

First Quarter 2018 - News & Updates

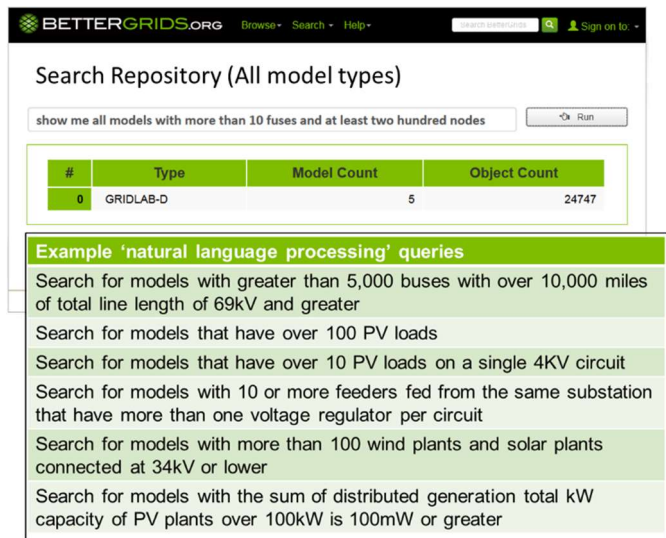
Newsletter for the GRID DATA Repository and BetterGrids Foundation, Inc. (www.bettergrids.org).

Phase 3 UAT

This month we are starting User Acceptance Testing of the Phase 3 semantic searching features.

The key enhancement is our 'natural language processing' engine. This new engine allows users to easily search the repository with more intuitive English phrases or questions, similar to how they use Google or Bing to search the web. We are also delivering native support for new model formats, including OpenDSS, RED, and PowerWorld.

Please [contact us at BetterGrids.org](http://www.bettergrids.org) if you are interested in volunteering to test, curate, have a model to submit, or new features to suggest.

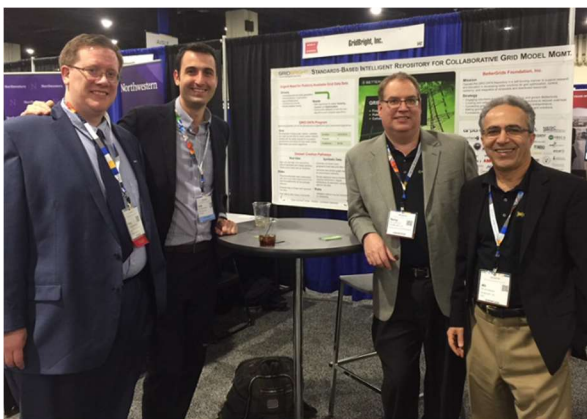


The screenshot shows the BetterGrids.org search interface. At the top, there is a navigation bar with the logo, "Browse", "Search", and "Help" links, along with a search input field and a "Sign on to" button. Below the navigation bar, the main heading is "Search Repository (All model types)". A search input field contains the text "show me all models with more than 10 fuses and at least two hundred nodes", and a "Run" button is to its right. Below the search input, there is a table with the following data:

#	Type	Model Count	Object Count
0	GRIDLAB-D	5	24747

Below the table, there is a section titled "Example 'natural language processing' queries" with the following examples:

- Search for models with greater than 5,000 buses with over 10,000 miles of total line length of 69kV and greater
- Search for models that have over 100 PV loads
- Search for models that have over 10 PV loads on a single 4KV circuit
- Search for models with 10 or more feeders fed from the same substation that have more than one voltage regulator per circuit
- Search for models with more than 100 wind plants and solar plants connected at 34kV or lower
- Search for models with the sum of distributed generation total kW capacity of PV plants over 100kW is 100mW or greater

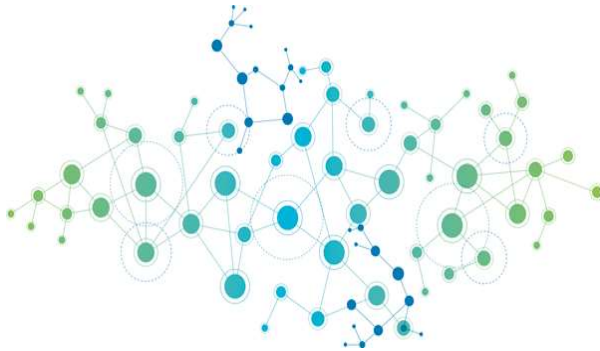


Industry Activities

The GridBright team recently returned from the [ARPA-E Energy Innovation Summit](http://arpa-e.energyinnovationsummit.com), where we had a booth in the Technology Showcase to present the latest work on the BetterGrids Repository. You can [read the report](http://www.gridbright.com/news) on our new Blog at [GridBright.com/news](http://www.gridbright.com/news).

Other GRID DATA projects were also represented, including NREL who recently loaded their new [Bay Area Synthetic Distribution Grid dataset](http://www.nrel.gov/bayarea) into the Repository. It is a distribution grid model that is more than two orders of magnitude larger than any other public dataset.

Last month, Ali Vojdani gave a presentation on behalf of BetterGrids to the [UC Berkeley Simons Institute](http://www.sims.berkeley.edu), a venue for some of the world's leading researchers and scholars in theoretical computer science. Attendees from around the globe were excited to hear about new tools and data supporting their work in energy optimization algorithms and methods.



Research & Development

With Phase 3 development wrapping up, our R&D focus has shifted to exploring spin-off ideas and new value-added services we could integrate with the Repository. During the last quarter we submitted 4 different concept papers to ARPA-E OPEN2018, including one to build a solution for securely sharing FERC ‘Critical Energy Infrastructure Information (CEII)’ grid models and data.

BetterGrids Self-Funding

We’ve begun efforts to transition BetterGrids to a self-funding business model with two separate campaigns. First, we are actively marketing our [Private Data Repositories](#) to R&D projects, building off our success with several DOE ENERGISE projects. Second, we launched a fundraising drive to support [Grid Resiliency Education & Research](#) through private donations. More information about BetterGrids services and our non-profit business model can be found on our website at BetterGrids.org/foundation.

Support Grid Resiliency Education & Research

We need your support!

BetterGrids, an organization with no employees, operates entirely through efforts and contributions from individuals and organizations. Over 70 organizations, including ARPA-E, have contributed to the creation of our Grid Data Repository, which provides free access to 200 grid models to researchers world-wide. We need donations to:

Metric	Q4	Q1
Model contributors	6	8
Registered accounts	120	142
Registered curators	3	3
Model collections	13	13
Distinct models	291	298
Model files	817	833
Model files (Mb)	615	2906
Views/Downloads	41,480	52,057

Quarterly Repository Metrics

In the latest quarter, we added a few very large models, including NREL’s [Bay Area Synthetic Distribution Grid](#). The size of our database is growing much faster than model numbers. We also added 22 new user accounts. Downloads grew another 25% to over 50,000 since we launched last April. There is a rich pipeline of new grid models in the making by the size other GRID DATA projects coming to the Repository later this year.

Stay Current

Stay up to date on the Repository progress and BetterGrids by following us at [LinkedIn](#), [Twitter](#), or at our website www.BetterGrids.org.

