

NEWS & UPDATES

Newsletter for the GRID DATA Repository and BetterGrids Foundation, Inc.



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2024: BetterGrids – Renew, Recharge, and Independence!

BetterGrids is off to a great start in 2024! With goals of recharging our efforts, BetterGrids is working on many goals to make a bigger and better impact on the Grid for future years to come.

1. ***Operating within budget while growing the user community and growing the number of grid models and datasets*** has always been a primary focus. We plan to continue to find unique model sets that will be beneficial to the Grid Research Community and engage researchers worldwide.
2. ***Continue Outreach & Community Engagement Activities by issuing Bi-Annual newsletters and the facilitation of educational webinars by the community.*** We plan to change our focus to support the needs of the community by hosting webinars for others within the industry. Our Bi-Annual newsletters will continue to share information on current and future happenings within BetterGrids.
3. ***Expand the Support Organization by engaging our new treasurer, the contract Repository Webmaster/Administrator, and Contract Administration and Communications support.***

We have engaged a new treasurer for the BetterGrids Team. Volunteer Eugene Spiranov began his term in April. Eugene volunteers outside of his full-time job.

Jason Lin's role as a contractor will be elevated as he adds more responsibility beyond model curation. He is the Grid Model Curator & Repository Administrator for the BetterGrids Foundation. As the Founder of Rimation Solutions Inc., a custom solutions engineering firm & trusted partner in bringing high-stakes, low-resource, dynamic engineering projects to life, Jason has worked with companies ranging from startups to US Department of Defense contractors in realizing various electronics, software, and renewable energy systems. In his spare time, he enjoys sailing whenever possible.

2024: BetterGrids – Renew, Recharge, and Independence (continued)

John Thompson has joined the BetterGrids Foundation as the Administration and Communications Manager after a career that spans a portfolio of non-profit, corporate, government relations and public policy consulting, business operations, lobbying, political campaigns, communications, and people operations functions. Blending his diverse experience with a charismatic spirit, John can view situations from multiple perspectives, and his cross-functional expertise is a solid catalyst to provide the Board of Directors and the BetterGrids Foundation with seasoned guidance in its mission to provide support for the GRID DATA Repository in a self-funding and self-governing manner through volunteers.

Our highly engaged volunteers will continue to support these new team members fostering a more independent BetterGrids.

4. **Expand Fundraising: Double Fundraising revenue.** Through the generosity of the Hoveida Family Foundation and the Vojdani Trust, we are off to a great start in 2024!

Volunteer Spotlight (Featuring 2 this month!)



Terry Nielsen is the Chief Consultant at Qualus. He has over 30 years of experience in defining and developing software solutions for the utility industry. His experience includes development, implementation, and integration of Advanced Distribution Management Systems (ADMS), Energy Management Systems (EMS), Market Management Systems (MMS), Network Model Management Systems, Supervisory Control and Data Acquisition (SCADA) systems, Outage Management Systems (OMS), and Emergency Management Systems. He serves on the Advisory Board of DistribuTECH conference.

He is the Chair of the BetterGrids Foundation Technical Committee. Terry was also the technical lead on the DOE GRID DATA project that created the initial BetterGrids repository.



Stephen J. Callahan is the Director for Government and Grid Modernization at Qualus. His Utility Industry experience spans over forty years in industry management and consulting. He has led the creation of business and technology strategies and implementation of complex processes and systems for several global utilities spanning the areas of T&D, network operations, Smart Grid, customer operations, finance, and telecommunications networks. Mr. Callahan is a GridWise Alliance (GWA) Board Member Emeritus and DistribuTECH Advisory committee member. In addition, he is a frequent contributor to industry conferences and publications focusing on the transformation of the electric utility industry.

Steve has been instrumental in the initial series of Webinars sponsored by BetterGrids, spanning key and timely issues in the industry, including Interconnection queue, Dynamic Line Ratings, Outage management, and CIM.

Thank you, Terry and Stephen, for your talents, efforts, and dedication to BetterGrids!

| Unique Models from 2024 | Source |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| <p>Annual Technology Baseline Cost & Performance Data for Electricity Generation Technologies</p> <p><i>These data provide the 2022 and 2023 updates of the Electricity Annual Technology Baseline (ATB). Starting in 2015 NREL has presented the ATB, consisting of detailed cost and performance data, both current and projected, for electricity generation and storage technologies.</i></p> | <p>NREL</p> |
| <p>Demand Side Grid Model Data from the Electrification Futures Project</p> <p><i>The Electrification Futures Study (EFS) was a multi-year research project that explored the impacts of widespread electrification on all U.S. economic sectors. The dsgrid toolkit was developed for the EFS and used to produce hourly electricity consumption profiles for every county in the contiguous United States for the historical year 2012. The initial modeling methods and results are publicly available and described in the dsgrid toolkit documentation and on the EFS website.</i></p> | <p>NREL</p> |
| <p>Transmission line data of different fault instances retrieved through Phasor Measurement Unit (PMU)</p> <p><i>The Distributed Generation Market Demand (dGenTM) model simulates customer adoption of distributed energy resources for residential, commercial, and industrial entities in the United States or other countries through 2050.</i></p> | <p>North, South University & Virginia Tech</p> |
| <p>Open Access Power-Grid Frequency Database</p> <p><i>This repository stores and links the openly available power-grid frequency recordings across the globe, consisting of open/public data across Transmission System Operators (TSO), research projects, and industrial gatherings</i></p> | <p>Open Science Framework</p> |

2024 Goals and Progress!

We have had great success in working towards the completion of our goals. Here's our update:

| # | Performance on 2024 Strategic Goals |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Operating within budget while growing the user community and growing the number of grid models and datasets Status: We are working to find ways to grow the user community within budget. |
| 2 | Continue Outreach & Community Engagement Activities by issuing Bi-Annual newsletters and the facilitation of educational webinars by the community. Status: As of this publication, have issued two newsletters. We are in the process of creating a webinar series. |
| 3 | Expand the Support Organization by engaging our new treasurer, the contract Repository Webmaster/Administrator, and Contract Administration and Communications support. Status: We have engaged a new volunteer treasurer, and contracted positions for a Repository Webmaster/Administrator and an Administration and Communications Support person. |
| 4 | Expand Fundraising: Double Revenue Status: We are off to a great start! |

BetterGrids Usage Statistics

We continue to grow as can be seen on the chart below.

| Metric | Q4/17 | Q2/18 | Q4/18 | Q2/19 | Q4/19 | Q2/20 | Q4/20 | Q4/21 | Q2/22 | Q4/22 | Q2/23 | Q4/23 | Q2/24 |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Model Contributors | 6 | 9 | 16 | 19 | 24 | 25 | 26 | 28 | 29 | 30 | 30 | 30 | 30 |
| Registered Accounts | 120 | 207 | 299 | 317 | 378 | 410 | 496 | 648 | 748 | 801 | 936 | 1042 | 1153 |
| Model Collections | 13 | 13 | 13 | 13 | 14 | 14 | 14 | 14 | 15 | 15 | 17 | 17 | 17 |
| Distinct Models | 291 | 314 | 413 | 441 | 448 | 454 | 469 | 504 | 567 | 591 | 603 | 648 | 671 |
| Model Files | 817 | 881 | 1015 | 1269 | 1289 | 1308 | 1395 | 1439 | 1567 | 1606 | 1622 | 1664 | 1682 |
| Models Total Sizes (Mb) | 615 | 2988 | 4741 | 4787 | 6130 | 6670 | 10701 | 10703 | 11603 | 11858 | 12830 | 12830 | 12530 |

Thank you to all of you!

We appreciate your continued support and connection with the BetterGrids Foundation. If you'd like to provide a charitable donation to the BetterGrids Foundation, please contact us at Ali.Vojdani@BetterGrids.org. If you have any ideas for Webinars, Forums or continued engagement, please reach out to us at BetterGridsEngagement@BetterGrids.org.

Stay Current

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