**Department of Energy (DOE): Office of Energy Efficiency and Renewable Energy (EERE) Data Management Plan Template**

[This plan is based on the "Department of Energy (DOE): Office of Energy Efficiency and Renewable Energy (EERE) " template provided by United States Department of Energy (DOE) - (ver: 1, pub: 2021-10-25).]

***Instructions for using this template****: highlighted in yellow are the section headers for the information to address in the data management plan. Under each section header in this document is guidance for the content of that section. The intent of the guidance is as a prompt to help you consider all the types of data produced and how to manage the data. With the exception of the section headers,* ***delete all the guidance and prompts from your final document, including these instructions and the information above this paragraph.***

### data management plan

### Data Types and Sources

**A brief, high-level description of the data to be generated or used through the course of the proposed research and which of these are considered digital research data necessary to**[validate](https://www.energy.gov/eere/funding/eere-digital-data-management-glossary#validate)**the research findings.**

* Give a summary of the data you will collect or create, noting the content, coverage and data type, e.g., tabular data, survey data, experimental measurements, models, software, audiovisual data, physical samples, etc.
* Consider how your data could complement and integrate with existing data, or whether there are any existing data or methods that you could reuse.
* Indicate which data are of long-term value and should be shared and/or preserved.
* If purchasing or reusing existing data, explain how issues such as copyright and IPR have been addressed. You should aim to minimize any restrictions on the reuse (and subsequent sharing) of third-party data.

### Content and Format

**A statement of plans for data and**[metadata](https://www.energy.gov/eere/funding/eere-digital-data-management-glossary#metadata)**content and format, including, where applicable, a description of documentation plans, annotation of relevant software, and the rationale for the selection of appropriate standards. (Existing, accepted community standards should be used where possible. Where community standards are missing or inadequate, the DMP could propose alternate strategies that facilitate sharing and should advise the sponsoring technology office or program of any need to develop or generalize standards.)**

Data Format

* Clearly note what format(s) your data will be in, e.g., plain text (.txt), comma-separated values (.csv), geo-referenced TIFF (.tif, .tfw).
* Explain why you have chosen certain formats. Decisions may be based on staff expertise, a preference for open formats, the standards accepted by data centers, or widespread usage within a given community.
* Using standardized, interchangeable, or open formats ensures the long-term usability of data; these are recommended for sharing and archiving.
* See DataONE Best Practices for [file formats](https://www.dataone.org/best-practices/document-and-store-data-using-stable-file-formats)

Metadata

* What metadata will be provided to help others identify and discover the data?
* Researchers are strongly encouraged to use community metadata standards where these are in place. The Research Data Alliance offers a [Directory of Metadata Standards](http://rd-alliance.github.io/metadata-directory/). Data repositories may also provide guidance about appropriate metadata standards.
* Consider what other documentation is needed to enable reuse. This may include information on the methodology used to collect the data, analytical and procedural information, definitions of variables, units of measurement, any assumptions made, the format and file type of the data, and software used to collect and/or process the data.
* Consider how you will capture this information and where it will be recorded, e.g., in a database with links to each item, in a "readme" text file, in file headers, etc.

### Sharing and Preservation

**A description of the plans for**[data sharing](https://www.energy.gov/eere/funding/eere-digital-data-management-glossary#sharing)**and**[preservation](https://www.energy.gov/eere/funding/eere-digital-data-management-glossary#preservation)**. This should include, when appropriate:**

* The anticipated means for sharing, applicable contact information, and the rationale for any restrictions on who may access the data and under what conditions
* A timeline for sharing and preservation that addresses both the minimum length of time the data will be available and any anticipated delay to data access after research findings are published
* Any special requirements for data sharing, for example, proprietary software needed to access or interpret data, applicable policies, provisions, and licenses for re-use and re-distribution, and for the production of derivatives, including guidance for how data and data products should be cited
* Any resources and capabilities (equipment, connections, systems, software, expertise, etc.) requested in the research proposal that are needed to meet the stated goals for sharing and preservation (This could reference the relevant section of the associated research proposal and budget request.)
* Cost-benefit considerations to support whether/where the data will be preserved after direct project funding ends and any plans for the transfer of responsibilities for sharing and preservation
* Whether, when, or under what conditions the management responsibility for the research data will be transferred to a third party (e.g. institutional or community repository)
* Any other future decision points regarding the management of the research data, including plans to re-evaluate the costs and benefits of data sharing and preservation.

### Protection

**A statement of plans, where appropriate and necessary, to protect confidentiality, personal privacy, personally identifiable information, and U.S. national, homeland, and economic security; recognize proprietary interests, business confidential information, and intellectual property rights; and avoid significant negative impact on innovation and U.S. competitiveness.**

Ethics and privacy

* Investigators carrying out research involving human participants should request consent to preserve and share the data. Do not just ask for permission to use the data in your study or make unnecessary promises to delete it at the end.
* Consider how you will protect the identity of participants, e.g., via anonymization or using managed access procedures.
* Ethical issues may affect how you store and transfer data, who can see/use it, and how long it is kept. You should demonstrate that you are aware of this and have planned accordingly.
* See [ICPSR approach to confidentiality](http://www.icpsr.umich.edu/icpsrweb/content/datamanagement/confidentiality/index.html) and Health Insurance Portability and Accountability Act [(HIPAA) regulations for health research](https://privacyruleandresearch.nih.gov/).

IP Rights

* State who will own the copyright and IPR of any existing data as well as new data that you will generate. For multi-partner projects, IPR ownership should be covered in the consortium agreement.
* Outline any restrictions needed on data sharing, e.g., to protect proprietary or patentable data.
* Explain how the data will be licensed for reuse. See the DCC guide on [How to license research data](http://www.dcc.ac.uk/resources/how-guides/license-research-data) and EUDAT’s [data and software licensing wizard](https://ufal.github.io/public-license-selector/).

### Rationale

**A discussion of the rationale or justification for the proposed DMP, including, for example, the potential impact of the data within the immediate field and in other fields, and any broader societal impact.**