

# PERFORMANCE OF ENPHASE MICROINVERTERS

## PERFORMANCE ANALYSIS

Enphase Energy compared the performance of nearly 150 solar installations using Enphase Microinverters to their expected performance, based on predictions from the National Renewable Energy Laboratory's PVWatts Calculator

On average, solar installations using Enphase Microinverters outperform their PVWatts predictions by 8% on average.

A similar study compared the performance of nearly 500 solar installations using standard inverter technology to their PVWatts predictions. This study found that solar installations using standard inverters underperform their PVWatts predictions by 8% on average.

When considered together, these studies indicate that Enphase Microinverters deliver a 16% performance advantage.

Download the full study at [www.enphase.com](http://www.enphase.com) (enter "PVWatts study" in the search bar).

Performance Ratio Distribution: Enphase v. Standard Inverter

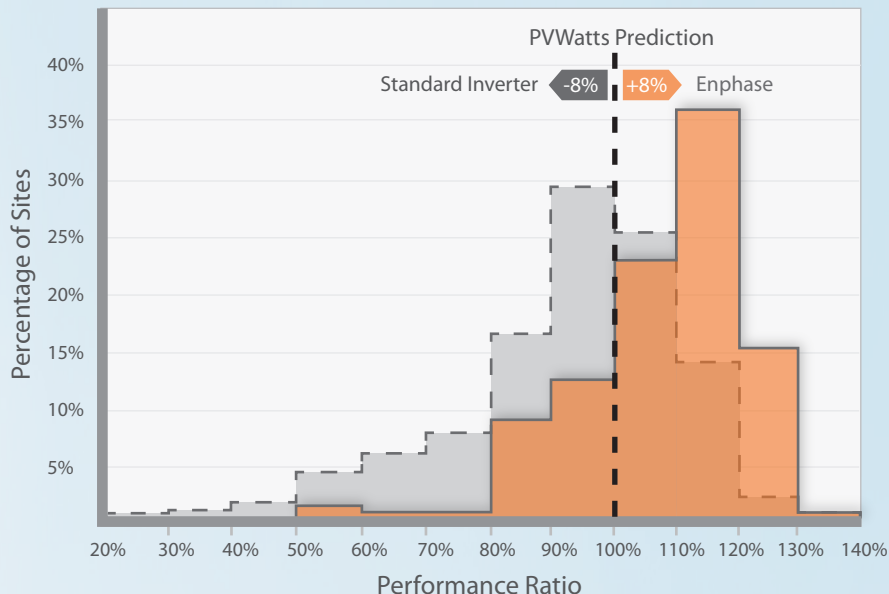


Figure 1: The performance of nearly 650 solar installations is compared to PVWatts predictions. Enphase sites are shown in orange, standard inverter sites in grey.

## FINANCIAL ANALYSIS

### Summary Table

System Size	5 kW DC
PVWatts Prediction (kWh/yr)	7,250 kWh
Enphase Performance Factor	+8%
Standard Inverter Performance Factor	-8%
Enphase Total Savings* (in today's dollars)	\$40,810
Standard Inverter Total Savings* (in today's dollars)	\$33,023
<b>Enphase Advantage</b>	<b>\$1.56/W</b>

\*Assumptions used to derive savings:

- (1) starting energy price of \$0.25/kWh
- (2) energy price escalation of 5% per year
- (3) inflation rate of 3.5% per year
- (4) annual panel degradation of 1% per year
- (5) standard inverter replacement in year 11

Total Energy Savings: Enphase v. Standard Inverter

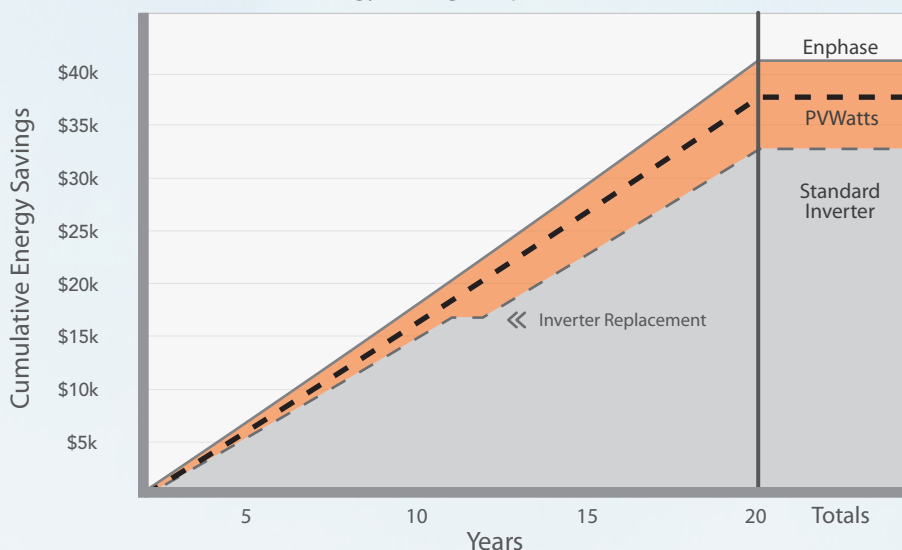


Figure 2: The financial benefits of a solar installation shown in terms of total energy savings over the lifetime of the system. Enphase is shown in orange, a standard inverter in grey.