A free library of public grid model data

Supporting research in grid optimization and reliability

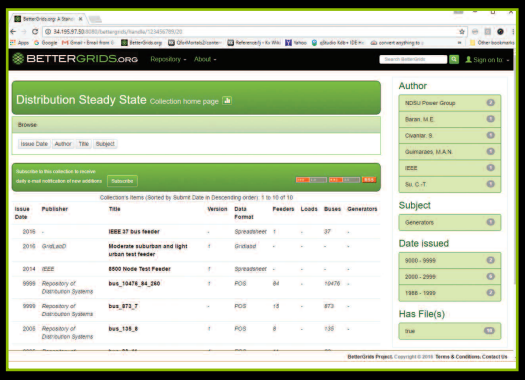
Enabling grid researchers to collaborate and share data

Supported by a community of volunteers led by GridBright

Funded by the DOE ARPA-E GRID DATA Program

The GRID DATA Repository is a free electronic library of publicly available test data instigated by the US Department of Energy (DOE) Advanced Research Projects Agency-Energy (ARPA-E) to support research in grid optimization and modernization.

The Repository pulls together grid models and related test data from across the utility industry to improve community access. Additionally, it provides a public forum for collecting and sharing data from new grid research, including all the grid models being created under the ARPA-E GRID DATA program. This program is focused on generating non-confidential and realistic test data for new distribution and transmission algorithms, and will be producing new grid models in the near future.



The Repository is built by GridBright, Inc as part of the ARPA-E GRID DATA program and is available for the public to submit new grid models or search for a growing volume of grid models submitted by other model contributors.

The BetterGrids Foundation, a nonprofit organization, provides support for the Repository in a self-funding and self-governing manner through volunteers. Visit **www.BetterGrids.org** for more information or to access the Repository.

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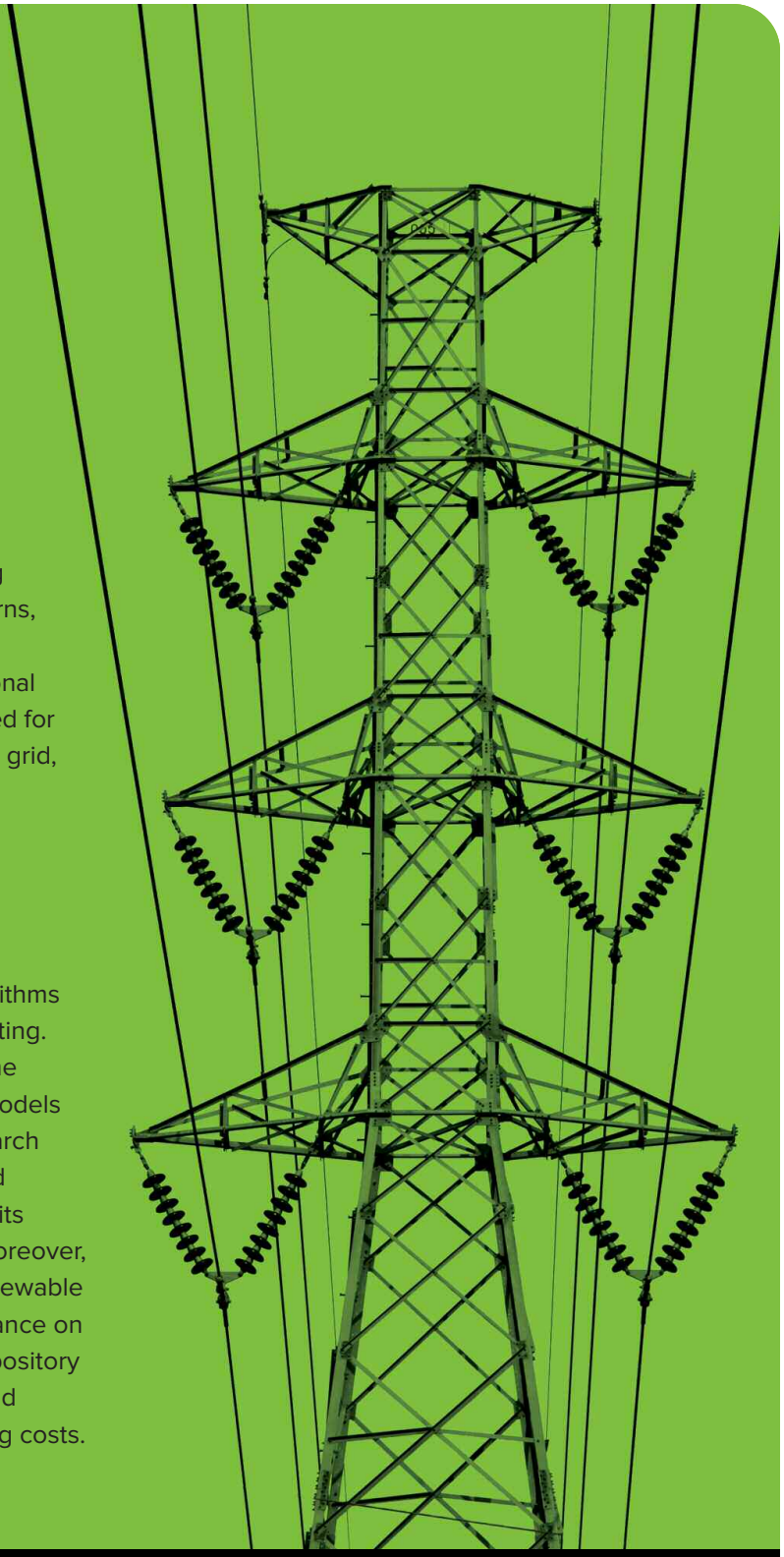
Critical Need for the Repository

Several emerging trends, including the rapid growth of renewable generation and greater emphasis on improving grid efficiency and resiliency, will require changes in the way electricity is delivered from suppliers to consumers. This grid of the future requires advances in transmission and distribution system management with algorithms to control and optimize how power is transmitted and distributed on the grid. However, the development of these systems has been hindered because the research community lacks high-fidelity, public, large-scale power system models that realistically represent current and evolving grid characteristics. Due to security and privacy concerns, much of the real data needed to test and validate new tools and techniques is restricted. To help drive additional innovation in the electric power industry, there is a need for grid models that mimic the characteristics of the actual grid, but do not disclose sensitive information.

Benefits of the Repository

GRID DATA Repository is expected to accelerate the development of new power system optimization algorithms by enabling more comprehensive and transparent testing. The new open-access, self-sustaining repository for the storage, annotation, and curation of power systems models will also enable richer and more comprehensive research collaborations. New grid optimization algorithms could increase the grid's resiliency and flexibility, improving its security during extreme weather and other threats. Moreover, the Repository could enable greater integration of renewable electricity onto the grid, which would help reduce reliance on carbon-emitting, fossil fuel generation. Finally, the Repository could lead to greater efficiencies for grid operators and power generators and therefore help reduce operating costs.



BetterGrids Foundation

Our Vision is that grid researchers have the essential test data they need to develop better grid solutions.

Our Mission is to operate the GRID DATA Repository in a self-funding manner to support research and education in developing better solutions for grid optimization, control, resiliency, and integration of renewable and distributed resources.

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