

# Bankable solar solutions

Best-in-class products and reliable support  
from a partner you can trust



**Schneider**  
Electric



*The sheer strength and integrity of the Schneider Electric company is head and shoulders above the competition. Your inverter is the heart and soul of your photovoltaic system; you simply can't afford anything but the best.*

**– Kenny Habul, CEO of SunEnergy1**



# Meeting the energy challenge with efficient solar power

Efficient solar solutions designed with your needs in mind

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Despite higher costs and threats of global warming, our planet grows more reliant on electrical energy with each passing day. And as the global population rises, we are increasingly turning to solar power as a viable, long-term renewable solution.

The solar industry, though young, is ready to help us meet this energy challenge. But to be part of the game, developers need a partner they can trust, so that they can confidently invest in reliable solutions that will prove profitable in the years to come — solutions that are bankable.

## The expertise of a trusted supplier

Schneider Electric™, the Global Specialist in Energy Management™, is at the forefront of photovoltaic technology, helping to ensure an optimised energy harvest over the lifetime of any installation.

We provide quality and reliable solar solutions with flexible designs, enabling an optimised total cost of ownership, starting with your capital expenses. And, with the backing of a global service organisation and best-in-class manufacturing, we can provide real bankability for any solar project worldwide.

## Best-in-class products with local support

From delivering reliable products and solutions to local services expertise worldwide, Schneider Electric is committed to ensuring a superior customer experience, including:

- Designing and manufacturing innovative products with an emphasis on quality and reliability
- A global organisation with local sales and services in more than 100 countries

# 15%

The expected annual growth rate increase for solar PV energy generation.

Source: World Energy Outlook © OECD/IEA, 2011

# 740 TWh

The amount of power projected to be generated by solar PV energy in 2035.

Source: World Energy Outlook © OECD/IEA, 2011

A wide-angle photograph of a solar farm. The foreground and middle ground are filled with rows of dark blue solar panels mounted on metal frames. The panels are arranged in neat, parallel lines that recede into the distance. The sky is a clear, vibrant blue with a few wispy white clouds. In the far background, a line of green trees is visible against the horizon. The overall scene is bright and clear, suggesting a sunny day.

Bankability means you can rely on our financial strength, worldwide support, industry experience, and reliable products for any solar project.

# A worldwide leader in solar solutions

Leveraging our global strength to support your business



With experience in power conversion design and manufacturing, Schneider Electric is a Fortune 500 company that has been in business for more than 175 years. We've been manufacturing solar inverters since 1999 — among the longest in the market.

As a global organisation, our various business units are all recognised as leaders in their respective fields, from industry to power, information technology, buildings, and infrastructure.

## A worldwide leader in power conversion

Being part of such a diverse business helps not only to optimise manufacturing costs, but also to capitalise on technology and supply chain synergies.

Our research and development, engineering and product development teams interact closely with our industrial power drives and UPS businesses to create innovative, next-generation solar inverters using proven designs and reliable product building blocks. The global Schneider Electric supply chain is also being leveraged fully to ensure component sourcing and product manufacturing to world-class industrial standards.



More than  
**2.2 GW**

The amount of large three-phase inverters Schneider Electric has installed worldwide.

More than  
**€22.4 billion**

The sales for Schneider Electric in 2011



Reliability testing is an accelerated stress test that identifies potential weaknesses which may be uncovered during the life span of the product.

# Building trust through proven performance

## Designing robust solar products

Schneider Electric solar products and solutions are designed to the highest standards and undergo robust Design for Quality & Reliability practices as well as reliability testing throughout the product development cycle.

These tests help both product reliability and overall customer satisfaction aiming to continuously improve robustness of the design proactively.

### Key aspects of Design for Quality & Reliability

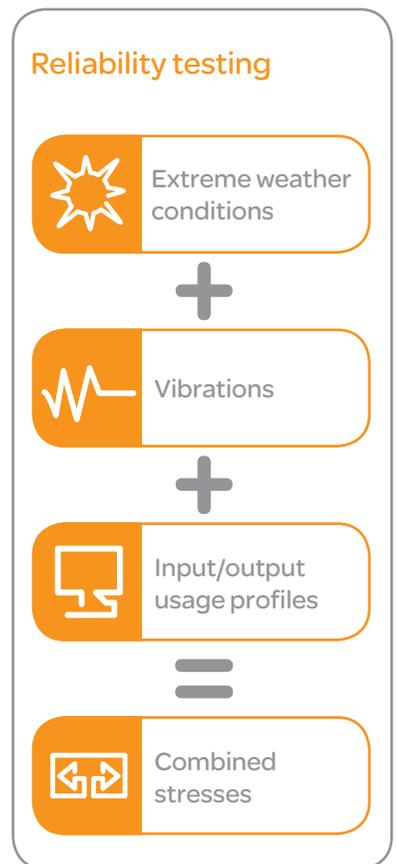
- > WCA (worst case analysis)
- > Useful life analysis
- > Design standard check
- > D-FMEA (design failure modes, effects analysis)
- > A-FMEA (application failure modes, effects analysis)
- > FIT/ MTBF (failure in time / mean time between failures) prediction
- > List of preventive maintenance parts for field serviceable products
- > Reliability testing

### Product life cycle reliability testing

- > Qualification of major design improvements
- > Continual reliability monitoring to ensure the same level of reliability throughout the product life cycle

### Types of reliability testing during product development cycle

- > THB (temperature humidity bias)
- > Salt-fog testing
- > HALT (highly accelerated life test): Product evaluation process during which thermal stress is combined with vibration and the product's functionality is tested at these combined environments
- > MEOST (multiple environmental over stress testing): Advanced version of HALT, the difference is in combining more stressors based on product application
- > STRESSORS: temperature step/shock, vibration, power, input DC Voltage, output AC voltage and frequency cycling
- > Custom reliability testing: Used for our large three-phase inverters; tested in walk-in chamber





Comprehensive warranty extensions, preventive maintenance, and uptime/availability programs are available for the entire balance of system.

# Support you can depend on

Ensuring peace of mind with a global service infrastructure

ADVANTAGE service levels available			
Services contract →	Plus	Elite	Ultra
Preventive maintenance	★	★	★
24/7 hotline	★	★	★
On-site intervention	★	★	★
Emergency spare parts delivery	★	★	★
Emergency spare parts delivery costs included		★	★
Emergency on-site intervention costs included		★	★
Yield loss compensation			★
Technical availability guarantee			★

With a local presence in more than 100 countries, Schneider Electric has a global service and support infrastructure designed to optimise your operation and maintenance costs. Skills and resources from our global power conversion, medium- and low-voltage, SCADA & automation businesses are leveraged to provide locally the necessary expert level support for solar applications.

Additionally, our spare parts inventories are strategically located in key areas of solar market activity, ensuring that the right parts are there when you need them.

### Proactively improving performance

Comprehensive warranty extensions, preventive maintenance, and uptime/availability programs are available for the entire balance of system, including inverters, transformers, LV components, MV equipment and the monitoring system.

### Specialists at your service 24/7

Schneider Electric commissioning support includes visual inspection, functional testing, and system support to help ensure your installation runs smoothly. We also have specialists in system design, installation, safety, system operation, and quality, with technical support available 24 hours a day.

# 99%

The availability achieved by Schneider Electric three-phase inverter products in North America in 2011



*The PV Box brings together Schneider Electric's complete know how, from electricity generation to energy management, and delivers real benefits to our partners. The people at Schneider Electric knew immediately just which components — and just what dimensioning — this project called for. That was also a significant factor in the rapid execution of this project.*

**— Dr. Marko Schulz, Managing Director of Saferay**



# Selected customer references

Global project support that makes any size installation a success story

6 kW residential installation  
in Ontario, Canada



5.2 MW power plant  
in North Carolina, USA



4.5 kW off-grid installation  
in California, USA



6.4 kW residential installation  
in New York, USA



18 MW power plant  
in La Reunion, France



78 MW power plant  
in Senftenberg, Germany



43 MW power plant  
in Puglia, Italy



3 MW power plant  
in Villanueva del Aceral, Spain





Discover more about our solar solutions!

Visit [www.schneider-electric.com/solar](http://www.schneider-electric.com/solar) and download our **FREE PV solution guide!**

Make the most of your energy<sup>SM</sup>



Design: Global Marketing, Communication, Strategy, and Design  
Photos: Schneider Electric

