

Performance of Siemens Microinverters

Performance Analysis

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

On average, solar installations using technology similar to Siemens 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 Siemens Microinverters deliver a 16% performance advantage.

Download the full study at www.usa.siemens.com/microsolar.

Performance Ratio Distribution: Siemens v. Standard Inverter

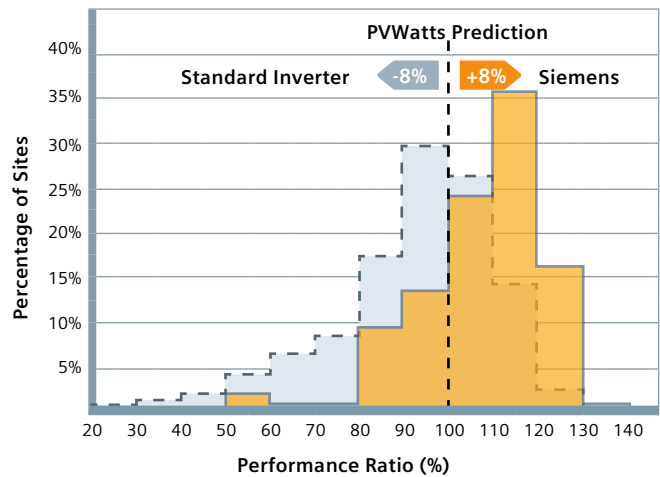


Figure 1: The performances of nearly 650 solar installations are compared to PVWatts predictions. Microinverter sites are shown in orange, standard inverter sites in grey.

Financial Analysis

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

- *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: Siemens v. Standard Inverter

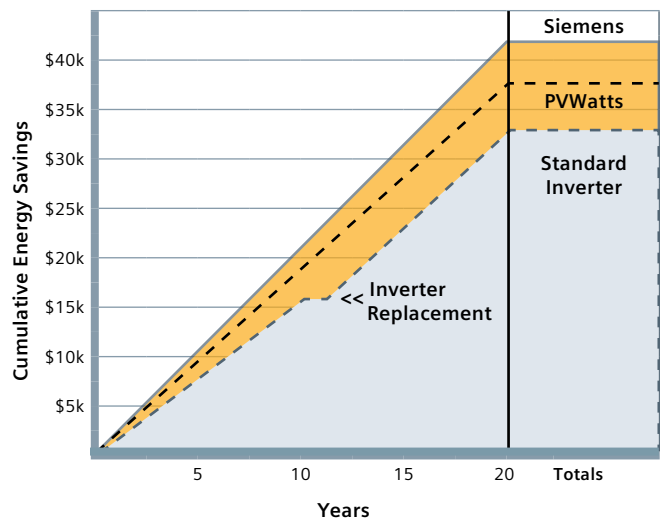


Figure 2: The financial benefits of a solar installation shown in terms of total energy savings over the lifetime of the system. Siemens is shown in orange, a standard inverter in grey.