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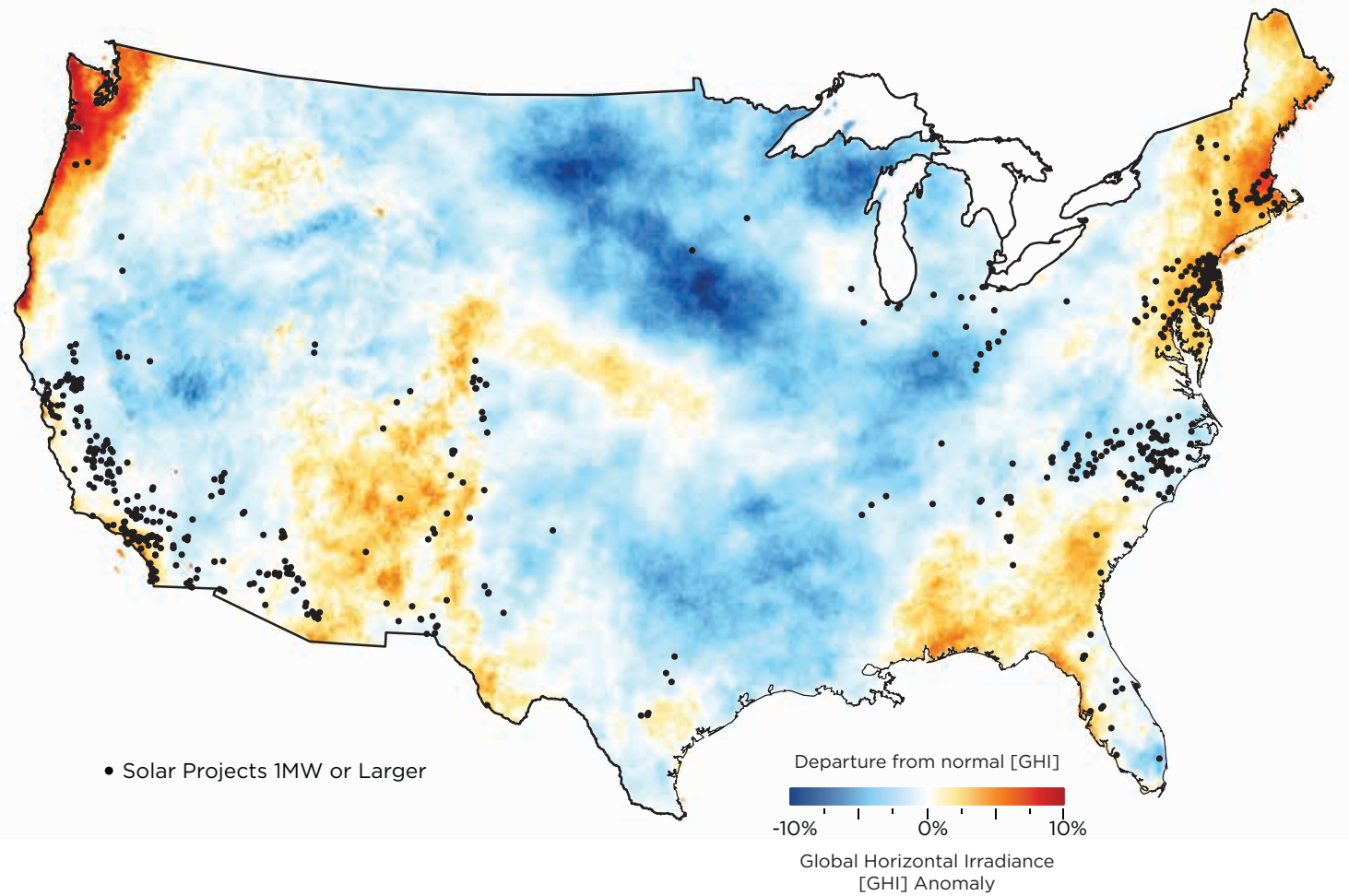
3TIER by Vaisala | Summer 2014 Solar Performance Map



The Summer 2014 Solar Performance Maps show the departure from average of solar conditions either in the form of global horizontal irradiance (GHI, the key variable for PV projects) or direct normal irradiance (DNI, the key variable for CSP projects). Average is based on 15+ years of solar irradiance data derived from our global solar dataset. A climate analysis of the three-month study is summarized below.

June experienced frequent upper-level troughs and low pressure systems traversing the US, bringing severe weather and cloud -iness to an area stretching from Texas and Louisiana up to the northern Plains and Midwest. The enhanced westerly flow aloft inhibited precipitation in the West, where drought intensified and Arizona had the third driest June on record, with an associated positive insolation anomaly.

July saw an active jet stream for summer, with a persistent high-amplitude pattern that brought cooler temperatures in the East and warmer, drier weather in the West. Large wildfires and smoke in the northwest interior reduced insolation in Washington State despite sunny weather. Above-normal monsoon showers over the Southwest reduced insolation there, and frequent weather systems moving through the upper-level trough over the eastern half of the country brought cloudiness and reduced insolation to the Southern Plains and East Coast. The upper-level circulation pattern inhibited summer thunderstorms and cloudiness over the Northern Plains and Midwest, increasing insolation there.

August brought a stronger subtropical Bermuda high pressure center, which lead to generally sunnier than normal conditions over the Southeast and Southern Plains states. An active jet stream dominated the North, with vigorous short-wave troughs and ridges migrating through the upper-level circulation, and frequent monsoon showers continued across the Southwest, resulting in low insolation across much of the northern and western US. The Pacific Northwest was an exception due to a persistent upper-level ridge causing sunny conditions west of the Cascade crest.

Some information courtesy of the NOAA National Climatic Data Center's State-of-the-Climate Synoptic Discussion (http://www.ncdc.noaa.gov/sotc/synoptic).

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