Wind farm locations

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In 2016, USGS, LBNL, and the American Wind Energy Association (AWEA, the predecessor of ACP) began collaborating on development of the USWTDB. Their goal was to create a joint product that would be more comprehensive and accurate than their individual wind turbine data sets. Federal agencies began using these combined data in April 2017, and in April 2018 the data were released to the public via this portal.

These data are used by government agencies, scientists, private companies, and citizens for a variety of analyses. Examples include operational impact assessments of turbines on air defense radar, weather and general aviation, analyses related to the role of wind energy in the U.S. electric grid, interactions between wind energy facilities and wildlife, and investments in wind energy infrastructure.

The data were created by combining publicly available data sets from the Federal Aviation Administration (FAA), USGS WindFarm data from a prior effort, online sources, and data privately held by ACP and LBNL. The locations of all turbines were visually verified to within 10 meters using high-resolution imagery. Technical specifications of the turbines are based on the make and model and other information collected.

With the release of this public version, we hope researchers and other interested parties around the world will use the data to further their efforts. If you have feedback or want to let us know how you are using the data, send us a note.

The latest release includes data on 74,695 turbines covering 45 states (plus Guam and PR). The most recent turbines added to the USWTDB became operational as recently as the second quarter of 2024, with a few from the third quarter of 2024. The oldest turbines in the data set were installed prior to 1990. USWTDB releases generally lag installations by one quarter to allow for merging of the various datasets, visual verification, and quality control. See more details on the release.

The suggested citation for use in academic papers and otherwise where applicable is as follows:Hoen, B.D., Diffendorfer, J.E., Rand, J.T., Kramer, L.A., Garrity, C.P., and Hunt, H.E., 2018, United States Wind Turbine Database v7.2 (November 20, 2024): U.S. Geological Survey, American Clean Power Association, and Lawrence Berkeley National Laboratory data release, https://doi /10.5066/F7TX3DN0.

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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, ACP 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.