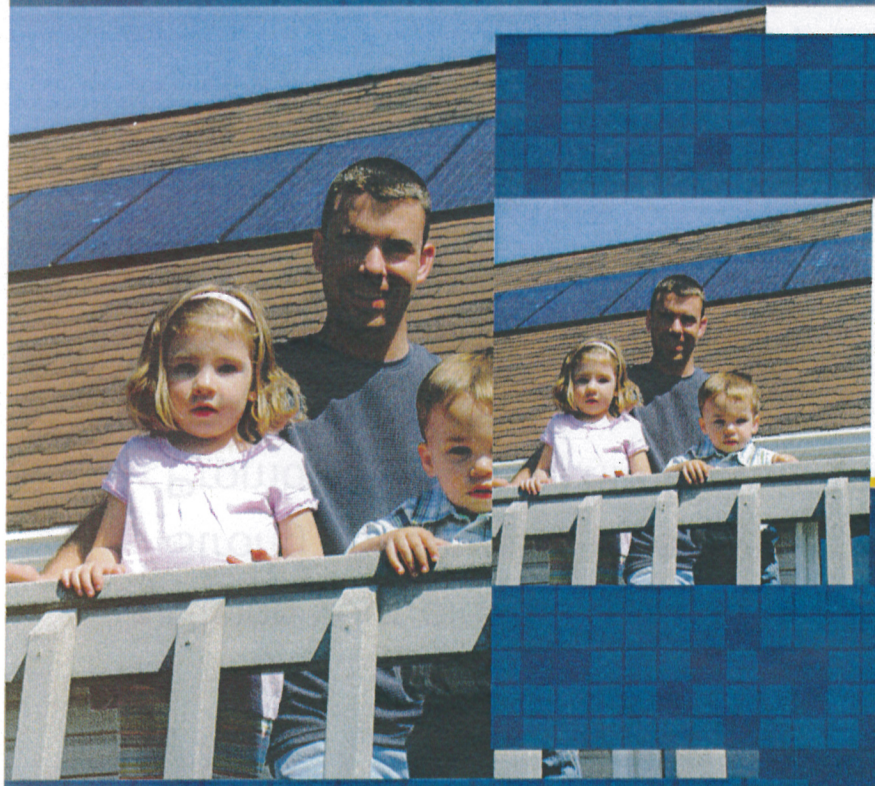

STANDARD SOLAR®

CLEAN ENERGY.
SMART INVESTMENT.

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Why Go Solar?

- Rising your electricity costs
- Strong government incentives
- Promoting solar technology in the community
- Excellent return on investment

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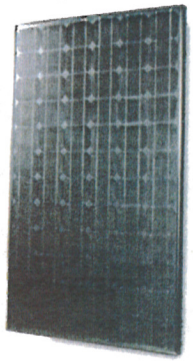
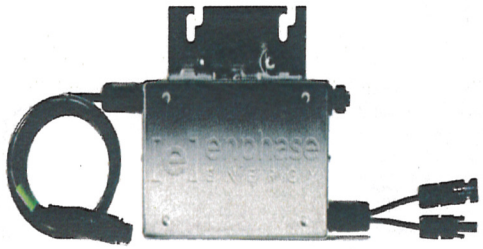
SMART INVESTMENT.

How Solar Works

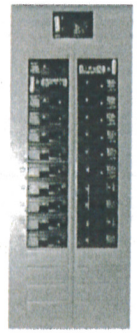
1. Solar Module



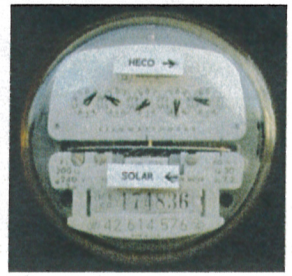
2. Micro-Inverters



3. Breaker Panel



4. Utility Meter



Images provided by:
www.noelectricbill.com, www.germes-online.com, www.solarpanelstore.com, www.debkrolls.com, www.thepowerchange.com

Personalized Monitoring Solutions

- Panel-by-panel monitoring
- User-friendly interface allows you to easily graph production
- Remote monitoring capabilities

1 Enphase Micro-inverter system
- installed on the mounting beneath each solar module
- maximizes energy harvest

2 AC power is sent via AC wiring to the load center
- performance data is also sent via the AC wiring
- plug and play communications

3 Envoy Communications Gateway
- plugs into any AC outlet
- collects information via the AC wiring
- transmits data through a standard ethernet router to the internet

4 Standard Ethernet Router
- information collected by Enphase Envoy is then transmitted to Enlighten in 5-minute intervals

5 Enphase Enlighten Monitoring
- provides monitoring and analysis
- performance information can be viewed from any web browser

Plug-and-Play Installation

Enphase Energy's per-module monitoring technology is integrated into the Enphase Microinverter System which means that you do not need to purchase or install a bolt-on or stand-alone third-party monitoring tool.

The Enphase Envoy (EMU) communications gateway plugs into any standard AC outlet and collects micro-inverter performance information over the existing power line. No additional wiring is required.

By plugging the Ethernet cable of the Envoy into a broadband router, performance data is automatically transmitted to Enlighten using the site's existing internet connection, further simplifying installation.

About Enphase Energy

Enphase Energy provides solar energy management systems for residential and commercial markets. The company offers a networked system, which includes high-efficiency micro-inverters, communications and web-based analytics. The systems increase energy harvest, increase system reliability, and simplify design, installation and management. Founded in 2006 and based in Northern California, the company is led by veterans from the solar and high tech industries and backed by industry leaders. For more information, please visit www.enphaseenergy.com or call (707) 763-4784.

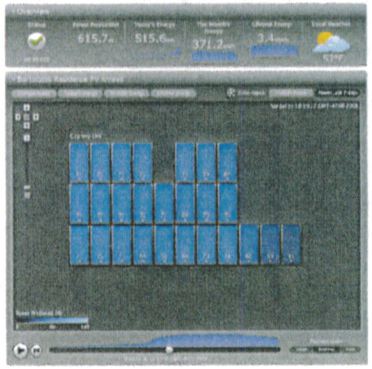
Enphase Energy, Inc.
201 1st Street, Suite 300, Petaluma, CA 94952
877 797 4743 enphase-energy.com

100% recycled paper

[e] enphase ENERGY

ENLIGHTEN™
Per-Module Monitoring and Analysis

Monitoring → Analysis → Insight



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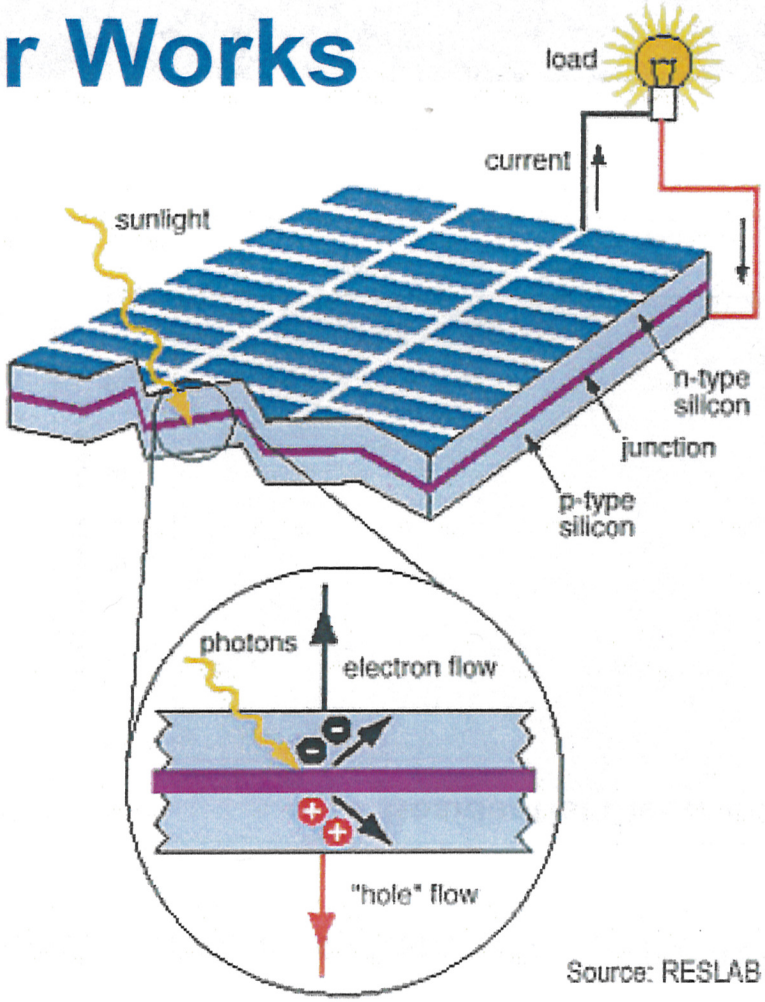
How Solar Works



Source: RESLAB

www.actewagl.com.au

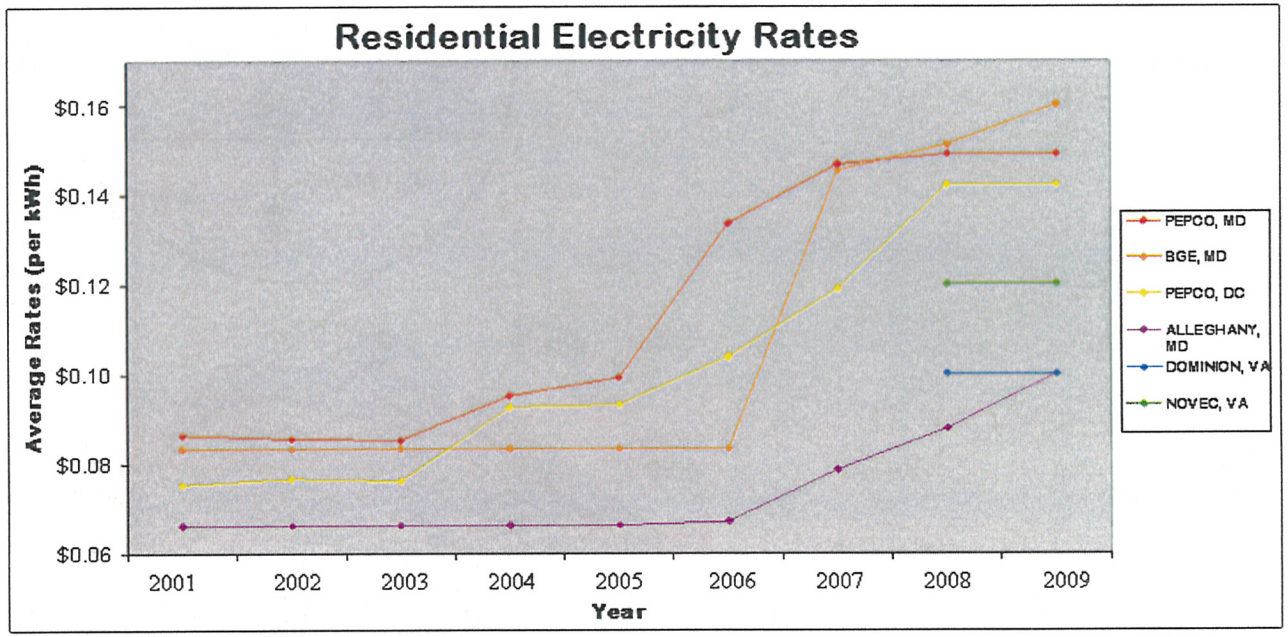
Making a Smart Investment…

Going Solar Profits You, Not the Utility

In a matter of a few years, your solar system will pay for itself. Take Control Now!

CA = $0.34 (peak rate)
CT = $0.19 kWh
NY = $0.19 kWh
MA = $0.17 kWh
NJ = $0.16 kWh
MD = $0.15 kWh
DE= $0.15 kWh
DC = $0.14 kWh
VA = $0.11 kWh
PA = $0.10 kWh *

** Expected to nearly double in '10.*



STANDARD SOLAR CLEAN ENERGY. SMART INVESTMENT.

These Customers Trust Us, So Can You

U.S. Department of Energy

National Institute of Health

U.S. Marine Corps

- Over 500 Residential Photovoltaic System Owners

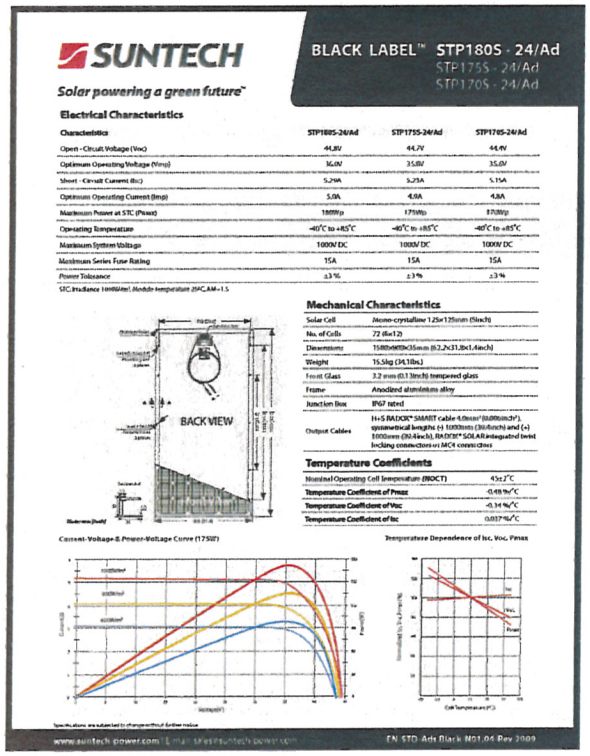
Department of Energy Install

Project Data

- **U.S. Department of Energy**
- **Forrestal Building Headquarters | Washington, DC**

  The Forrestal Building, adjacent to the National Mall, became the first government agency in 2008 to adopt a roof-mounted solar array, demonstrating the viability of solar energy for tens of thousands of commercial and government building rooftops. The 205-kilowatt system provides up to 8% of the Forrestal Complex's energy during peak demand hours. The system is **projected to save taxpayers $26,000 during its first year of operation**. The array puts the Department of Energy a big step closer to acquiring 7.5% of all energy from renewable sources by 2010.
- **System Size, Type** 205 kilowatts, grid connected
- **Generation** 215 megawatt hours annually (est.)
- **Modules** 891 qty. 230-watt panels
- **Inverter** One 210-kilowatt inverter
- **Support Infrastructure** Ballasted support structure with no roof penetrations
- **Monitoring System** Web-based data system, viewable in lobby and via Internet
- **Carbon Emissions Avoided** 186 metric tons annually

The Best Solar Solution and Warranties in the Industry



SUNTECH

Solar powering a green future

BLACK LABEL™ STP180S - 24/Ad
STP175S - 24/Ad
STP170S - 24/Ad

Electrical Characteristics

Characteristics	STP180S-24/Ad	STP175S-24/Ad	STP170S-24/Ad
Open - Circuit Voltage (Voc)	44.8V	44.7V	44.4V
Optimum Operating Voltage (Vmp)	36.0V	35.8V	35.0V
Short - Circuit Current (Isc)	5.29A	5.25A	5.15A
Optimum Operating Current (Imp)	5.0A	4.9A	4.8A
Maximum Power at STC (Pmax)	180Wp	175Wp	170Wp
Operating Temperature	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
Maximum System Voltage	1000V DC	1000V DC	1000V DC
Maximum Series Fuse Rating	15A	15A	15A
Power Tolerance	±3%	±3%	±3%

STC:Irradiance 1000W/m², Module temperature 25°C, AM=1.5

Mechanical Characteristics

Solar Cell	Mono-crystalline 125x125mm (5inch)
No. of Cells	72 (6x12)
Dimensions	1580x808x35mm (62.2x31.8x1.4inch)
Weight	15.5kg (34.1lbs)
Front Glass	3.2 mm (0.13inch) tempered glass
Frame	Anodized aluminum alloy
Junction Box	IP67 rated
Output Cables	H+S RADOX® SMART cable 4.0mm² (0.006inch²), symmetrical lengths (-) 1000mm (39.4inch) and (+) 1000mm (39.4inch), RADOX® SOLAR integrated twist locking connectors or MC4 connectors

Temperature Coefficients

Nominal Operating Cell Temperature (NOCT)	45±2°C
Temperature Coefficient of Pmax	-0.48 %/°C
Temperature Coefficient of Voc	-0.34 %/°C
Temperature Coefficient of Isc	0.037 %/°C

BACK VIEW

Current-Voltage & Power-Voltage Curve (175W)

Temperature Dependence of Isc, Voc, Pmax

Specifications are subjected to change without further notice

www.suntech-power.com | E-mail: sales@suntech-power.com

EN STD-Ads Black M01.04 Rev 2009

- Cutting-edge technology
- Panels warranted for 25 years
- Micro-inverters 15-20 year warranty
- World's largest suppliers with US Manufacturing facilities

SUNTECH [e] enphase ENERGY

STANDARD SOLAR CLEAN ENERGY. SMART INVESTMENT.

Solar Energy Professionals

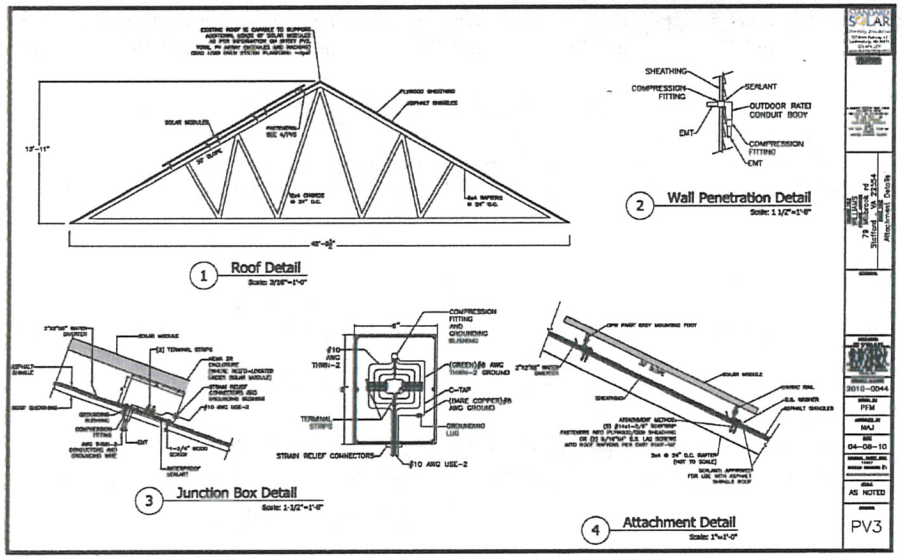
Standard Solar has 6 NABCEP Certified Solar Installers on Staff

North American Board of
NABCEP
Certified Energy Practitioners®

NORTH AMERICAN BOARD OF CERTIFIED ENERGY PRACTITIONERS®
CERTIFIED
Solar PV
Installer

STANDARD SOLAR
CLEAN ENERGY.
SMART INVESTMENT.

Our Process



Engineering

- Physical size of system
- Angle / tilt of panels
- System output
- System efficiency
- Utility rates and programs

Design

- Location (latitude) of property
- Roofing materials
- Roof pitch
- Determining the "sweet spot"
- Shading

Our Company Warranty

Our installation and all system components not covered by a manufacturer's warranty are covered for 10 years against defects in materials or workmanship.

This includes, but is not limited to:

- Mounting hardware
- Support brackets
- Connections
- Racking assemblies
- Electrical wiring
- Conduit
- Flashing
- Roof sealants
- Roof Replacement

Why Standard Solar? Why Now?

- Why Standard Solar?
  - Most experienced solar integrator in the region
  - Cutting edge technology
    - Best monitoring solution
    - Best Warranties
  - Exceeds all current safety and fire code regulations
  - Customer has final approval on system layout

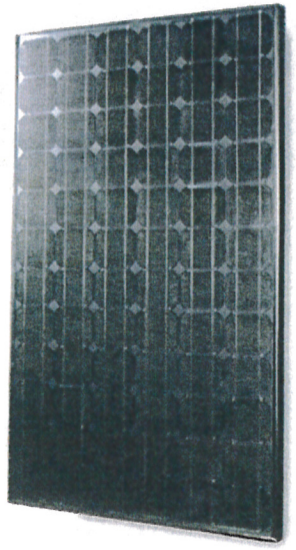
- Why Now?
  - Popular incentive programs, funds are running out quickly
  - In 10 years you have given the same amount of money to the power company!
  - Peak months of solar production and valuable SREC's
  - Why wait? Start saving money now!

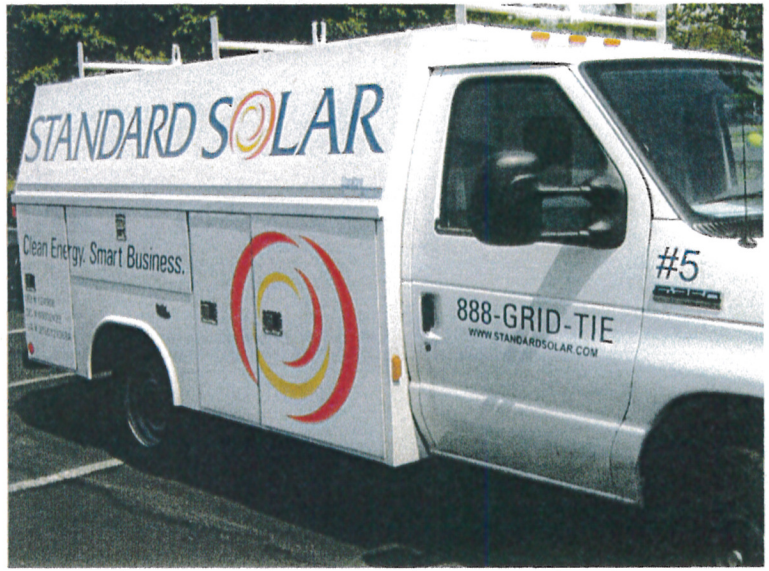
Turn Key Approach

We Make Solar Easy –
100% Satisfaction Guaranteed

From start to finish, you can count on:

- Customized layout and design
- Provide all Hardware/Installation
- Certified Experienced Installers
- Required permits
- Utility interconnection
- Grant and rebate processing
- Post-installation quality inspection
- System Education and Training
- Registration and Brokerage of Solar Renewable Energy Credits (SRECs)





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