | This issue is impacting DOE in FY 2023, and supply chain issues may continue to lead to order fulfillment cancelations and delays in the future. |
| **Plan** | Look at ZEV alternatives if first choice is not available. Delay replacement, if possible, to allow for ZEV replacement. |
| **Implementation timeline** | Annually as part of the ordering cycle. |
| **Additional assistance** | None. |

***Issue 2*:Lack of Varying ZEV Models**

|  |  |
| --- | --- |
| **Scope** | In FY 2023, 535 additional ZEVs could have been ordered. The DOE fleet is primarily LD pickup trucks, mid-size/full-size SUVs, and medium/heavy duty trucks. There are limited/no offerings in these model types currently, and no viable alternatives in the near future. |
| **Timing** | This issue is impacting DOE in FY 2023 and may continue in the foreseeable future depending upon supply chain issues and model availability. |
| **Plan** | We are waiting for additional models to be introduced that meet our needs. |
| **Implementation timeline** | This issue will be addressed annually with GSA. |
| **Additional assistance** | None. |

### B. EVSE Deployment Challenges

***Issue 1:* Lack of Infrastructure**

|  |  |
| --- | --- |
| **Scope** | 2,920 Ports and 4,416 ZEVs have been impacted by the lack of adequate electric infrastructure and supply chain delays for EVSE installation. |
| **Timing** | This issue is impacting DOE in FY 2023 and may continue in the foreseeable future depending upon proactive planning and available funding. |
| **Plan** | Engage facility managers, sustainability offices, and fleet managers to provide education, tools, and assistance regarding requirement determination and planning to establish budget estimates for EVSE. |
| **Implementation timeline** | This issue will be addressed on an ongoing basis. |
| **Additional assistance** | None |

## Section 4: Integrated ZEV Fleet Management

### A. Organizational Change Management

Share details of how the agency is organizing internally and educating staff to support its ZEV goals*.*

|  |
| --- |
| DOE implemented a new fleet acquisition policy emphasizing acquisition of ZEVs. This policy requires program leadership approval prior to each acquisition cycle. ZEVs will be the mandatory selection and any acquisition that is not a ZEV will require program leadership approval. Currently, all vehicle acquisitions are reviewed and approved by the DOE HQ Fleet Manager.  The DOE HQ Fleet Management team hosts monthly meetings with fleet management POCs that provide ZEV and EVSE updates. Additionally, training has been provided on an as needed basis to other offices regarding EVSE. The DOE Fleet Handbook is being revised to include ZEV and EVSE language, as appropriate.  The DOE HQ Fleet Management team has increased cross-cutting collaboration with facilities, energy, and sustainability mangers to ensure that EVSE infrastructure needs are met. |

Describe steps the agency is taking to ensure Plug-In Hybrid Electric Vehicles (PHEVs) are being consistently plugged in after use to minimize/eliminate use of back-up internal combustion engines.

|  |
| --- |
| DOE’s Office of Asset Management will update DOE’s Fleet Management Handbook to ensure PHEVs are plugged in for charging, so the battery is ready for the next use. |

### B. Environmental Justice Plans

Share details of how the agency is integrating environmental justice (EJ) into fleet electrification planning.

|  |
| --- |
| As in prior years, the majority of EVSE will be installed on DOE sites with controlled access and little to no access by the public. Rollout for the remainder of the EVSE program continues to be coordinated with the DOE Office of Energy Justice and Equity to ensure proper incorporation of EJ. |

### C. ZEV Fleet Management

#### i. Workplace Charging

Describe plans for workplace and visitor charging programs and pilots, including number of vehicles supported, number of projects, and number of charging ports; and whether EVSEs are or will also be used for fleet vehicle charging.

|  |
| --- |
| DOE is first prioritizing installation of EVSE for Federal fleet vehicle charging. Where deemed appropriate, when not being used for DOE fleet vehicles, EVSE will be made available for use by visitors and employees. There are currently no EVSE pilots anticipated solely for visitor and employee EVSE charging. |

#### ii. FAST Data Quality Management

Provide the agency’s FY 2022 FAST data quality score, the significant data quality issues identified by the FAST management team, and what steps the agency is taking to address them. Also summarize concrete steps that have been taken to address any significant data quality issues identified last year by the FAST management team.

|  |
| --- |
| The DOE FY 2022 FAST data quality score is 0.49, which is a slight decrease from the previous year. However, this score is still better than the overall Federal Fleet score. DOE has been working with federal fleet managers to identify and correct flagging errors prior to final submission. DOE provides training sessions to our FAST POCs and asks that they review their data throughout the year for error identification and corrections. |

#### iii. Telematics Status

What percentage of the agency fleet has telematics installed at this time? Describe the agency’s telematics rollout plan for both agency-owned and GSA-leased vehicles.

|  |
| --- |
| Currently, 30 percent of the DOE fleet has telematics. DOE fleet managers have had training and education opportunities regarding telematics and their benefits. Many of DOE’s vehicles are waivered from using telematics due to security concerns. The DOE HQ Fleet Management team will be working with programs to update and review existing telematics waivers for applicability and to promote new telematics adoption. |

#### iv. Rightsizing the Fleet

|  |  |
| --- | --- |
| **Description** |  |
| **Date of most recent agency vehicle allocation methodology (VAM) study and optimal fleet profile (OFP)** | June 8, 2023 |
| **Number of vehicles identified for elimination in FY 2024 (disposal via sale or turn in, with no plans to replace with a new vehicle)** | 400 |

Describe any longer-term plans (FY 2025 and following) the agency has to reduce the overall size of the fleet. Describe if and how the agency is incorporating vehicle electrification considerations into these plans and future VAM studies.

|  |
| --- |
| DOE annually conducts a VAM on 20 percent of its fleet. This is a five-year cycle to ensure 100 percent of DOE fleets are studied. As part of the VAM process, questions are asked related to right typing vehicles and making ZEV determinations based on vehicle utilization. The most recent VAM identified 1,078 vehicles that could be acquired as BEV or PHEV – with an incremental cost of $22.7 million. |

#### v. Consolidation into the GSA Leasing Program

|  |  |
| --- | --- |
| **Description** | **Vehicles (#)** |
| **How many agency-owned vehicles has/will the agency consolidate into the GSA leasing program in FY 2023?** | 502 |
| **How many agency-owned vehicles is the agency planning to consolidate into the GSA leasing program in FY 2024?** | 0 |

## Section 5: Points of Contact and Plan Approval

For the Sept 1st submission, the **agency CSO must review and sign off on each strategic plan**.

After submission, CEQ and OMB will schedule agency Strategic Plan Reviews to meet with agency Sustainability staff, listed below, to discuss the details of the strategic plans.

**The head of the agency does not need to approve these initial plans for the Sept 1st submissions.**

**Strategic Plan Key Contacts**

|  |
| --- |
| Benjamin Robles, DOE Federal Fleet Manager, Office of Asset Management  Jade Silver, DOE ZEV Management and Program Analyst, Sustainability Performance Office  Benjamin Calvert, DOE Federal Fleet Contract Support, Sustainability Performance Office |

**Coordination with Budgets Office**

|  |  |  |
| --- | --- | --- |
|  | Plan has been shared with the Agency Budget office | Katherine Donley, Director, Office of Budget |

**Chief Sustainability Review and Approval**

|  |  |  |
| --- | --- | --- |
|  | CSO has reviewed and approved the plan | Ingrid Kolb, Director, Office of Management, and DOE’s Chief Sustainability Officer |

# 

# DOE Net-Zero Emission Buildings Strategic Plan for FY 2024

## Section 1: Net-Zero Emissions Buildings Targets

|  |  |
| --- | --- |
| Target: | Net-zero emissions building portfolio by 2045, including 50 percent reduction in GHG by 2032 from 2008 levels. |
| Metric: | Reduction in annual scope 1 and 2 emissions (MT CO2e). |
| Progress Milestone: | Agencies will set annual emissions reduction targets in consultation with CEQ and OMB, beginning with FY 2023. |

### A. Strategy Overview

|  |
| --- |
| In 2008, DOE’s Scope 1 and 2 GHG gas emissions were 4,696,000 MTCO2e; in 2022, they dropped to 2,194,000 MTCO2e – a 53 percent reduction. While the Department has already achieved its 50 percent reduction goal, to continue this momentum, DOE is finalizing a buildings roadmap to set the course for achieving building efficiency and electrification in conjunction with carbon-pollution free energy, as part of its net-zero strategy. DOE’s existing CFE Roadmap provides the other piece of DOE’s net-zero facility strategy. Once DOE’s buildings are electrified and operate on CFE, they will be net-zero facilities. These two roadmaps outline DOE’s approach toward identifying net-zero opportunities and planning for the budget requirements to implement those opportunities. |

### B. Targets and Plans

The FY 2024 Net-Zero Emissions Buildings Strategic Plan (BSP) includes the following goal areas and targets required under E.O. 14057:

|  |  |
| --- | --- |
| Goal Area | Request from agencies |
| 1. Energy Efficiency | Target energy use intensity (EUI) (FY 2030 and annual milestones) |
| 1. Water Efficiency | Target water use intensity (WUI) (FY 2030 and annual milestones) |
| 1. Federal Building Performance Standard | Target percentage of floor area that meets the Federal BPS (FY 2030 and annual milestones) |
| 1. Deep Energy Retrofits | Target percentage of floor area that implements a deep energy retrofit (FY 2030 and annual milestones) |
| 1. Climate Smart Buildings Initiative | Targets for Scope 1 and Scope 2 emissions reductions delivered through performance contracting as established by the Climate Smart Buildings Initiative |

#### i. Energy Efficiency

|  |  |
| --- | --- |
| Target: | Agency-specific energy use intensity (EUI) target for FY 2030. DOE’s target is a 50 percent reduction from 2021 to 2030. |
| Metric: | Site-delivered British thermal units (Btu) consumed per gross square foot per fiscal year (Btu/GSF/FY). |
| Progress Milestone: | Agencies will set annual EUI targets beginning with FY 2023. |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Energy Use Intensity | FY21 | FY22 | FY23 | FY24 | FY25 | FY26 | FY27 | FY28 | FY29 | FY30 |
| Target EUI (Btu/GSF) | 133,933 | 123,394 | 121,000 | 118,000 | 114,000 | 108,000 | 96,000 | 84,000 | 72,000 | 67,000 |
| % Diff. from 2030 target | 100% | 84% | 81% | 76% | 70% | 61% | 43% | 25% | 7% | 0% |

##### Implementation Plans:

|  |
| --- |
| DOE recently updated its Departmental Sustainability Order 436.1A to include requirements to analyze energy conservation measures and implement those that are economically lifecycle cost effective within two years. In addition, DOE has modified its Sustainability Dashboard database to better track the status of energy conservation projects identified via routine site energy assessments. Furthermore, DOE has recently integrated a sustainability crosscut analysis into its budget planning process which will allow DOE programs to identify their funding requirements for energy conservation measures as well as other sustainability-related initiatives. DOE now has the policy in place to implement energy conservation measures and has the tools in place to plan and track implementation and identify resources. The next steps will be for DOE programs and sites to identify their planned energy conservation actions, update the Sustainability Dashboard to communicate these plans, and use the sustainability crosscut budget to identify and request funds to support these projects. Sites will update their sustainability plans accordingly by the end of the first quarter of FY 2024. |

#### ii. Water Efficiency

|  |  |
| --- | --- |
| Target: | Agency-specific potable water use intensity (WUI) target for FY 2030. DOE’s target is a 50% reduction from 2021 to 2030. |
| Metric: | Annual agency potable WUI: gallons (Gal) per GSF per fiscal year (Gal/GSF/FY). |
| Progress Milestone: | Agencies will set annual WUI targets, beginning with FY 2023. |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Water Use Intensity | FY21 | FY22 | FY23 | FY24 | FY25 | FY26 | FY27 | FY28 | FY29 | FY30 |
| Target WUI (Gal/GSF) | 43.9 | 45.0 | 43.0 | 40.0 | 37.0 | 34.0 | 31.0 | 28.0 | 25.0 | 22.0 |
| % Diff. from 2030 target | 100% | 105% | 96% | 82% | 69% | 55% | 41% | 28% | 14% | 0% |

##### Implementation Plans:

|  |
| --- |
| DOE sites are conducting water balance studies to identify the various processes and activities that use water across their facilities. Scheduled for completion by March 2024, these studies will provide sites with a good indication of where they use water as well as a relative indication of which activities have higher consumption. As a follow-on to these studies, DOE’s SPO will then review the sites’ reports to develop a department-wide picture of water consumption along with recommendations on areas of focus for conservation initiatives. In addition, DOE’s recently updated Departmental Sustainability Order makes this an enduring agency process by requiring updates to these water management reports on a recurring five-year basis. |

#### iii. Federal Building Performance Standard (BPS)

|  |  |
| --- | --- |
| Target: | Meet the Federal Building Performance Standard (BPS) by FY 2030. |
| Metric: | Cumulative percentage of portfolio by GSF that meets the BPS. |
| Progress Milestone: | Agencies will set annual BPS targets, in consultation with CEQ and OMB, beginning with FY 2024. |

The Federal Building Performance Standard (FBPS) sets a goal for30 percent of each agency’s Federal buildings, measured by square footage, to achieve zero scope 1 emissions from on-site fossil fuel use through building electrification.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Federal BPS | BPS Applicable Facilities GSF (thousands)\* | | | | | | | 70,087 |
| Annual scope 1 emissions from applicable facilities (MT CO2e) | | | | | | | 402,196 |
| FY21-23 | FY24 | FY25 | FY26 | FY27 | FY28 | FY29 | FY30 |
| GSF (thousands) of facilities intending to electrify | 210 | 759 | 631 | 2,075 | 540 | 1,239 | 385 | 1,540 |
| Count of buildings intending to electrify | 33 | 24 | 23 | 39 | 26 | 32 | 20 | 49 |
| Cumulative % of GSF that meets the Federal BPS | 0% | 1% | 2% | 5% | 6% | 8% | 8% | 11% |

##### Implementation Plans:

|  |
| --- |
| Note, the gross square footage of applicable buildings under the Federal Building Performance Standard (FBPS) is a rough estimate at this point based on the total square footage of all DOE’s Energy Independence and Security Act (EISA) Section 432 covered facilities. DOE is working on developing tools and procedures for identifying a building-by-building FBPS baseline. To accomplish this, DOE will incorporate building-level data collection into its sustainability database of record to identify which specific covered buildings across the complex generate Scope 1 emissions and will incorporate procedures to identify specific buildings planned for electrification in its annual site sustainability planning process. DOE expects to accomplish this by the end of the first quarter of FY 2024. To date, DOE sites have identified a total of 246 buildings that will be electrified between now and 2030 (119 of those are planned retrofit projects and 127 of those are planned new construction). Together, these planned electrification projects will encompass about 7.4 million square feet. |

#### iv. Deep Energy Retrofits

|  |  |
| --- | --- |
| Target: | Implement deep energy retrofits in at least 30 percent of owned covered facilities by FY 2030. |
| Metric: | Percentage of GSF that completed deep energy retrofits, starting from FY 2019. |
| Progress Milestone: | Agencies will set annual deep energy retrofit targets, beginning with FY 2023. |

To qualify as having completed a deep energy retrofit, a facility must achieve a 40% reduction in EUI from a FY 2019 baseline. Agencies are tasked to set annual targets leading up to and including FY 2030 Agencies to demonstrate how they will achieve the goal of implementing deep energy retrofits in at least 30% of covered facilities no later than FY 2030.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Deep Energy Retrofits | Covered Facilities GSF (thousands) subject to deep energy retrofit requirement\* | | | | | | | | 70,087 |
| FY19-22 | FY23 | FY24 | FY25 | FY26 | FY27 | FY28 | FY29 | FY30 |
| GSF (thousands) planned to achieve deep energy retrofits each FY | - | - | 46 | 651 | 1,352 | 2,229 | 9 | 34 | 233 |
| Count of buildings intending to implement deep energy retrofits | - | - | 2 | 8 | 20 | 33 | 2 | 3 | 3 |
| Cumulative % GSF that meets deep energy retrofit criteria towards 2030 target | 0% | 0% | 0% | 1% | 3% | 6% | 6% | 6% | 6% |

##### Implementation Plans:

|  |
| --- |
| DOE is in the process of updating its site sustainability planning instructions to add a section in sites’ plans to address this topic and identify any buildings or facilities where sites plan to implement deep energy retrofits along with an implementation timeline. DOE received sites’ updated plans in the first quarter of FY 2024. Please note that DOE is not emphasizing deep energy retrofits as a goal unto itself but, rather, as one approach among many to achieve across-the-board reductions in energy consumption and GHG emissions. DOE has set the following hierarchy:  1. Facilities undergoing major renovations: incorporate deep energy retrofit requirements into renovation scopes of work.  2. Facilities included in upcoming performance contracts: include a deep energy retrofit as part of the preliminary assessment to determine implementation feasibility; if feasible, include in the performance contract scope of work.  3. EISA 432 covered facilities expected to remain in DOE’s portfolio in the next ten years that have not undergone major renovations or have been part of a performance contract within the past ten years: analyze the feasibility of a deep energy retrofit during the next round of four-year energy and water evaluations.  DOE will focus on maximizing energy and emission reductions in a lifecycle cost effective manner across all of its facilities regardless of whether specific buildings can reach the 40 percent deep energy retrofit threshold. To date, DOE sites have identified a total of 71 buildings for planned deep energy retrofit projects which will cover about 4.5 million square feet. |

#### v. Climate Smart Buildings Initiative (CSBI)

|  |  |
| --- | --- |
| Target: | Agency-specific target for Scope 1 and 2 emissions reductions delivered through performance contracting by FY 2030. |
| Metric: | Annual emissions (MTCO2e) reduction expected as a result of projects awarded during the FY. |
| Progress Milestone: | Agencies will set interim milestones for FY 2024 and FY 2027. |

To meet the goals of E.O. 14057, agencies must develop a strategy to increase and sustain performance contracting efforts, aligned with the Climate Smart Buildings Initiative, and integrate it into comprehensive facility portfolio planning and emissions reduction efforts.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Planned Performance Contracting GHG Reductions | FY24 | FY25 | FY26 | FY27 | FY28 | FY29 | FY30 |
| Number of Performance Contract Awards in the FY (ESPC, UESC, etc.) | 5 | 7 | 10 | Optional | Optional | Optional | Optional |
| Annual Energy Savings (MMBtu) | 12,025 | 16,835 | 24,050 | Optional | Optional | Optional | Optional. |
| Investment ($) | 67M | 119M | 171M | Optional | Optional | Optional | Optional |

##### Implementation Plans:

|  |
| --- |
| DOE’s buildings roadmap (currently in development) will emphasize performance contracting as DOE’s preferred, first choice method for funding and implementing energy and water savings projects. In addition, DOE continues to provide performance contracting education and awareness to groups beyond its core community of sustainability professionals. Through webinars and other information sessions, DOE is reaching out to procurement managers and facility managers across the complex to deliver training and hold discussions on initiating and managing energy savings performance contracts (ESPCs) and utility energy service contracts (UESCs). DOE operates an ESPC Review Board to evaluate new projects and task orders at the request of the respective program office. The DOE ESPC Review Board consists of headquarters representatives from the SPO, FEMP, Office of Project Management, Office of the Chief Financial Officer, and Office of General Counsel who each review new DOE ESPCs according to their areas of expertise and provide feedback and recommendations to help ensure a successful contract. In FY 2023, DOE awarded one performance contract with a total investment of $5.1 million and an estimated annual energy savings of 2405 MMBtu. For FY 2024, five sites are planning to award new ESPCs or new task orders for existing ESPCs with a total investment of approximately $67 million. The FY 2024 performance contracts are still in development and sites have yet to fully characterize the associated reductions in annual Scope 1 and Scope 2 GHG emissions. |

### C. Implementation Strategies

### 

#### i. Net-Zero Emissions New Construction

|  |  |
| --- | --- |
| Target: | All new construction and modernization projects greater than 25,000 GSF must be designed to be a Federal net-zero emissions facility by FY 2030. |
| Metric: | Annual percentage and gross floor area of Federal net-zero emissions new construction projects. |
| Progress Milestone: | Agencies to track progress annually. |

Agencies must ensure all new construction and modernization projects greater than 25,000 gross square feet entering the design phase in fiscal year 2022 and beyond are designed to be net-zero emissions by 2030, and where feasible, net-zero water and waste buildings.

A *Federal net-zero emissions building* is an efficient, all electric building that is designed and operated so that Scope 1 and 2 GHG emissions from all facility energy use equal zero on an annual basis, when connected to on-site renewable energy or a regional grid that provides 100 percent CFE on a net annual basis.

##### Implementation Plans:

|  |
| --- |
| DOE updated its *Program and Project Management for the Acquisition of Capital Assets* policy (Order 413.3b) in June 2023 to address net zero new construction. This updated order requires net-zero GHG emissions design for all applicable buildings over 25,000 square feet and to also requires net-zero water and net-zero waste buildings where feasible. In, addition, in May 2023, DOE updated its Departmental Sustainability Order to require net-zero design for all facilities over 25,000 square feet. To date, sites have identified a total of 127 new buildings planned for construction between now and 2030 that will be designed as net zero facilities (i.e., will be 100 percent electrified). |

## Section 2: NZE Buildings Strategic Budget Coordination

### A. Budget Planning Update

Please provide a brief description of the agency’s process to collaborate between its Chief Financial Officer (or the part of the agency responsible for executing the budget), the Chief Sustainability Officer (or the part of the agency responsible for achieving the sustainability goals) and the real estate management team (or the part of the agency responsible for maintaining and operating real estate).

|  |
| --- |
| DOE’s SPO and Office of the Chief Financial Officer (CFO) have collaborated to develop the Department’s first crosscut budget process for sustainability and climate actions. The CFO integrated this cross-cut process into its annual budget guidance in May 2023 for the FY 2025 budget year. Under the crosscut process, the CFO requests DOE’s program offices to list their accomplishments, challenges, current plans, and future plans for implementing a wide array of climate and sustainability topics including CFE, ZEV, efficient net-zero buildings, clean energy technologies, climate resilience, environmental justice, and climate literacy. The crosscut also requests enacted and requested budget information in these various categories. |

## Section 3: NZE Buildings Challenges

Provide details on the top one to three challenges that the agency faces on implementing the goals related to NZE Buildings. If challenges listed in the agency’s FY 2023 NZE Buildings Strategic Plan remain relevant, the agency may discuss them here, but should provide updated information. Do not list in this space general concerns related to funding and appropriations.

### A. FY 2024 Challenges

|  |  |
| --- | --- |
| Scope | Performing building-level planning to support electrification and deep energy retrofit initiatives is an agency-wide challenge. |
| Timing | This is a current challenge that will extend across the time-period that this strategic plan addresses and beyond (between now and 2030). |
| Plan | To overcome these challenges, DOE needs to develop building data collection tools that accommodate building-level detail and integrate building-level data collection and planning into its sites’ annual site sustainability plan development process. See below for more details, milestones, and timelines. |
| Implementation timeline | Develop hierarchies to indicate priorities for implementing electrification and deep energy retrofit projects. (Status – complete)  Integrate these hierarchies into the DOE’s Buildings Roadmap. (Status – in-progress, expected completion end of second quarter FY 2024)  Updated the Department’s Site Sustainability Planning instructions to request that sites identify building-specific projects for performing electrification retrofits and deep energy retrofits in their annual sustainability plans.  Updated the Department’s sustainability database of record to enable DOE to create a building-by-building level baseline inventory of assets that generate Scope 1 emissions.  Complete a site sustainability planning cycle with these new tools and instructions to identify successes and areas for improvement. (Status – planned completion by August 2024) |
| Additional assistance | Informational resources regarding electrification would be helpful. SPO understands that FEMP is currently working on developing such references. Ensuring that these resources include guidance for how to identify and prioritize good candidates (buildings) for electrification would be very useful. In addition, including examples of recent successful electrification projects from across the federal government for a variety of building sizes and types would also be helpful. |

## Section 4: Integrated NZE Buildings Management

### 

### A. Organizational Change Management

Share details of how the agency is organizing internally and educating staff to support its NZE Buildings goals*.*

|  |
| --- |
| DOE recently updated its 436.1 *Departmental Sustainability* Order which sets the Department’s primary policy on sustainability issues. The scope of the updated order is much more comprehensive than the previous version and addresses a wide array of sustainability and climate topics. In terms of sustainable building management, the order specifically sets policy regarding: sustainable, resilient, and net-zero building facility design, metering, water management planning, renewable energy, and green leasing.    In addition to integrating these policy changes into the Department’s operations, DOE has also been reaching beyond the Department’s sustainability community to engage with more groups on the topics of sustainability and building efficiency. For example, DOE is engaging with its senior leadership through quarterly sustainability meetings with the DOE Deputy Secretary to discuss progress and planned actions. DOE is also engaging more with the Department’s facility management community by including building sustainability topics on the meeting agendas of groups like the DOE Facility and Infrastructure Steering Committee (for higher-level program facility program managers) and the DOE Facilities and Infrastructure Quarterly Meetings (for all facility mangers across all programs and sites). DOE also provided several training sessions on performance contracting to the Department’s procurement community.  And to emphasize the need to incorporate sustainability into budget planning, the offices of DOE’s Chief Sustainability Officer and Chief Financial Officer worked together to integrate climate and sustainability considerations into the Department’s annual budget planning process. This new budget planning process requests that DOE programs provide information about their sustainability/climate accomplishments, challenges, current plans, future plans, and associated requested and enacted budget amounts. The net zero buildings effort specifically asks DOE programs to address energy and water conservation measures, deep energy retrofits, building electrification, and performance contracting. |

### B. Environmental Justice Plans

Share how the agency is integrating environmental justice (EJ) into its facility project prioritization and implementation process.

|  |
| --- |
| DOE’s Office of the Chief Financial Officer has also developed a sustainability/environmental justice budget crosscut to provide programs with an avenue to identify sustainability related project requirements in their budget requests. Among other environmental sustainability topics, this crosscut budget process includes an Environmental Justice category to identify actions to promote equity and energy justice. Examples include sustainability projects targeted at DOE sites in/or near underserved communities and research activities to understand environmental effects on such communities. The DOE financial office incorporated this crosscut into its official 2023 budget guidance to cover the budget planning year 2025.  DOE procurement and contracting activities are decentralized and managed at various field offices across the enterprise. Field procurement offices do consider environmental justice topics when reviewing and awarding contracts including contracts for real property management services. One example is DOE’s National Renewable Energy Laboratory (NREL) whose procurement office has specifically aligned its mission and facilities goals with the Justice40 initiative and includes elements of that initiative in its procurement source selection criteria. In addition to increasing its goal to use more small, disadvantaged businesses, NREL also integrates environmental justice considerations into its contracts.  Lastly, DOE is also incorporating environmental justice considerations into its “Cleanup to Clean Energy” initiative which seeks to facilitate new CFE generation and storage on federal real property. |

### C. Future of Work Impacts

Share how the agency’s efforts to assess the future of work, with regards to space needs and rightsizing the portfolio, could impact the agency’s building related GHG emissions reduction goals.

|  |
| --- |
| DOE is currently working on its future of work planning to establish long-term policies and direction on a hybrid-work environment and will take these policies into account for future sustainability planning and projections. DOE is also taking GHG emissions into account when developing these policies. For example, to support telework policy planning, DOE analyzed the impact of COVID on Scope 3 commuter emissions to gauge the impact of telework during COVID. Note that DOE focused on these Scope 3 emissions since they are more directly related to occupants’ activities compared to Scope 1 and 2 emissions which are more related building-wide operations of which occupants’ activities are just a portion. Results showed that while emissions dropped significantly during COVID, they rebounded to near pre-COVID levels after the end of pandemic. Regarding building operations, DOE expects future of work policies to have a measurable but perhaps not major impact on overall emissions in the near term. Part of the reason is that many DOE mission activities involve hands-on production processes and laboratory science activities which require personnel to be present in specialized laboratories and production facilities designed for those activities. Of course, DOE also houses many administrative/office type activities which may lend themselves well to hybrid/remote work. But even increased or sustained hybrid office work in the short term may not have a big impact on building emissions since building operations are not entirely occupant dependent. For example, the temperature of a building must generally be controlled across the facility regardless of the number of occupants. DOE has not yet seen significant divestitures of owned office space that would suggest the Department is shrinking and consolidating its office footprint in response to a new work environment. As a result, the same number of buildings continue to operate to support DOE activities (i.e., DOE is not decreasing emissions by operating fewer buildings). However, as future of work plans develop, this may change so that, in the long term, the Department is able to better consolidate employees into fewer buildings in response to enduring hybrid work polices. At that point, any significant decrease in building square footage could also lead to significant Scope 1 and Scope 2 emission reductions. |

## Section 5: Points of Contact and Plan Approval

For the Sept 1st submission, the **agency CSO must review and sign off on each strategic plan**.

After submission, CEQ and OMB will schedule agency Strategic Plan Reviews to meet with agency Sustainability staff, listed below, to discuss the details of the strategic plans.

**The head of the agency does not need to approve these initial plans for the Sept 1st submissions.**

**Strategic Plan Key Contacts**

|  |
| --- |
| Eric Haukdal, General Engineer & Real Property Analyst, Office of Asset Management  Steve Bruno, Management/Program Analyst, Sustainability Performance Office  Isabelle Heilman, Management/Program Analyst, Sustainability Performance Office |

**Coordination with Budgets Office**

|  |  |  |
| --- | --- | --- |
|  | Plan has been shared with the Agency Budget office | Katherine Donley, Director, Office of Budget |

**Chief Sustainability Review and Approval**

|  |  |  |
| --- | --- | --- |
|  | CSO has reviewed and approved the plan | Ingrid Kolb  Director, Office of Management |

**ATTACHMENT: Supplemental FY24 Buildings Strategic Plan Workbook**

