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FEATURED DOE Datasets AND dATA Repositories

**Energy Efficiency & Renewable Energy Data Portal**  
Select sources of data on energy efficiency and renewable energy technologies from throughout EERE and from the DOE national laboratories. These data resources provide information such as prices, savings, use, and state statistics by technology. Also included are links to more comprehensive data collections, policy data resources, and supply and demand forecasts. Featured EERE datasets and data portals include:

* [**Visual Patent Search**](http://techportal.eere.energy.gov/VPS/index.html)**:**  A searchable, sortable resource of patents from research funded by DOE.
* [**National Geothermal Data System (NGDS):**](http://geothermaldata.org/)This resource contains raw geoscience data that can help pinpoint elusive sweet spots of geothermal energy deep in the earth, enabling researchers and commercial developers to find the most promising areas for geothermal energy.
* [**Bioenergy Knowledge Discovery Framework :**](https://www.bioenergykdf.net/)The Bioenergy KDF supports the development of a sustainable bioenergy industry by providing access to a variety of data sets, publications, and collaboration and mapping tools that support bioenergy research, analysis, and decision making. In the KDF, users can search for information, contribute data, and use the tools and map interface to synthesize, analyze, and visualize information in a spatially integrated manner.
* [**Buildings Performance Database:**](https://bpd.lbl.gov/)The Buildings Performance Database lets users mine anonymous statistical data from real buildings that match a specific building characteristic profile, enabling real estate professionals, contractors, policymakers and lenders to incorporate real-world performance data into their decision making.
* [**Energy Data Exchange :**](https://edx.netl.doe.gov/)EDX facilitates a more rapid and comprehensive utilization of key data needs that crosscut multiple projects/program areas (CO2 storage, unconventional and conventional hydrocarbon systems, natural gas hydrates, etc.).

**National Renewable Energy Data & Resources**

Databases, maps, and tools produced by the National Renewable Energy Laboratory can be found online. These resources are available to assess, analyze, and optimize renewable energy and energy efficiency technologies. NREL maintains a number of databases and portals. Examples include the [Transparent Cost Database](http://en.openei.org/wiki/Transparent_Cost_Database) for energy-related program costs and [FRee Energy Data (FRED), which enables cross- organizational comparisons of energy costs and performance. Other NREL data resources include:](http://en.openei.org/wiki/FRee_Energy_Data_%28FRED%29" \o "Link to FRED)

* [**OpenEI.org:**](http://en.openei.org/)A knowledge-sharing wiki, containing links to Department of Energy and other energy datasets, applications and articles. OpenEI is a collaborative open data platform that builds knowledge and datasets, connects and structures data via linked open data standards, and utilizes crowd-sourcing and partner collaboration to build data/content. It enables centralized data cataloging, dataset contributions by offices and their stakeholders, cross-laboratory participation/data connections, and dataset curation from subject matter experts. Program Data Repositories on OpenEI include the [Geothermal Data Repository](http://gdr.openei.org/index.php) and the new [Marine Hydro Kinetic Data Repository](https://mhkdr.openei.org/). These data repositories are geared toward collecting project and technical data to enable reporting compliance and provide DOE with needed information and data about the projects that they fund.

Another Open EI resource, [Energy DataBus](http://en.openei.org/wiki/NREL_Energy_DataBus), is used for tracking and analyzing energy use on NREL’s Colorado campus. The system is applicable to other facilities—including anything from a single building to a large military base or college campus—or for other energy data management needs. Key features include the software's ability to store large amounts of time series data collected at high frequencies—NREL collects some of its energy data every second—and rich functionality to integrate this wide variety of data into a single database.

* Smart Grid Data Hub and [Smartgrid.gov](https://www.smartgrid.gov/) : NREL created an enterprise-level data hub that was responsible for collecting, managing, and storing the data generated through the Smart Grid Recovery Act Projects. Any open data was automatically fed to SmartGrid.gov so that key datasets for projects could be transparently displayed to the public.
* [Developer.nrel.gov](http://developer.nrel.gov/): NREL's developer network helps all developers access and use energy data via Web services, including renewable energy and alternative fuel data. The API umbrella used for this system is open sourced and has been made accessible for others to use. In fact, GSA's API umbrella utilizes this code base for all GSA related APIs.

[DOE Explorer](http://www.osti.gov/dataexplorer/)

This portal, launched in 2013 by DOE’s Office of Science, provides science, technology, and engineering research and data collections from DOE. The most-used data collections include the following (listed with their sources):

* [Large-Scale Atomistic Simulations of Material Failure](http://www.osti.gov/dataexplorer/biblio/1077335)— Office of Science
* [DOE Global Energy Storage Database](http://www.osti.gov/dataexplorer/biblio/1134061)— Office of Science
* [Chart of Nuclides from the National Nuclear Data Center (NNDC)](http://www.osti.gov/dataexplorer/biblio/1077258)— Office of Science
* [Engine Combustion Network Experimental Data](http://www.osti.gov/dataexplorer/biblio/1077217)—EERE
* [Community Climate System Model (CCSM) Experiments and Output Data](http://www.osti.gov/dataexplorer/biblio/1077203)--USDOE (no other org)
* [GSOD Based Daily Global Mean Surface Temperature and Mean Sea Level Air Pressure (1982-2011](http://www.osti.gov/dataexplorer/biblio/1130373))--Office of Science

**Energy Information Administration**

The U.S. Energy Information Administration collects, analyzes, and disseminates independent and impartial energy information to promote sound policy making, efficient markets, and public understanding of energy and its interaction with the economy and the environment. The EIA’s open API can be found [here](http://www.eia.gov/beta/api/).

**Green Button Data**

A set of RESTful API methods and an XML data standard allowing consumers to access their energy usage data and securely share that data with third-party web and mobile apps. Today, 48 utilities and electricity suppliers have committed to enable their customers with "Green Button" access. Over 42 million household and business customers already have access to their Green Button energy data. The industry-led [Green Button Alliance](http://greenbuttonalliance.org) was legally incorporated and launched in February 2015.

**National Library of Energy**

The library "virtually integrates information from Energy.gov (the DOE website) and all DOE program offices, national laboratories and other facilities. The National Library of Energy search feature provides one-stop, easy access to information in DOE's broad mission areas: science and R&D; energy and technology for industry and homeowners; energy market information and analysis; and nuclear security and environmental management.

**Federal Energy Regulatory Commission Data Sets**

Data from the Federal Energy Regulatory Commission, an independent agency that regulates the interstate transmission of natural gas, oil, and electricity.