

California Solar Initiative Simulated 15-Minute Interval Data

Clean Power Research, L.L.C. (CPR) was commissioned by the California Energy Commission under the Electric Program Investment Charge (EPIC) research grant agreement number EPC-17-003 to perform a broad study of solar forecasting, entitled “Developing a Comprehensive, System-Wide Forecast to Support High-Penetration Solar.” One of the tasks was to use the existing database of aggregated behind-the-meter (BTM) photovoltaic production collected from 504 Itron meters monitored under the California Solar Initiative (CSI) from January 1, 2011, through December 31, 2016, that contains solar PV production data by zip code at 15-minute intervals to develop an improved database via simulated data.

The simulated dataset was built on measured historical production data from 414 of the 504 systems that were monitored, with the remaining 90 systems discarded due to data issues. To develop a complete and continuous dataset, gaps in the measured data and invalid data were filled and replaced with simulated data reflecting the characteristics of the underlying systems. These simulated 15-minute datasets are available for download by zip code or by individual CSI project. A copy of the slide deck and the final report, which explain the issues with the raw dataset and the methodology used in developing the simulated dataset, are also available for download. Please note: the files are large and may take several minutes to download.

Technical Support

Please direct any technical questions to: csisupport@energy-solution.com.