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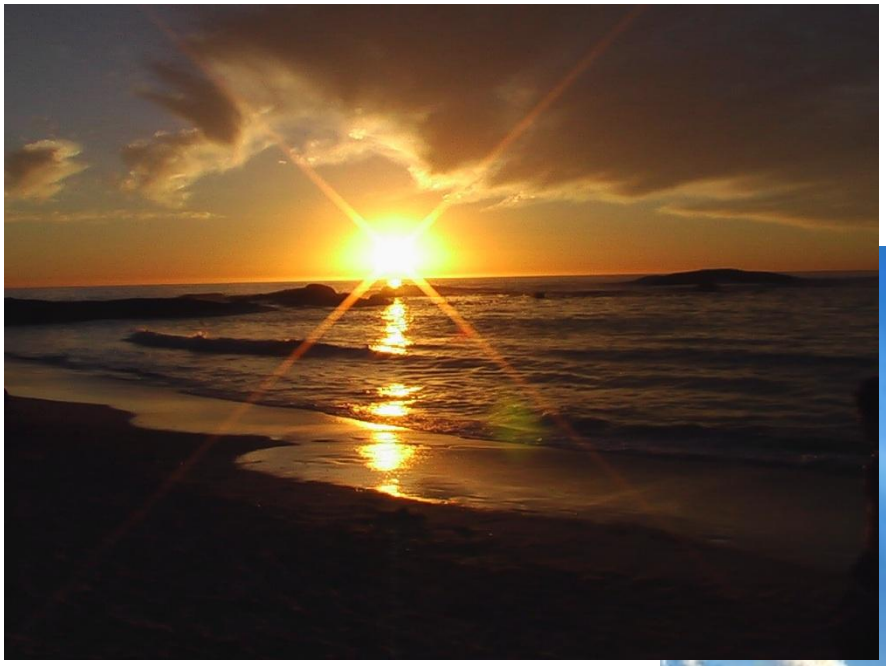
Solar 101

The Case for Solar

PV isn't perfect…



Solar energy doesn't reach the earth's surface on an exact schedule. Weather place a large role in PV generation estimating.

Sunsets are beautiful but we cannot generate electricity through PV at night.

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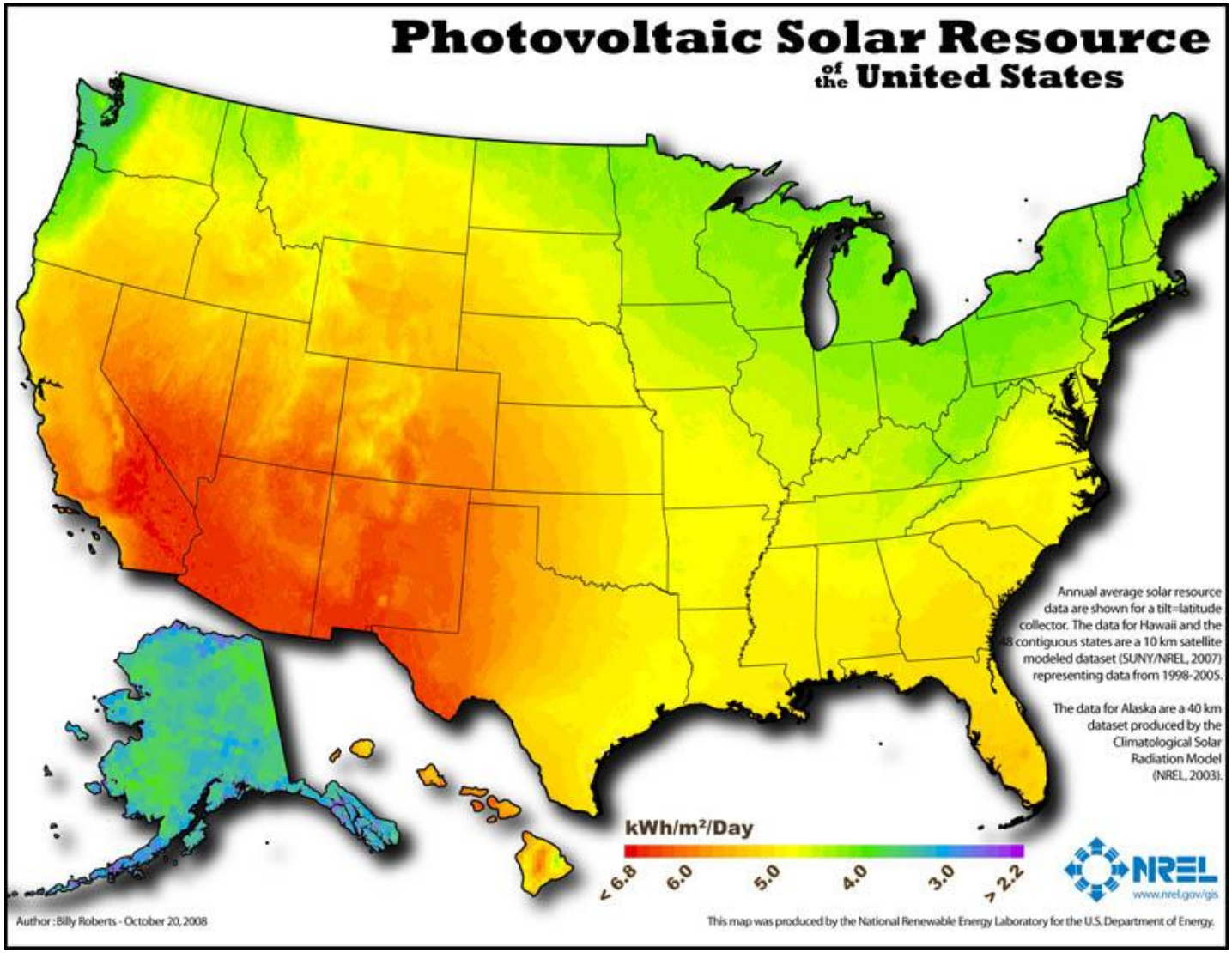
Variable Resource



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Predicting Solar Output

PVWatts

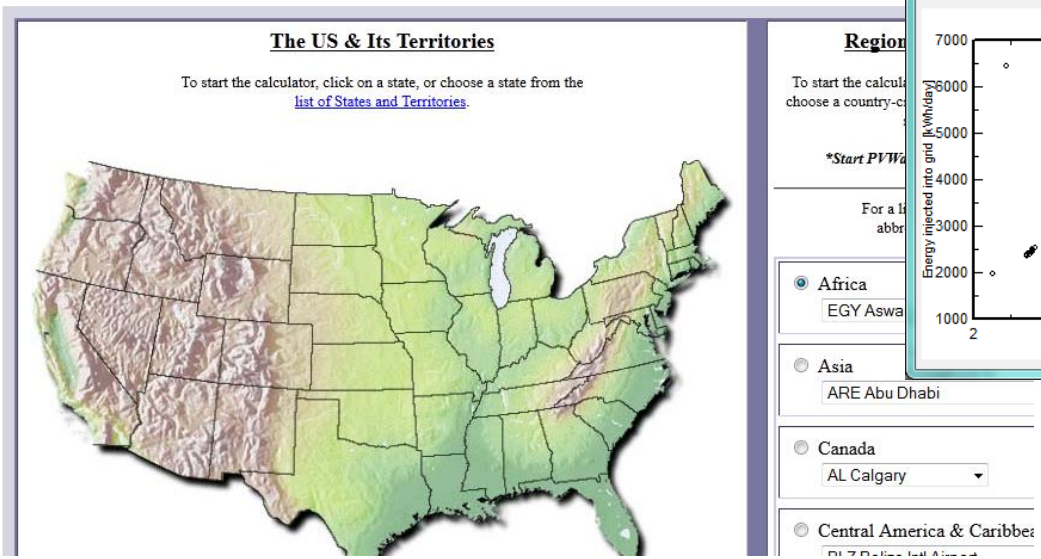
A Performance Calculator for Grid-Connected PV Systems

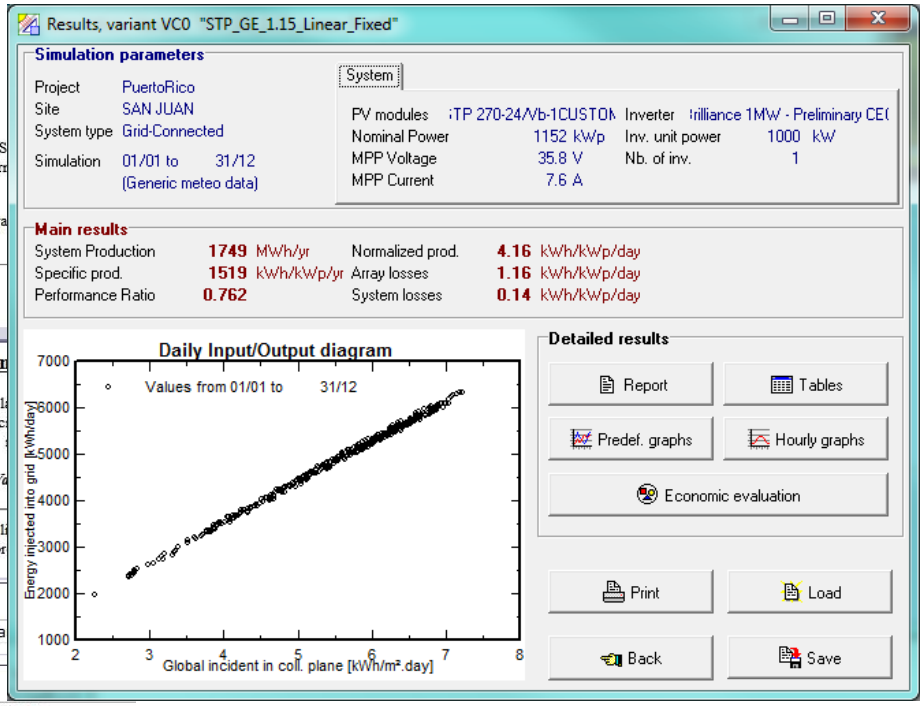
A new map-based interface for PVWatts has been released. This new version combines capabilities from both version 1 (below) and a gridded monthly data set; this updated interface is available at PVWatts. The interface below has been retained for the near future.

Version 1

PVWatts v. 1 can be used for locations accessible through links on the map below, or through a text list for U.S. sites; or for sites outside the US lists by region. Researchers at the National Renewable Energy Laboratory developed PVWATTS to permit non-experts to quickly obtain perfor for grid-connected PV systems.

Also available is an option to output hourly performance data. This option can be run after the inital calculation, and outputs the data in a separa window. Instructions for saving the output to a text file can be accessed through the "Help" link at the top of the hourly output page.





Why Solar?

No Fossil Fuels

- Once a PV System is installed it produces “clean” electricity. It uses sunlight as its fuel so it is completely renewable and does not produce harmful emissions.

Simplicity

- PV systems have no moving parts and do not require continuous maintenance. They can also be deployed to almost any area in the world.

Longevity

- Solar modules have long warranties and have been proven to Last for more than 40 years. As long as the sun continues to shine, a PV system will unobtrusively produce green electricity.

Safety

- Because there is no fuel, there is no danger in working with harmful chemicals or highly flammable and combustible materials.

Recyleability

- PV systems use basic materials such as silicon, copper, steel and aluminum. They can have a very low environmental impact and can be reused or recycled at the end of their useful life.