

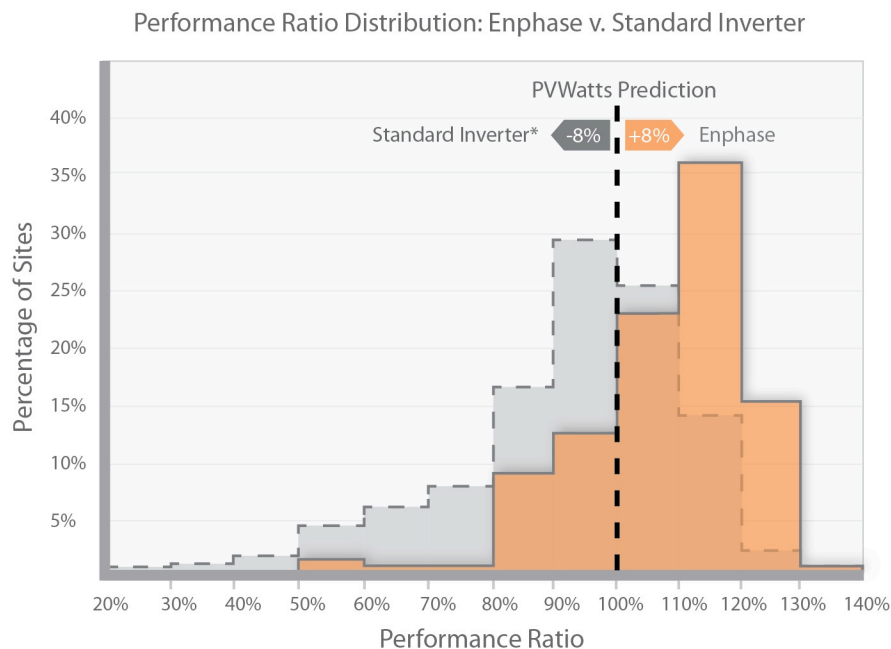
## Study Shows Enphase Installations Outperforming PVWatts Estimates by 8%

*New Enlighten tool to assist installers with PV system performance estimates*

**Petaluma, Calif.** – August 31, 2011 – [Enphase Energy](#) today released results from a field performance study demonstrating that Enphase installations on average perform 8 percent higher than their PVWatts calculator predictions. Also introduced today is a performance estimation tool in Enlighten, Enphase’s web-based monitoring and analysis software. This new feature allows installers to more accurately analyze the performance of their Enphase installations. Both are part of an expanding Enphase effort to enhance installers’ and system owners’ understandings of microinverter technology and the factors affecting PV system performance.

### Field Performance Study

The study examined energy production data from over 143 Enphase systems installed by [Real Goods Solar](#), [Solar Universe](#) and [Astrum Solar](#) in California and the Eastern U.S. This data was compared to performance forecasts generated by the National Renewable Energy Lab’s (NREL) PVWatts calculator, based on geographic location, system design factors and product specifications for each installation. PVWatts is the leading performance forecasting tool for residential and small commercial solar applications. The full study can be found here: <http://enphase.com/wp-uploads/enphase.com/2011/08/Enphase-Study-Performance-Versus-PVWatts.pdf>



\* Source: Gostein, et al., 2009



The results show that Enphase installations on average outperform PVWatts by 8 percent, with a majority of sites outperforming by 10 percent or more. A review of similar published PVWatts studies, such as the 2009 study authored by Gostein, et al., indicates that solar installations using traditional central inverters actually underperform PVWatts estimates by 8 percent on average. When considered together, these results indicate that Enphase Microinverters can improve the performance of solar installations by 16 percent on average.

“Enphase Microinverters increase energy production versus standard inverter technology, and this study further confirms it,” said Raghu Belur, VP of products and co-founder of Enphase Energy. “This level of superior system performance is one of the key benefits of the Enphase Microinverter System enjoyed by system owners.”

### **Enlighten Performance Estimation Tool**

This new Enlighten enhancement allows installers to register solar energy system design information, such as location, azimuth, tilt, module type and additional parameters, in order to generate the corresponding PVWatts production estimation right in Enlighten.

“Integrating estimation tools into Enlighten provides a whole new dimension of information for our installers,” added Belur. “By adding integration with estimation calculators such as the PVWatts system, we’ve enabled our installers to hone their estimates and provide the most accurate and informed recommendations to their customers.”

### **About Enphase Energy**

Enphase Energy delivers microinverter technology for the solar industry that increases energy production, simplifies design and installation, improves system uptime and reliability, reduces fire safety risk and provides a platform for intelligent energy management. Our semiconductor-based microinverter system converts energy at the individual solar module level and brings a systems-based, high technology approach to solar energy generation.

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