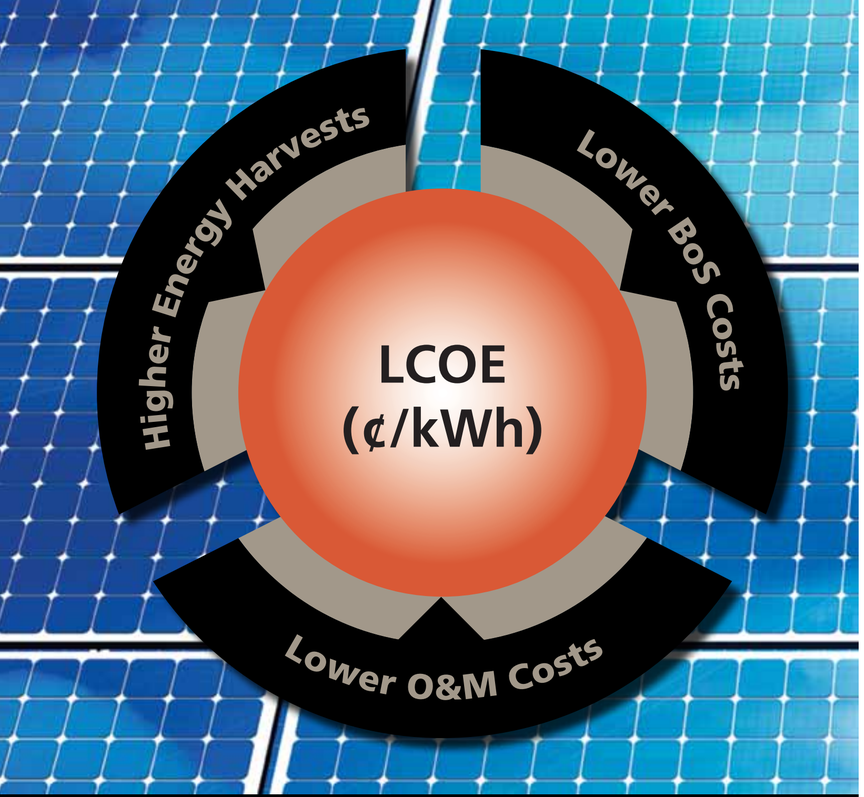


Advanced Energy offers inverter solutions and services that improve PV system performance and reduce costs, driving the industry closer to grid parity for commercial and utility-scale PV. The innovation in Advanced Energy® Solaron® inverters supports a fundamental shift to today's more exacting PV system metric—the levelized cost of energy (LCOE), measured in ¢/kWh, which requires a balance of high system performance, low BoS costs, and low, ongoing operations and maintenance costs.

## AE Worldwide Operations

- **Design, launch, service, and manufacturing**
  - **Fort Collins, Colorado**
  - **Bend, Oregon**
- **Direct sales and service**
- **Regional manufacturing**
  - **Toronto, Ontario, Canada**
  - **Shanghai, China**
- **Inverter parts depots**

## Unlock the Full LCOE Potential of Your PV System

Achieve the lowest LCOE for the entire lifecycle of your PV projects. Maximize power, lower BoS costs, and lower O&M costs.

To run an LCOE analysis and compare results for yourself, we encourage you to visit *https://www.nrel.gov/analysis/sam*.

To get started with an AE Solaron product, contact us directly at 800.446.9167 or +1.970.221.0108, or visit *www.aesolaron.com*.


Specifications are subject to change without notice.


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ENG-SolaronFamily-250-03 1M 12/10




AE solaron®
Grid-Tied PV Inverters

# Photovoltaic Inverter Solutions Portfolio

Enabling the Lowest Levelized Cost of Energy

## Commercial & Utility Inverters

### Solaron® 250
Compact, outdoor-ready PV inverters suitable for commercial rooftops

| | |
|---|---|
| Max Power | 250 kW AC |
| Efficiency | 97.5% CEC |
| Peak Efficiency | 98.1% |
| Thermal Envelope | Full power up to 50°C (122°F) |
| Options | Cold weather operation |

Reduce footprint and noise at commercial sites

Convert DC power more efficiently and reliably

Process power longer with a wide, fast, proprietary MPPT window

### Solaron® 333
High-efficiency inverters, ideal for large commercial PV installations

| | |
|---|---|
| Max Power | 333 kW AC |
| Efficiency | 97.5% CEC |
| Peak Efficiency | 98.3% |
| Thermal Envelope | Full power up to 50°C (122°F) |
| Options | Cold weather operation, Remote PV Tie (RPT) |

Get maximum kWh output

Reduce BoS costs with transformerless design and smallest footprint in its class

Expect the most reliable energy conversion

### Solaron® 500 / 500E / 500 1 kV
Durable, robust, 500 kW building blocks for utility-scale PV installations

| | |
|---|---|
| Max Power | 500 kW AC |
| Efficiency | 97.5% CEC<br>98.1% European |
| Peak Efficiency | 98.6% |
| Thermal Envelope | Full power up to 50°C (122°F) |
| Options | Cold weather operation, RPT, AC/DC disconnect, utility controls |

Achieve faster PV system ROI

Reduce material and labor costs with fewer, smaller pads

Lower BoS and improve reliability with fewer medium-voltage transformers

### Solaron® 1000 / 1000E
Next-generation 1 MW technology for industry-leading LCOE


| | |
|---|---|
| Max Power | 1 MW AC |
| Efficiency | Industry leading |
| Peak Efficiency | Industry leading |
| Thermal Envelope | Full power up to 50°C (122°F) |
| Options | Cold weather operation, RPT, optional disconnects, advanced utility controls |

Reach exceptional system performance ratios

Provide utility-interactive controls

Improve PV system designs with greater flexibility for large, multi-section solar farms

### PowerStation™ 1 to 2 MW Integrated Base Station
Integrated solution for utility-scale, multi-megawatt PV projects

| | |
|---|---|
| Max Power | 1 to 2 MW |
| Configurations | Open, enclosed |
| MV Transformer | Parallel connect, single winding |
| Thermal Envelope | Full power up to 50°C (122°F) |
| Options | Cold weather operation, RPT, AC/DC disconnect, advanced utility controls |

Optimize LCOE for large projects

Reduce project engineering, material, and field labor costs

Simplify connections between DC array and grid

## Global Services & Accessories

### Product Warranties
Coverage for 5 to 20 years

Receive comprehensive 5 year standard inverter warranty

Extend warranties up to 20 years

Access worldwide technical support 24 x 7 x 365

### SafeGuard® PM Services
Customized Solaron preventive maintenance programs

Maximize uptime with remote testing, diagnostics, and controls

Safeguard your investment, letting AE manage PM and annual inspections

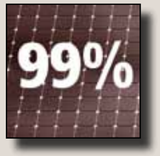
All parts and labor included

### SafeGuard® 99% Uptime Guarantee
A new class of service, ensuring your inverter is operational, rain or shine

Rely on uninterrupted peak performance

Virtually eliminate downtime with a rain-or-shine algorithm

Receive compensation should the inverter fall below 99% uptime




### SiteGuard® O&M
Customized PV site operations and maintenance service programs

Recover quickly from unplanned outages

Coordinate geographically dispersed installed base with a single, global, service organization

Replace fixed costs with variable costs

### IDS™ Communications
Integrated data system, enabling remote monitoring for every inverter

Access performance data remotely

View real-time temperature, current, voltage, and other data

Save data to 10 year / 2 GB SD card

### Remote PV Tie (RPT™) 333 / 500 Accessories
Cable-saving RPT™ accessories for greater flexibility in PV design architectures

Dramatically reduce cable costs

Eliminate common installation obstacles

Gain up to +2% additional efficiency

### Certifications
Meets UL and CE requirements

ISO 9001 processes and manufacturing

Certified regulatory compliance worldwide

Worldwide quality assurance


## Why AE?
Founded in 1981, Advanced Energy is an established global leader in high-performance, power-conversion applications. AE's leading solutions offer energy precision, unsurpassed uptime, and long lifecycles in markets such as:

**Renewable Energy**
Solar grid-tied inverters
Solar photovoltaic cells
Passive solar architectural glass coatings

**Thin-Film Technology**
Semiconductors
Flat panel displays
Data storage media

## Innovation Heritage
AE has generated over 100 power-conversion-related patents worldwide and continues to develop a solid patent position relative to its inverter development. The Solaron platform incorporates soft-switching, high-power IGBT engines and liquid-cooling to enable >98% peak efficiency and 20 year design life.

## Lifecycle Services
AE customers insist on long-term support programs and responsiveness measured in hours, not days. AE Global Services provide a single resource for PV site preventive maintenance (PM), PV site O&M support, and inverter uptime performance guarantees.

## Quality—Zero Defects
Zero defects, measured at the point of customer commissioning, is our goal to ensure customers enjoy a hassle-free and efficient power-up process.

## Operating Scale
AE's global infrastructure and purchasing scale ensure operating efficiencies and cost effectiveness for customers. AE recently tripled Solaron production capacity to support its growing customer base and larger PV projects.

## Lowest Levelized Cost of Energy—LCOE
LCOE accounts for up-front capital costs, inverter power-conversion performance, and service expenses. The bottom line for Solaron customers is that they can achieve the lowest cost of producing energy over the entire project lifecycle.

## Bankability
Advanced Energy is publicly traded on the NASDAQ, ticker AEIS, and our financial information is available through the Securities and Exchange Commission and at *www.advanced-energy.com*.

## Reliability—Uptime
AE's heritage in the semiconductor industry embedded an intolerance to downtime and the expectation for long product life.