FISCAL YEAR 2023 SITE SUSTAINABILITY PLAN GUIDANCE

September 2022

U.S. Department of Energy
Sustainability Performance Division

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Acronyms

Acronym	Definition
ASER	Annual Site Environmental Report
BTU	British Thermal Unit
CARP	Climate Adaptation and Resilience Plan
CFE	Carbon Pollution-Free Electricity
CTS	EISA Section 432 Compliance Tracking System
C&D	Construction & Demolition Waste
DCIM	Data Center Infrastructure Management
DCOI	Data Center Optimization Initiative
DEAR	Department of Energy Acquisition Regulations
DOE	Department of Energy
EAC	Energy Attribute Credit
EAct 2020	Energy Act of 2020
ECM	Efficiency & Conservation Measure
EISA	Energy Independence and Security Act of 2007
EMS	Environmental Management System
E.O.	Executive Order
EPAct	Energy Policy Act
ERE	Energy Reuse Effectiveness
ESPC	Energy Savings Performance Contract
EUI	Energy Usage Intensity
EV	Electric Vehicle
EVSE	Electric Vehicle Supply Equipment
FAIRS	Federal Aviation Interactive Reporting System
FAR	Federal Acquisition Regulation
FAST	Federal Automotive Statistical Tool
FEMP	Federal Energy Management Program
FIMS	Facilities Information Management System
FPDS	Federal Procurement Data System
FRPP	Federal Real Property Profile
FY	Fiscal Year
GHG	Greenhouse Gas
GP	Guiding Principles
GSA	U.S. General Services Administration
HEMSF	High Energy Mission Specific Facility
HQ	Headquarters
IDC	Integrated Data Collection
ILA	Industrial, Landscaping, & Agricultural
LEED	Leadership in Energy & Environmental Design
MSW	Municipal Solid Waste
M&V	Measurement & Verification
OCIO	Office of the Chief Information Officer
OMB	Office of Management and Budget
PPA	Power Purchase Agreement
PUE	Power Usage Effectiveness
R2	Responsible Recycling
REC	Renewable Energy Credit
SAM	System for Award Management
SF_6	Sulfur Hexafluoride
SPD	Sustainability Performance Division
UESC	Utility Energy Service Contract
VARP	Vulnerability Assessment and Resilience Plan
VT	Verification Team
V&E	Vehicles and Equipment
WUE	Water Usage Effectiveness
WUI	Water Usage Intensity
ZEV	Zero-Emission Vehicle

Message from the Director, Office of Asset Management

Dear Sustainability Steering Committee Members,

I want to thank you for your work towards meeting Federal sustainability requirements as well as your program and site sustainability teams for developing the Site Sustainability Plans (SSPs).

As the Department's sustainability community, we are responsible for improving the performance and efficiency of energy, water, waste, fleet, procurement, and other sustainability areas. We strive to increase resilience and adapt to the changing climate through on-site renewable energy production, reduction of energy and water use, implementation of the Guiding Principles for Sustainable Federal Buildings, and a variety of other measures that help ensure that DOE's infrastructure continues to sustain our science, energy, defense, and cleanup missions. We are now at a pivotal point where all our personnel – from facility managers to operations managers, research scientists, energy managers, and everyone in between – must fully embrace a sustainability mindset for our sites to positively address the climate and energy challenges we face today. Today's climate situation poses risks to the Nation, federal operations, and property that supports the Department's essential work. Your work is crucial to increasing the efficiency of the Department's facilities and infrastructure, enhancing livability for the scientists and workers at the sites, improving performance for the taxpayer, and supporting the communities in which we live and work.

At the Office of Asset Management, we seek to assist programs in sustaining their missions, freeing up resources by reducing waste, avoiding excess expenditure on utilities, maximizing productivity, and improving the efficiency of facilities and processes. We believe that by focusing on mission needs, we can assist the programs in finding ways to help the Department meet its sustainability goals, as outlined in Federal statutory and regulatory requirements. The FY 2023 SSP Guidance aims to minimize and streamline reporting, while simultaneously addressing Federal requirements including Federal Government goals set by Executive Order 14057, *Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability:*

- 100 percent carbon pollution-free electricity (CFE) use by 2030, including 50 percent on a 24/7 basis.
- 100 percent acquisition of zero-emission vehicle (ZEV) by 2035, including 100 percent light-duty ZEV acquisition by 2027.
- A net-zero emissions building portfolio by 2045, including a 50 percent emissions reduction by 2032.
- Net-zero emissions from Federal procurement by 2050.
- Climate resilient infrastructure and operations.
- Advance equity and environmental justice.

Thank you again for your hard work and I look forward to a continued successful partnership in meeting the Department's sustainability and climate goals.

Scott L. Whiteford
Director, Office of Asset Management
U.S. Department of Energy

Introduction

This document provides guidance for DOE sites to complete their FY 2023 SSPs. As required by DOE Order 436.1, *Departmental Sustainability,* each site must develop and commit to implementing an annual SSP that identifies its contributions toward meeting the Department's sustainability goals. SSPs should provide an overview of results/accomplishments, discuss plans, and highlight successes and challenges of site sustainability and climate mitigation efforts. For the FY 2023 SSP, there is an increased focus on efforts related to carbon pollution-free electricity (CFE), net-zero emission buildings, zero-emission vehicles (ZEV) and fleet management, and performance projections to address the requirements of Executive Order (E.O.) 14057, *Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability*.

Since 2011, SPD has issued guidance documents for DOE sites and national labs—thereafter referred to as sites within this guidance—to complete sustainability reporting requirements. The *Site Sustainability Plan Guidance* serves as a resource for reporting data and developing the SSP narrative. This document is reviewed regularly and revised as needed to reflect updated requirements, executive orders, and reporting process improvements. This guidance presumes that sites have undertaken the steps of gathering and analyzing the data required for annual reporting in the Dashboard and formulating the SSP. Sites can start entering data into the Dashboard as early as February.

The Dashboard collects both the data and SSP narrative necessary to report DOE's progress on its sustainability requirements. Sites should ensure consistency between the narrative, reported Dashboard data, and other major documents and initiatives. This includes publications and data reported in other systems, such as the Federal Automotive Statistical Tool (FAST), Facilities Information Management System (FIMS), Annual Site Environmental Reports (ASER), Federal Procurement Data System (FPDS), and budget reports.

To submit the FY 2023 SSP and supporting documentation, sites are to use the SSP narrative module in the Dashboard and approve their plan via the Dashboard's completion process. Direct entry into the Dashboard for the SSP narrative is required. If you wish to enhance the format of the SSP, please enter information in the Dashboard's SSP module, then download the report and make any necessary formatting changes. Sites can then upload this new version as a Word or PDF file with supporting documents to the Executive Summary category of the SSP module. The sustainability data is due **November 18** and the SSP narrative is due **December 2, 2022**. To ensure the accuracy of DOE's sustainability data, a second-party Verification Team (VT) is assembled to conduct an audit of the data annually. The sites selected to participate in this year's data verification process were notified in **July 2022**.

SPD will host training sessions and weekly Open Line Help Calls to answer questions on the sustainability data and SSP reporting process. A schedule with call-in information is available on the Dashboard's Reporting Schedule page. Additionally, Dashboard training tutorials as well as other resources to aid in reporting can be found on the Dashboard's Supporting Resources page.

Data provided in the SSP and other reports may be subject to disclosure under the Freedom of Information Act. In addition, with concurrence from Program Offices, active projects and success stories may be selected for inclusion in the Department's reports, plans, newsletters, and other documents.

Please contact the Sustainability Performance Division at sustainability@hq.doe.gov with any questions.

Major Changes & Important Reminders

Summarized below are major changes to this year's reporting as compared to last year, along with reminders of upcoming reports.

Area	Changes & Reminders
Energy Management	• To support the CFE and net-zero emission efforts, several fields are being added to the data entry modules of the Dashboard with an ETA of early October. To the maximum extent feasible, these will be prepopulated with existing data and will be optional fields for FY 2022 reporting and required thereafter. • Metering updates will be captured directly within the Dashboard and will be due in February along with energy and water evaluation status updates. SPD will prepopulate the new metering module with site provided data. • Include a subsection with a focus on CFE while still integrating with other relevant categories.
Water Management	• Reminder, all sites are to complete their water management plans, including a water balance analysis, by the end of FY 2023.
Fleet Management	• Include a subsection with a focus on site fleet management plan and processes.
Sustainable Buildings	• Include a subsection with a focus on net-zero emission buildings while still integrating with other relevant categories.
Acquisition & Procurement	• Per section 3b of the DOE's Climate Adaptation and Resilience Plan (CARP) sites are to complete a Supply Chain Risk Assessment. SPD is currently developing the guidance for this and will work with programs to set the due date.
Investments: Improvement Measures, Workforce, & Community	• Section name change to capture investments in our facilities through efficiency and conservation measures (ECM), workforce, and communities, especially in regard to environmental and economic justice. • Performance Contracting will be tracked directly in the Dashboard through the ECM module. • A new standard report is being developed to inform budget requests based on current Dashboard data entry fields. Tentative ETA December 2022. • For the Investment section, include a subsection with a focus on workforce development and environmental and economic justice in communities.
Indirect Emissions	• Section name change to capture existing efforts to reduce Scope 3 emissions and new Scope 3 categories.

Area	Changes & Reminders
Resilience	• A Resilience Solutions Tracking module has been added to the Dashboard to track resilience solutions identified in site Vulnerability Assessment and Resilience Plans (VARPs). Initial dataset is due along with VARPs on September 30, 2022. Be sure to regularly update the data, similar to the ECM module.

SSP Narrative Guidelines

The SSP is comprised of two main components: the narrative and the data. This guidance document outlines the requirements for the narrative, which consists of an Executive Summary table and 12 sustainability narrative categories. In addition to incorporating within the existing 12 narrative categories, for this year, sites are requested to add custom categories to address the focus areas of CFE, net-zero emissions buildings, and zero emissions fleet. The SSP narrative is intended to inform site management, programs, and headquarters of key accomplishments, reporting period performance, challenges, and future initiatives. For each SSP category, sites are to report on FY 2022 performance along with plans and projected performance and address applicable relevant discussion topics. The use of graphs and/or tables in the SSP narrative is encouraged.

SPD recognizes that some goals and requirements overlap, such as greenhouse gas (GHG) emissions reduction, and climate change adaptation and resilience efforts. For SSP categories with overlap, sites can discuss efforts by either integrating aspects of efforts in the relevant section or creating a new custom category within the Dashboard's SSP module.

Under Current Performance, sites should:

- Address major initiatives, projects, or changes to missions or facilities in FY 2022 that impact performance in each category.
- Share FY 2022 success stories and accomplishments. Success stories should focus on results/accomplishments and include relevant savings (e.g., energy savings, water savings, waste reduction, cost savings), cost of implementation, and lessons learned.
- Quantify performance towards goals and savings (i.e., sustainability and cost savings) and ensure the percent change from both the prior year and goal baseline year are correct in Dashboard's Comprehensive Scorecard module. Submit change requests for historical data if needed.
- Discuss challenges and obstacles as well as solutions and insights gained.
- Ensure existing policies, procedures, and plans are uploaded to the Dashboard for ease of reference.

Under Plans and Projected Performance, sites should:

- Address major planned activities (e.g., mission changes, projects, new energy systems, new construction, major renovation, deactivation and decommissioning, procurement strategies, and policy and procedures updates) and expected impact of these planned activities. Quantify when possible.
- Estimate and forecast annual energy, water, clean and on-site renewable energy output, compliant sustainable buildings, and waste generation and diversion. Projection data is to be entered into each respective SSP category. At a minimum, provide current FY data and projections for the next five years. If your site is large and projection data is not available, please explain. If your site is small, performance estimates are encouraged but not required. Projection data is an important dataset used by the SPD to set agency targets.
- Discuss challenges and obstacles, include possible solutions and requests for technical assistance. If a goal area has a high risk of non-attainment, as assigned in the executive summary table, describe the rationale by type of risk(s).

Pre-existing documentation may be referenced in lieu of writing new descriptions. In such cases, please reference the document in the appropriate SSP category and ensure it is documented under the relevant category's Site-Level Policy Tracker in the Dashboard as an attachment or link.

Executive Summary

The executive summary should be concise and no more than three pages, not including the executive summary table. This summary should discuss mission changes, successes and challenges including investments that improve mission performance and result in significant efficiency and sustainability gains. For this year, also address focus areas. In addition to the executive summary narrative, sites must complete the executive summary table within the Dashboard's SSP Executive Summary category. Please ensure the summary table and narrative are consistent with the data entered into the Dashboard. If discrepancies exist, submit a change request via the Dashboard.

Within the executive summary table be sure to assign a risk of non-attainment for each sustainability goal using the following definitions:

- High Risk (H): Risk in at least one of the risk types is so significant that non-attainment of goal is likely or expected. Describe the rationale for the high risk of non-attainment in the relevant SSP category.
- Medium Risk (M): Risk in at least one of the risk types is so significant that it is moderately likely you may not attain the goal.
- Low Risk (L): Any risks associated with this goal are being satisfactorily mitigated such that attainment of the goal is likely.

Assess the risk of non-attainment for each goal by considering the following types of risks:

- Technical: Technology and/or systems are not available in current facilities.
- Management: Management systems, policies, and/or support may require changes to policies, procedures, or contracts.
- Mission: Major initiatives, construction, and/or changes to mission that substantially impact sustainability goals.
- Financial: Funds are not identified in current or forecasted years and performance contracts are not viable.
- Supply Chain: Interruptions to flow of material, purchased goods, and services.

Energy Management

Describe site efforts to reduce energy intensity, non-fleet fuel use, increase use of CFEs, approach to achieve a net-zero emissions portfolio, and associated GHG emissions. Sites should also include metering and benchmarking efforts, approach to conducting energy evaluations and implementing an energy management system (EnMS). Address the following key topic areas:

- Approach for converting buildings to be net-zero emissions. Highlight efforts to decrease emissions from real property, ensure new buildings meet net-zero goals, and efforts to electrify equipment that use fossil fuels.
- For sites with High-Energy Mission-Specific Facilities (HEMSFs) and high-performance computing (HPC)/data centers, highlight the facilities' impacts on sustainability metrics and proposed investments.
- Initiatives, projects, or actions that impact energy use and/or efficiency – describe separately for goal subject and excluded assets. If excluding buildings from the energy use intensity goal, complete the Excluded Buildings Self-Certification in the Dashboard's Completion Status module.

- Efforts to reduce and electrify non-fleet vehicles and equipment (V&E) not captured by FAST. Non-fleet V&E consists of motorcycles, non-highway vehicles, planes, boats, and equipment (e.g., forklifts, generators, lawnmowers, and leaf blowers).
  - Reminder: Report fuel usage and cost for non-fleet V&E in the Dashboard. The Federal Aviation Interactive Reporting System (FAIRS) does not capture fuel data.
- Energy management strategies and procedures, including:
  - Energy management system (EnMS), such as ISO 50001 or DOE's 50001 Ready Program.
  - Energy evaluations, re-/retro-commissioning, continuous commissioning, and deep energy retrofits.
  - Energy management information systems (EMIS), advanced meters and metering infrastructure, interval data analytics/collection, automated fault detection and diagnostics, utility bill management, benchmarking, grid-interactive efficient building measures, and measurement and verification of measures.
  - Operations and maintenance procedures of assets, deferred maintenance and repair reduction, implementation of setbacks, footprint reduction, and space optimization policies.
  - Cybersecurity policies and procedures for systems.

Note: The Dashboard's Facility Metering Status is being revamped and there is no longer a metering workbook. The metering data will be due in February 2023 along with energy and water evaluation status.

For this year's report, add a subsection with a focus on CFE plans that addresses key topic areas noted below. If you provided input to your program for the program-level CFE plans, leverage that information. Include details of current year efforts, if any.

- CFE procurement options from utility suppliers to increase use by the site and accelerate the transition of the electricity sector.
- Strategies for measuring and tracking CFE consumption and supply to achieve 24/7 CFE.
- Special procurement contract agreements, such as conventional hydro-specific agreements.
- Opportunities for on-site CFE generation, carbon capture and storage options, as well as land availability for large systems.
- On-site systems that convert fossil fuel to electricity and options for converting to CFE source energy along with paths and timeframe and challenges.
- Strategies and actions, such as electrification, demand response, rightsizing facilities, adoption of emerging technologies and building standards, and efforts to increase efficiency.
- Government-wide coordination and collaboration efforts to increase CFE use, including DOE's Tribal preference policy.
- Discuss projected performance, and relative increase or decrease of net electricity use and supply of CFE.

Water Management

Describe initiatives to reduce potable and non-potable water consumption, comply with stormwater management requirements, and improve water efficiency. In addition, summarize any obstacles related to the implementation of conservation strategies or the collection of water consumption data. Address the following key topic areas:

- Identify major potable and non-potable fresh water consuming end-uses, such as cooling, heating, plumbing, irrigation, and laboratory equipment, and estimate usage. If complete, upload the site's water

management plan and water balance under the Dashboard's Facilities Site-Level Policy Tracker. Note, all sites must develop a water balance by the end of FY 2023 per the 2021 DOE *Sustainability Plan*.
- Initiatives, projects, or actions that impact water use and/or conservation. Quantify when possible.
- Water management strategies and procedures, including:
  - Use of alternative water sources (i.e., gray water, harvested rainwater, reclaimed water, process discharge water) to offset the use of fresh surface and groundwater sources.
  - Evaluations and conservation measures, metering and benchmarking, optimization of systems, and operations and maintenance practices.
  - Landscape management best practices to reduce stormwater runoff, minimize water use, and promote resilience.
- If applicable, summarize non-potable freshwater used for industrial, landscaping, and agricultural (ILA) purposes and specify the water supply source. Note, on-site alternative water is reported separately from non-potable freshwater use.
- If applicable, discuss efforts to eliminate scope 1 emissions from on-site wastewater management.

Waste Management

Describe your site's approach for reducing municipal solid waste (MSW) and construction and demolition (C&D) waste and increasing diversion through reuse, recycling, composting, and waste to energy. Address the following key topic areas:

- Current and planned efforts to divert and track/measure MSW (non-hazardous waste including food and compostable material) and C&D waste from landfills. Note any changes in diversion efforts, such as new diversion programs or recycling policies affecting diversion.
- Anticipated impact of site mission, population changes, modernization, renovation, and projects and how these projects will affect recycling and MSW/C&D waste generation rates.
- Waste hauling contract provisions for waste minimization and diversion, as well as reporting of waste data to facilitate tracking of MSW and diversion rates.
- Increase the use of acceptable non-toxic or less-toxic alternative chemicals and processes while minimizing the acquisition of hazardous chemicals and materials (such as ozone-depleting substances and fluorinated gases).
- Efforts to reduce scope 1 and 3 emissions from on-site and contracted waste management facilities.
- Procedures and policies for ensuring a C&D waste management plan is in place for new construction, modernization, or renovation.

Fleet Management

Describe your site's approach for fleet optimization, petroleum use reduction, alternative fuel use increase, and transition to a net-zero emission fleet. Address the following key topic areas:

- Since FAST data will not be finalized by the SSP submission deadline, provide qualitative descriptions of your site's performance towards goals.
- Strategies for reducing petroleum use, optimizing fleet operations and maintenance, and anticipated impact on emissions.
- Efforts to increase on-site electric vehicle charging with capability to track energy use separate of facilities with submetering, and energy resilience through bi-directional charging.

For this year's report, add a subsection that provides an overview of your site's fleet management program and policies that govern procurement, utilization, disposition, and mission support. If you have an existing plan, leverage that information and be sure it addresses key topic areas noted below. If otherwise, address the following key topic areas:

- Description of fleet management organizational structure, including contact information for:
  - Federal Fleet Manager
  - Budget Officer, if applicable
- Identify and describe mission changes that will impact your site's fleet.
- Vehicle use policies and procedures, and upload to the Dashboard's policy tracker module. Include:
  - Employee check-out standards.
  - Driver training on proper driving behavior and fueling requirements.
  - ZEV and electric vehicle supply equipment (EVSE) related training processes and plans for vehicle operators.
  - Home to work use, personal and visitor vehicle charging, and ability separate accounting.
- Fleet use, management, and deployment of telematics, including current status and the timeline for installation on all DOE-owned and GSA-leased vehicles.
- Vehicle Allocation Methodology (VAM) efforts:
  - Efforts to control fleet size and cost.
  - Basis used for future cost projections.
  - Progress towards optimal fleet profile as prescribed by the DOE June 2021 VAM study. If any changes in direction of the June 2021 VAM, address.
  - Additional site level VAM efforts currently being conducted.
- Summary of your site's annual ZEV and EVSE strategies and plans:
  - Project fleet inventory progress/needs beyond FAST along with anticipated performance
  - Opportunities to install necessary charging or refueling infrastructure, including metering to separate out usage and off-peak charging.
  - Address both government owned and leased, along with contractor-operated vehicles
  - Site-specific challenges to implementation and deployment of ZEVs and/or EVSE.
- Describe your site's fleet management information system (FMIS):
  - Are you using a commercially off-the-shelf (COTS) FMIS or personal property management system, an in-house developed system, or GSA's Federal Fleet Management System (FedFMS)?
  - Data accuracy issues amongst systems, if any.

Clean & Renewable Energy

Describe efforts to utilize clean, especially carbon pollution-free, and renewable energy resources. Keep in mind the use of clean and renewable energy, regardless of electric or thermal, contribute to progress towards multiple goals, such as energy usage intensity (EUI), GHG, and climate change. Address the following key topic areas:

- Strategy to increase and prioritize on-site clean and renewable energy generation, including carbon capture and storage options along with land availability for large systems.
- Efforts to increase use of CFE through energy purchases that include the property rights to the environmental, social, and other non-power attributes of the CFE, on-site systems, or purchased energy attribute certificates (EACs).
  - Note, EACs are similar top RECs in that they transfer the rights to attributes of the CFE system.

    - Existing renewable energy purchase contracts and on-site generation systems count towards CFE up to 7.5 percent at the agency level. New contracts are subject to the parameters of place in service on or after October 1, 2021, delivery to the same balancing authority, and produce CFE.
- Opportunities for microgrids, energy supply arrangements, energy storage, replacement of fossil fuel-based heating with electric or thermal renewable energy systems.
- Incorporation of DOE Procurement Policy Guidance on Purchase of Electricity, Energy Products and Energy By-Products from Indian Tribes.

Sustainable Buildings

Describe efforts to shift towards a more sustainable building portfolio by increasing the number of buildings compliant with the Guiding Principles for Sustainable Federal Buildings (GPs), the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Standard 90.1, and net-zero emission, water, and/or waste. Address the following key topic areas:

- Existing and new buildings that meet the GPs, as well as plans to reassess every four years.
    - Barriers to meet the GPs in remaining facilities and identify the most challenging GPs. If available, include cost estimates for compliance.
    - Note, the gross square footage threshold has been increased to 25,000. SPD recommends focusing on buildings with the greatest cost efficiency gains from meeting the GPs, as all owned buildings meeting the GPs will receive credit regardless of their square footage.
    - Note, SPD recommends ensuring compliant buildings are reassessed no later than FY 2025 and every four years thereafter.
- Energy reduction per ASHRAE Standard 90.1 2019 in new buildings and major renovations at Critical Decision (CD) -1 for all buildings, regardless of size or cost per 42 USC 6834 (a).
- Plans to ensure capital asset construction, renovation, and modernization projects with an anticipated total project cost of $50 million or more and at CD-1 integrate sustainability and resiliency measures per the Deputy Secretary's Memorandum on *Climate Adaptation, Resilience and Sustainability in Project Management, April 5, 2022*.
- Incorporation of sustainable, healthy, and climate-resilient building practices into institutional documents, procedures, and processes, such as site planning documents, policies, and specifications.
- Steps to ensure new federal leases for space greater than 10,000 rentable square footage are in Energy Star buildings per 42 USC 17091.
    - Note, the General Services Administration will provide guidance for green lease contracts issued after September 30, 2023 and at least 25,000 rentable square footage. If you have existing green leases that include provisions such as reduction and reporting of energy, water, waste, and material resource use, consider highlighting and lessons learned.

For this year's report, add a subsection with a focus on net-zero emissions, water, and/or waste plans that addresses key topic areas noted below. Include details of current year efforts, if any.

- Approach to integrating energy, water, waste, fleet, facilities, operations, resilience, and procurement activities, as well as how sustainability projects are developed, tracked, and prioritized within outyear budgets, and opportunities for alternative financing through performance contracts.
- How the fossil fuel reduction design strategies per 42 USC 6834 are being integrated into net-zero emission efforts.
- Coordination efforts amongst stakeholders by identifying each and their role to promote net-zero emission.

- Strategies to accelerate achieving net-zero emission goals, such as deep energy retrofits, building electrification, and replacement of fossil fuel consuming equipment.
- Technologies needed to achieve net-zero emission and strategies for addressing or collaborating on these challenges.
- A high-level strategy for applying a site-wide net-zero framework that compliments building-level efforts.
- Efforts to ensure all new construction and modernization projects greater than 25,000 square feet entering the design phase (CD-1) in fiscal year 2022 and beyond are designed to be net-zero emissions by 2030, and where feasible, net-zero water and waste buildings. Net-zero emission buildings are energy efficient, all electric buildings that when connected to on-site renewable energy or a regional grid that provides 100 percent CFE on a net annual basis is sufficient to provide an annual balance of zero scope 1 and scope 2 emissions. Include:
  - Use sustainable materials and low embodied carbon materials, as determined by whole building life-cycle assessments.
  - Reduction and diversion of construction and demolition debris from treatment and disposal facilities, landfill, combustion and incineration, and tracking of diversion.
  - Installation of necessary EVSE to support an electric fleet, facility security, and technical feasibility.
- Opportunities and challenges for reducing emissions from process loads that consume fossil fuel for support to manufacturing, industrial, commercial, or research process. Identify process loads with challenges, describe the challenge, and note if it is separately metered or not. If the process is already being excluded from the energy use intensity goal, be sure to update the justification to include net-zero emission and details of challenges.

Acquisition & Procurement

Describe the incorporation of all relevant sustainable acquisition clauses, recent sustainable purchases, and efforts to improve your site's supply chain GHG emissions. Address the following key topic areas:

- Efforts to maximize sustainable acquisition of products (see DOE's Priority Products List) and services that include:
  - Energy efficient (ENERGY STAR or FEMP-designated)
  - Water efficient (WaterSense)
  - Biobased (USDA BioPreferred)
  - Environmentally preferable
  - Non-ozone depleting (Significant New Alternative Policy) chemicals or other alternatives to ozone-depleting substances and high global warming potential hydrofluorocarbons
  - Recycled content
  - Non-toxic or less toxic alternatives products (Safer Choice labeled)
  - Fuel efficient products and services (SmartWay Transport partners and SmartWay products)
  - Minimization of products that contain perfluoroalkyl or polyfluoroalkyl substances (PFAS).
  - Phasing out single-use plastics.
- Discuss how your site's sustainable acquisition strategy is applied and verified for new construction.
- Data collection method for sustainable acquisition contracts (i.e., tracking whether the contract includes sustainability clauses) and biobased product purchases (e.g., product category/type, cost) by addressing the following questions:

- Does your site collect sustainable acquisition contracts and/or biobased data in an internal system (i.e., excluding FPDS and SAM)?
    - If so, please describe the system.
    - If not, would the integration of the Sustainable Acquisition Contracts and Biobased Product Purchases Workbooks into the Dashboard be useful? Please explain.
- Do you report into FPDS or SAM?
    - If so, have you faced issues with using these systems? Please describe the issue(s) and ways that SPD can assist (e.g., more guidance, training, collection methods).

- Supply chain vulnerabilities and actions taken or planned to address each risk (e.g., climate resilient actions, supply chain analysis including scope 3 emissions). Note, all sites must develop a supply chain risk assessment to determine the reliability and vulnerability of their critical supply chains per Section 3b of the CARP. SPD is currently developing the guidance for this and will work with programs to set the due date.
- If any, discuss approach and lessons learned from procurement contracts that include provisions from emissions and climate risk.

For data reporting, if your site has access to the Federal Procurement Data System – Next Generation (FPDS) and System for Award Management please use these systems. If you do not have access to FPDS or SAM, or the data is inaccurate, please complete the Sustainable Acquisition Contracts and/or Biobased Product Purchases workbooks, as appropriate (see the FAQ on each workbook for more information). If the data in these systems is inaccurate, please contact HQProcurementSystems@hq.doe.gov for assistance to correct the data for future reporting.

If utilizing the workbook(s) for supplementary reporting, please upload the completed workbook(s) to the Acquisition & Procurement section of the Dashboard's SSP module as a supporting document. Only one Sustainable Acquisition Contracts Workbook and one Biobased Product Purchases Workbook should be uploaded per site. Note, the Biobased Product Purchases Workbook is due by **October 21, 2022,** and the Sustainable Acquisition Contracts Workbook is due by **November 18, 2022**.

Investments: Improvement Measures, Workforce, & Community

Describe investment efforts to implement identified ECMs through appropriations, performance contracts, or other funding mechanisms. Additionally, discuss investment efforts to continually enhance workforce capabilities and support the site's community, especially environmental and energy justice communities. For investment in ECMs highlight implemented measures and funding needed beyond planned activities as well as typical operation costs for meeting sustainability goals. If actively pursuing a performance contract, utilize the Dashboard to report on status. Address the following key topic areas:

- Plans to implement all life cycle cost effective ECMs. Note, EAct 2020 amends 42 USC 8253 (f) by requiring agencies to use performance contracts to address at least 50 percent of ECMs identified through energy and water evaluations within two years of identifying those ECMs.
    - For the life cycle cost effective ECMs you plan to accomplish via performance contract (e.g., Energy Saving Performance Contract (ESPCs), Utility Energy Service Contracts (UESCs), or Power Purchase Agreements (PPAs)) describe the site's efforts and progress in implementing those contracts.
    - For life cycle cost effective ECMs you plan to accomplish via direct or indirect funding, describe the site's efforts to insert those projects into the budget process.

- If a performance contract is actively being pursued, provide the contract vehicle under consideration, potential investment value, cost savings for both energy and water, types of ECMs covered, and status along with timeline for award.
- Approved FY appropriations, direct, and indirect obligations for ECMs, including facility surveys/evaluations. These are obligations for energy and/or water efficiency incurred from appropriated funds, revolving fund accounts including saving reinvestment programs or other accounts. This data is included in the FEMP Annual Energy Management Data Report Workbook for the OMB Scorecard and must be updated annually. If you are unable to provide this information, please explain.
- Measurement and verification (M&V) of implemented projects. Projects financed under ESPCs have a statutory requirement to conduct M&V. For non ESPC projects, DOE encourages M&V but recognizes that it may not be cost effective to perform continuous M&V on all projects.
- Initiatives to implement a savings reinvestment program and use of other funding options.

For investment in your site's workforce, discuss sustainability and climate related training and engagement activities. For investment in your site's community, discuss efforts to improve the communities' wellbeing and equity. Address the following key topic areas:

- Efforts to ensure facility energy managers demonstrate General Services Administration's (GSA) Federal Buildings Personnel Training Act of 2010 (FBPTA) core competencies.
- Initiatives or activities performed to promote sustainability and climate literacy, awareness, and action.
- Actions taken to incorporate and/or expand environmental justice into operations, planning, decision making, and procurement activities.
- Tribal and stakeholder engagement initiatives and approaches.
- Efforts to ensure sustainable and equitable siting that promotes conservation of natural resources, reduces emissions, increases resilience to climate change, integrates use of local infrastructure, expands use and access to public transportation, ensures equitable development that promotes environmental justice and spurs economic activity in disadvantaged communities, and coordinates with the development of Tribal, State, and local governments.

Indirect Emissions

Describe your site's scope 3 emissions relative to the categories of data that are currently collected (e.g., business travel, commute data) and those that apply but are currently not reported. Address the following key topic areas:

- Classify the applicability of the 15 scope 3 categories. Describe existing tracking and calculation methodologies and assess opportunities and challenges to address.
- Policies and/or programs to minimize GHG emissions from business travel and employee commuting, as well as insights into the most effective ones.
- Altered work schedule or reduced office space due to COVID-19 and impact of the changes.
- Initiatives to promote alternative transit methods, participation in regional transportation planning, and efforts to promote community transportation infrastructure.
- Current or existing electric vehicle charging stations for employee and visitor use, including ability to account separately.
- Describe the methodology used for gathering employee commuting information. If a survey was used, upload a copy to the Travel & Commute Site-Level Policy Tracker section and include an estimate of

commuter/employee contribution to site GHG emissions. If barriers exist in gathering employee commute information, please describe.
- Opportunities and challenges in coordinating and collaborating with contracted wastewater and waste management providers to reduce emissions.

Fugitives & Refrigerants

Discuss efforts to reduce GHG from fugitive emissions or refrigerants. Address the following key topic areas:
- Inventory management, monitoring and control techniques, capture systems and storage equipment, leak detection and repair, and preventive maintenance programs used to minimize releases.
- Challenges with efforts to reduce GHG emissions at high energy mission specific facilities (HEMSF).
- Lessons learned from substitution and phasedown efforts (e.g., sulfur hexafluoride, hydrofluorocarbons).

Electronics Stewardship & Data Centers

Describe the acquisition, operations and management, and disposal of electronics – sites with HPC/data centers should describe the optimization and consolidation of HPC/data centers with a particular focus on energy and water efficiency. Address the following key topic areas:
- Recent acquisitions and barriers in procuring EPEAT-registered and Energy STAR certified electronic devices as well as any reuse initiatives (i.e., internally or externally).
- Policies and procedures that require and ensure used electronic assets are disposed through required environmentally sound disposition practices (e.g., reuse, donation, certified recycling).
- Describe how energy and water performance (e.g., power usage effectiveness [PUE], energy reuse effectiveness [ERE], water usage effectiveness [WUE]) is measured for HPC/data center. Please ensure all HPC data in eDARS is up-to-date.
- Optimization and consolidation efforts to improve energy and water efficiency for HPC/data center equipment and supporting infrastructure (e.g., goals, realized reductions in PUE, ERE, WUE).
  - Consolidation activities include closure of inefficient data centers, migration to cloud services, and closure of server rooms/closets.
  - Optimization activities include installing meters, installing/using data center infrastructure management (DCIM) systems, improving energy and water efficiency of data centers equipment and supporting infrastructure, improving server utilization, utilizing virtualization, eliminating underutilized servers, and leveraging application rationalization to reduce or eliminate duplicate applications.
- Utilization of ENERGY STAR power management features (e.g., sleep, standby, hibernate) on all eligible electronic products (e.g., computer desktops, laptops, displays).
  - Individual electronics can be exempt from the power management goal if they are used for mission critical functions, such as site security or uninterruptable laboratory experiments. Describe policies and procedures for granting and tracking exemptions.
  - If power management has not been fully implemented, discuss plans to obtain compliance as well as anticipated compliance date.
- Policies and procedures for automatic duplexing (i.e., default double-sided printing) on all eligible electronic devices (e.g., computers, printers, scanners, multifunction devices).

Adaptation & Resilience

Describe site efforts to increase site adaptation and resilience to address the impacts of climate change. Resilience is the ability to adapt to changing conditions and withstand or recover from disruption. Adaptation refers to actions taken to reduce risks from changed climate conditions and to prepare for expected future changes. Sites may also address other resilience efforts to ensure continual operations in response to pandemics, cyber-attacks, or other events that may disrupt normal operations. Address the following key topic areas:

- If available, provide a progress update on the implementation of your site's Vulnerability Assessment and Resilience Plan (VARP) and any findings and solutions.
- Current climate adaptation and resilience efforts to protect critical infrastructure and to provide adequate energy and water supplies, facility operations, information and communication technology capability, and transportation availability when needed. Include interdependencies when appropriate. Describe considerations and trade-offs within the planning and design of resilience projects that would either reduce GHG emissions, increase them, or have a neutral impact.
- If you are using FEMP's Technical Resilience Navigator, please share your feedback on the effectiveness of the tool.
- If applicable, describe how your site is integrating climate resilience into its larger risk management processes (e.g., emergency management, continuity of operations planning [COOP], cyber).

In addition to the narrative, sites must also ensure that resilience solutions identified in site VARPs are added to the Dashboard's *Resilience Solutions Tracking* module. The resilience solution tracking is a new reporting component that will require annual updates in the Dashboard. If you have not already entered in your site resilience solutions make sure to report on these solutions by November 18th.

Appendix A – Reporting Schedule

The following schedules shows the dates and deadlines for reporting into DOE databases and submission of documents pertinent to DOE sustainability goals. These databases and reports are the official, exclusive sources of DOE sustainability data. Please ensure the accuracy of all database entries as this data is reported to Congress, the Office of Management and Budget (OMB), and the White House Council on Environmental Quality (CEQ). Timely data submission is necessary to produce reports that meet Departmental reporting requirements. For each database or report, the closing or reporting deadline is highlighted.

- FIMS: Collects real property attributes and use. The database also stores data on buildings that have been assessed or are planned to be assessed against the sustainable building goal. Note, the Dashboard collects additional asset information that is not captured in FIMS and both systems must be populated.
- FAST: Collects Federal fleet fuel use, vehicle inventory, and vehicle acquisitions data and projections.
- Environmental Management System (EMS) Status Reporting: Collects information on status of EMS systems.
- Integrated Data Collection (IDC) process: Data Center Optimization Initiatives (DCOI) reporting is conducted through the IDC. Coordinate with the Office of the Chief Information Officer (OCIO) points of contact at the site and headquarters.

Table A.1 – Sustainability Dashboard

Date(s)	Action/Event
February 7, 2022	Dashboard opened for FY 2022 data entry.
September 22 to December 1, 2022	Weekly Open Line Help Call for FY 2022 sustainability reporting.
October 4, 2022	End of year FIMS basic facility information uploaded to Dashboard.
October 5, 2022	Dashboard new user training.
October 21, 2022	• Sustainable Building page locked for data entry until February 2023. • FY 2022 Biobased Product Purchases Workbook uploaded to Dashboard by sites, if needed.
November 18, 2022	FY 2022 Federal employee travel data uploaded to Dashboard.
November 18, 2022	FY 2022 Dashboard data, including Sustainable Acquisition Contracts workbook, are due with appropriate level(s) of approval. If not using the Dashboard approval process, be sure to upload a completed Dashboard Data Accuracy Self-Certification.
November 21 to December 16, 2022	SPD to QA/QC data and work with sites to finalize FY 2022.
December 2, 2022	FY 2023 SSP narrative, Excluded Buildings Self-Certification, and optional Plan Signature Document are due with appropriate level(s) of approval.
TBD	FY 2022 FAST fleet data uploaded to Dashboard.

Table A.2 – Sustainability Data Verification

Date(s)	Action/Event
July 29, 2022	SPD disseminates Verification Guidance & Site selections to Program Offices.
September 13, 2022	Training on best practices for verification documentation. Recommended for sites that have been selected to provide verification documentation.
October 28, 2022	Program Offices to submit Verification Team (VT) Member Point of Contact.
November 21, 2022 to January 20, 2023	Selected sites submit verification documentation to SPD.
January 17 to April 28, 2023	SPD to review documents, working with VT to address issues, provide site specific improvements (corrective actions) as need be & prepare findings summary.
May 2023	SPD to finalize and distribute Verification Summary Report.
May 2023	VT members meet with SPD to review findings summary and discuss verification suggestions/comments/improvements.

Table A.3 - Facilities Information Management System (FIMS)

Date(s)	Action/Event
August 1, 2022	Begin input of FY 2022 Repair Needs, Deferred Maintenance, Modernization Cost, and Uniformat II Repair Needs values. If necessary, also update other fields.
September 19 to October 31, 2021	Population and completion of data elements related to repair needs, deferred maintenance, modernization cost, excess indicator and date, size, replacement plant value, and sustainability.
October 31, 2021	Conclusion of all FY 2022 data element updates. FY 2022 year-end HQ Snapshot.
December 14, 2022	Office of Asset Management to complete the Federal Real Property Profile (FRPP) submission.

Table A.4 - Federal Automotive Statistical Tool (FAST)

***Tentative* Date(s)**	Action/Event
June 29 to August 26, 2022	OMB Circular A-11 data call for fleet budget submission.
October 3, 2022	FAST opens for FY 2022 data entry of actual inventory, disposal, cost, fuel, and mileage along with future acquisition, disposal, waivers, and cost projections.
October 5, 2022	FAST reporting training.
December 14, 2022	FAST closes for FY 2022 data entry.
December 15, 2022 to March 31, 2023	FAST FY 2022 data is reviewed by FEMP for inconsistencies and addressed by NNSA and DOE's Federal Fleet Managers.

Table A.5 - Environmental Management System Reporting (EMS)

Date(s)	Action/Event
December 2022	EMS reporting opens for FY 2022 data entry.
January 2023	EMS reporting closes for FY 2022 data entry.