The Renewables.ninja European PV data set

Please cite these data and this document as:

> Stefan Pfenninger and Iain Staffell (2016). *Long-term patterns of European PV output using 30 years of validated hourly reanalysis and satellite data*. Energy.

The data are stored in plain-text CSV format, and contain 30 years of hourly capacity factors. All countries in the EU-28 plus Norway and Switzerland are included. There are two data files: one for MERRA-2, and one for CM-SAF SARAH simulations. For details on the differences between them see the paper referenced above.

All times are given in UTC, with no shift for summer time / daylight savings time. When matching these capacity factors to other data sources, such as electricity demand from national system operators, you may need to shift the capacity factors to match the local time zone.

Capacity factors are given in the range of [0, 1]. These can be multiplied by assumptions for installed capacity in each country to give the hourly power output from national PV fleets.