



U.S. DEPARTMENT
of ENERGY

U.S. Department of Energy

Open Data Plan

Version 2

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Purpose

The U.S. Department of Energy's (DOE's) Open Data Plan aligns with Office of Management and Budget (OMB) Memorandum [M-25-05](#) and the [Foundations for Evidence-Based Policy Making Act of 2018](#) (Evidence Act) OPEN Government Data Act (OGDA), demonstrating our commitment to transparent and accessible government data. We aim to make DOE's extensive data assets (over 3,700 on [Data.gov](#)) more findable, accessible, interoperable, and reusable, empowering data-driven decisions across our vital energy, science, environmental cleanup, and security missions.

DOE Enterprise Data Strategy

DOE's [FY25-28 Enterprise Data Strategy](#) addresses key components of OGDA while reinforcing the Department's commitment to increasing the discoverability of and access to data across our vastly different mission areas encompassing Headquarters Offices and Programs, Power Marketing Administrations, National Laboratories, Field Sites, and Plants. The strategy sets a comprehensive framework for strengthening data governance and promoting the use of data for strategic decision-making, subject to appropriate safeguards for privacy, confidentiality, and security, through five goals:

- Goal 1: Establish and Scale Federated Data Governance and Stewardship
- Goal 2: Build and Maintain Data Architecture and Infrastructure Foundations
- Goal 3: Strengthen Capabilities that Improve Discoverability, Usability, Quality, and Trustworthiness of Our Data
- Goal 4: Foster and Sustain Our Next Generation Data and Analytics Workforce
- Goal 5: Ensure the Sustainable Use of Data for AI

The Office of the Chief Information Officer established the Enterprise Data Management (EDM) Program to connect DOE components with the guidance, tools, and support needed to implement the strategy and integrate open data principles and best practices into their operations. The EDM Program works closely with the Department's Data Governance Board to set and enforce priorities for managing data as a strategic asset to support DOE in meeting its mission.

DOE Data Requirements

This plan follows the structure of OMB M-25-05 section 6, Agency Data Requirements: OPEN Data Plan:

- A. Data Collection Processes for Open Formats
- B. Data Usage Information
- C. Collaboration with Data Users
- D. Open Data Point of Contact
- E. Improvement Processes
- F. Open Data Goal Requirements

- G. Prioritizing Public Data Asset Review
- H. Compliance Status
- I. Updating the Strategic Information Resources Management Plan

The activities described below also address requirements listed in section 4, Agency Requirements that Apply to All Data Assets, and section 5, Requirements that Apply to All Public Data Assets of OMB M-25-05. Please note that per OMB M-25-05, DOE data assets maintained in national security systems, as defined in [40 U.S.C. § 11103](#), are exempt from inclusion in DOE's comprehensive inventory and the Federal Data Catalog.

A. Data Collection Processes for Open Formats

DOE is committed to collecting and maintaining data in open, machine-readable formats. Our ongoing efforts include:

- Establishing guidance that ensures DOE data assets are available in accessible, machine-readable, open formats. This includes metadata conformance to Data Catalog Vocabulary (DCAT)-US 3.0 per M-25-05 guidance.
- Promoting and enhancing mission-related open data sharing initiatives that support AI use case and broader scientific innovation, such as but not limited to:
 - [Datahub](#) – hosted by Pacific Northwest National Laboratory (PNNL)
 - [DOE Data Explorer](#) – hosted by the Office of Scientific and Technical Information (OSTI)
 - [Energy Data eXchange® \(EDX®\)](#) – hosted by the National Energy Technology Laboratory (NETL) for DOE's Office of Fossil Energy and Carbon Management (FECM)
 - [Livewire Data Platform](#) – hosted by the Office of Energy Efficiency and Renewable Energy (EERE)
 - [Open Data Initiative \(ODI\)](#) – hosted by Lawrence Livermore National Laboratory (LLNL).
 - [Open Energy Data Initiative \(OEDI\)](#) – hosted by the National Renewable Energy Laboratory (NREL)
- Facilitating public access to scientific data through relevant, mission-specific platforms that power transformative, interdisciplinary research through seamless data sharing and open collaboration.

Our planned efforts include:

- Assessing current obstacles to ensuring DOE data assets are available in open, machine-readable formats and developing actions to overcome challenges.
- Reviewing all public data assets for machine-readability and license compliance.
- Enhancing integration of DOE-hosted applications to automate the evaluation and promotion of relevant datasets.

- Establishing and directing DOE federal employees and contractors to implement best practice frameworks to improve the exchange and security of data, focusing on methods like machine-readable metadata, unique identifiers, data tagging, and standard access protocols.

B. Data Usage Information

DOE collects and analyzes digital information on data asset usage from internal and external users through various methods such as web analytics, access logs, and user feedback. Our ongoing efforts include:

- Developing key performance indicators and leveraging display metrics (e.g., views, downloads) for dataset usage insights.
- Consulting with other federal agencies to identify leading practices for user-centric data publication, enhancing public access and maximizing the impact of DOE data.

C. Collaboration with Data Users

DOE facilitates engagement and collaboration to expand the use of public data assets. Our ongoing efforts include:

- Leveraging Deputy Secretary-led governance structures that include Artificial Intelligence, Data, Cybersecurity, and Enterprise Architecture Governance Boards. These boards provide senior-level oversight of data management initiatives and promote compliance with federal requirements.
- Engaging with the public through regular outreach and engagement activities, such as hackathons and contests that promote innovative use of DOE datasets.

D. Open Data Point of Contact

Bridget Carper, Deputy Chief Information Officer for Architecture, Engineering, Technology, and Innovation, within the Office of the Chief Information Officer, and the doedgb@hq.doe.gov mailbox, serve as the agency Open Data Point of Contact.

E. Improvement Processes

DOE ensures and regularly advances the discoverability, usability, quality, trustworthiness, and availability of open government data assets. Our ongoing efforts include:

- Progressing and promoting DOE's [FY25-28 Enterprise Data Strategy](#) goals and objectives related to maturing data management best practices, scaling metadata standards, and promoting data quality frameworks.
- Expanding DOE's [Open Energy Data](#) web page to be a modern, centralized front door for the public to efficiently discover and use DOE data.

- Maturing metadata management strategies and DOE's Data Stewardship Playbook to enforce the data quality, lineage, and classification activities required to improve the discoverability and use of DOE data while balancing security and risk factors.
- Conducting an annual review of DOE's [Open Data Catalog](#), tasking data owners to check their data assets for quality.

F. Open Data Goal Requirements

DOE invests in the infrastructure and workforce needed to meet open data goals. Our ongoing efforts include:

- Providing training opportunities to ensure the data and analytics workforce is fully equipped with the expertise required to support open data activities.
- Ensuring compliance with current [Data.gov](#) reporting requirements.

Our planned efforts include:

- Leveraging cross-agency councils and working groups to identify and pursue opportunities for new Memoranda of Understanding and data sharing agreements to enhance open data access and foster data-driven decision-making across the DOE enterprise.

G. Prioritizing Public Data Asset Review

DOE has established processes for identifying data assets that are of high value to the public and ensuring that they are prioritized for dissemination. Our ongoing efforts include:

- Implementing DOE's [Public Access Plan](#), which ensures scholarly publications, data, and related information from DOE-funded research are made immediately and freely available to the public.
- Facilitating public access to scientific data through relevant, mission-specific platforms that power transformative, interdisciplinary research through seamless data sharing and open collaboration.
- Ensuring data is appropriately assessed for privacy, confidentiality, and security risks.

Our planned efforts include:

- Developing a formalized framework for the evaluation and prioritization of DOE data assets for public dissemination based on demand, impact, quality, and risk criteria.
- Coordinating with DOE's Freedom of Information Act (FOIA) Office to understand data assets that receive frequent requests to be made publicly available.

H. Compliance Status

DOE will comply with all requirements of OMB M-25-05 and the requirements of [44 U.S.C. § 3511](#) when disseminating a public data asset pursuant to the Evidence Act.

Our ongoing efforts include:

- Managing DOE's publicly accessible [Open Data Catalog](#) to maintain updates to the Department's diverse metadata and ensure alignment with [Data.gov](#).
- Coordinating with key DOE leadership officials and other relevant agency officials and/or governance bodies to ensure activities are lawful, appropriate, and adhere to data privacy, confidentiality, and security requirements.
- Collaborating across the Department to iteratively refine governance processes, as needed, to ensure data published on DOE's [Open Data Catalog](#) and [Data.gov](#) continue to conform with federally mandated technical requirements.

I. Updating the Strategic Information Resources Management Plan

DOE will make updates to this plan and post it on its publicly accessible energy.gov website.



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For more information, visit: energy.gov/data