Photovoltaic pv systems united states

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In 2020, LBNL and USGS began collaborating on development of the USPVDB to create an accurate, comprehensive, and publicly accessible national large-scale PV database of large-scale PV facilities that includes estimates of the total footprint (i.e., facility size based on array boundaries) of each facility. This work builds on expertise developed through the creation and maintenance of the U.S. Wind Turbine Database (USWTDB) since 2016.

The data may be used by government agencies, scientists, private companies, and other stakeholders for a variety of analyses. Examples include operational impact analyses related to the role of solar energy in the U.S. electric grid, interactions between PV facilities and the natural environment, and investments in PV infrastructure.

The database combines datasets from the U.S. EIA, the Environmental Protection Agency (EPA) and the National Renewable Energy Laboratory (NREL). The locations and array boundaries of all facilities were visually verified and digitized to within 10 meters using high-resolution aerial imagery.

The USPVDB Viewer, created by the USGS Energy Resources Program, allows users to visualize, inspect, interact, and download the most current USPVDB through a dynamic web application. Data-driven styling and dynamic filtering capabilities allow users to access USPVDB information quickly and more efficiently. Feedback continues to be important to us so don"t hesitate to let us know what you"d like to see in future releases.

The latest release includes data on 4,185 facilities covering 47 states (plus the District of Columbia). The most recent facilities added to the USPVDB became operational as recently as the third quarter of 2023. The oldest facilities in the data set were installed prior to 1990. USPVDB releases generally lag installations by more than a year, due to the release times of underlying data and the effort required to digitize facilities. See more details on the release.

The suggested citation for use in academic papers and otherwise where applicable is as follows:Fujita, K.S., Ancona, Z.H., Kramer, L.A., Straka, M., Gautreau, T.E., Garrity, C.P., Robson, D., Diffendorfer, J.E., and Hoen, B., 2023, United States Large-Scale Solar Photovoltaic Database (v2.0, August, 2024): U.S. Geological Survey and Lawrence Berkeley National Laboratory data release, https://doi /10.5066/P9IA3TUS.

Map services and data downloaded from the U.S. Large-Scale Solar Photovoltaic Database are free and in the public domain. There are no restrictions; however, we request that the following acknowledgment statement be included in products and data derived from our map services when citing, copying, or reprinting: "Map services and data are available from Large-Scale Solar Photovoltaic Database, provided by the U.S. Geological Survey and Lawrence Berkeley National Laboratory via https://eerscmap gs.gov/uspvdb".

Although this digital spatial database has been subjected to rigorous review and is substantially complete, it is released on the condition that neither the USGS, LBNL, nor the United States Government nor any agency thereof, nor any employees thereof, makes any warranty, expressed or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information contained within the database.