FOR IMMEDIATE RELEASE
October 21, 2024

Contact:
Cassady Craighill, Cassady[at]GridLab.org

Revolutionary Open-Source Wind and Solar Dataset Made Publicly Available to Model Future Renewable Power Systems

"RARE Power Dataset" equips grid planners to design the renewable grids of the future

Providence, Rhode Island – As part of the Energy Systems Integration Group (ESIG) Fall Technical Workshop kicking off today, Vibrant Clean Energy (VCE), Pattern Energy, Catalyst Cooperative and GridLab released the Resource Adequacy Renewable Energy (RARE) Power Dataset, which provides an open-source solar and wind dataset for power systems planners helping to fill an important void in the modeling world.

CLICK HERE to access the "RARE Power Dataset"

"The availability of public and quality high-resolution renewable datasets is one of the most important requirements for planning a reliable clean power system," said Debra Lew, ESIG Executive Director. "Pattern Energy is filling an important void by making this data set available and addressing an important need for modeling high renewable future power systems."

In a report released last year, *Weather Dataset Needs for Planning and Analyzing Modern Power Systems*, ESIG detailed the need for accurately modeling the impacts of weather variables on resource adequacy and system reliability in increasingly weather-dependent power systems.

With support from GridLab, Catalyst Cooperative will host and distribute the renewable energy dataset. The data includes hourly solar, onshore and offshore wind production published at a county granularity by aggregating 3 km data for the contiguous United States. The first release contains data for the years 2019-2023, while a further release in Q1 2025 will contain data for 2014-2018. The foundation for this dataset are weather variables produced by the National Oceanic and Atmospheric Administration's High-resolution rapid refresh (HRRR) operational numerical weather prediction model. The approach has been used to inform real-world processes, such as developing a dataset for the Midcontinent Independent System Operator (MISO) in 2020.

"Without quality renewable datasets that are coherent with the weather conditions and load, we are flying blind with respect to planning for an energy system powered by renewables. This contribution from Pattern Energy is a step forward in filling the gap and will help enable more accurate power system analysis," said Justin Sharp, who has a doctorate in atmospheric sciences and is an EPRI technical lead focusing on the intersection of meteorology and energy.

"The Pattern team and I recognize that there is benefit to all consumers, as well as the power system broadly, by making this data publicly available," said Pattern Energy Vice President of Integrated Systems Planning and CEO of VCE, Christopher Clack. "One of the main challenges that modelers run into when designing robust future clean power systems is the lack of availability of granular quality renewable datasets for multiple weather years. The partnership with Catalyst Cooperative moves us one step closer to a clean and reliable grid."

"The models that energy planners utilize to power our world are only as good as the information provided to that model. Modelers have been operating with only a part of the picture, which is a risk to reliability for all consumers. The release of RARE Power Dataset will help the collective community to build a stronger grid for everyone," said Ric O'Connell, Executive Director of GridLab.

<center>###</center>

GridLab is a nonprofit organization with a mission to provide expert capacity and thought leadership to address technical challenges and reliability questions in the implementation of clean energy policies. For information on GridLab, visit gridlab.org.

Vibrant Clean Energy is a nationally recognized energy grid modeling firm based in Boulder, Colorado. VCE® creates computer optimization software to study pathways for energy systems futures. It also performs studies using WIS:dom® to provide expertise in new arenas of electrification, decarbonization and variable resources. The mission of VCE® is to help facilitate universal, sustainable, and cheap energy for everyone. To learn more about VCE®, please visit vibrantcleanenergy.com.

Pattern Energy is one of the world's largest privately-owned developers and operators of wind, solar, transmission, and green fuels projects. Its operational portfolio includes over 30 renewable energy facilities that use proven, best-in-class technology with an operating capacity of nearly 6,000 MW across North America. Pattern Energy is guided by a long-term commitment to serve customers, protect the environment, and strengthen communities. For more information, visit patternenergy.com.

Catalyst Cooperative works with clean energy advocates, environmental non-profits, researchers, journalists and others to compile custom datasets and analyses using public data and integrating those into publicly-available platforms. Learn more at catalyst.coop.