

Peralta Community College District

Solar Power PV System Proposal for Merritt College

October 6, 2009



Table of Contents

- Executive Summary 2**
- Proposed System Locations 4**
- SunPower Technology Advantage 5**
 - SunPower Fixed-Tilt Parking Structures..... 5
 - Photovoltaic Modules..... 6
 - PV Module Data Sheet 7
- SunPower “Green Job” Training for Peralta CCD 9**
- College Experience 12**
- Select Carport Systems 16**
- Warranties 23**
- Bonding Capacity 24**
- SunPower Services 25**
 - Operations & Maintenance Services 25
 - System Performance Monitoring and Support..... 28
 - SunPower Monitor: Performance Data Website..... 30

EXECUTIVE SUMMARY

Dr. Harris
Chancellor
Peralta Community College District
333 East 8th Street
Oakland, CA 94606

Dear Dr Harris:

I am pleased to present to you SunPower's proposal for a 1 MW solar PV system for Merritt College. SunPower's Systems group is headquartered in Richmond, CA. SunPower has over 400 employees in the Bay Area, many of which are residents of the District and support Peralta CCD. We request fair consideration of our proposal for the solar project paid for under Measure A by the residents of the District.

SunPower is the best choice for the District, with the world's most efficient PV technology, delivered by the most experienced solar company in the U.S. A summary of the proposed solar PV system is as follows:

System Size: 1 MWac (1,126 kWdc)

Year 1 Energy Output: 1,563,550 kWh

System Price: \$7.4 million

PV Modules: 305W SunPower modules (18.7% efficiency)

The proposed pricing above includes the following:

- Full system maintenance coverage and system monitoring for 10 years
- 10-year Performance Guarantee
- 25-year Output Guarantee on PV modules
- Turn-key installation, including site preparation, interconnections, and commissioning

Should the District elect to proceed with SunPower's proposal, we recommend the following next steps:

- 1) Obtain hourly interval data from PG&E to determine the true 'avoided cost' of energy from PG&E for the proposed solar system. This is a critical component to determining the economics of a solar project.
- 2) Obtain additional information regarding the ground site (topography maps, soils types, etc) to validate site preparation costs
- 3) Obtain detailed information about potential electrical interconnection locations
- 4) Work with the District's Workforce Development organization to discuss SunPower's 'Train the Faculty' program and solar lab facilities

Upon completion of the items above, SunPower will deliver an optimized proposal, at or below the proposed price.

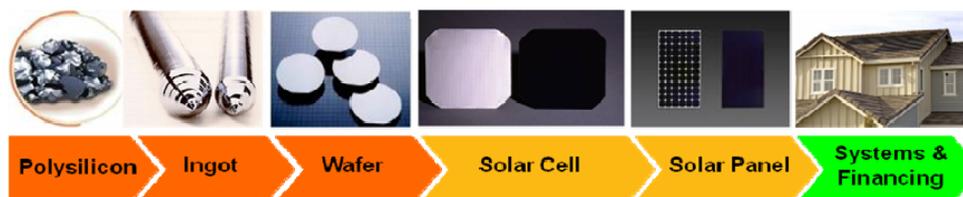
Summary of SunPower Qualifications:

Overall Experience: SunPower is the largest solar power system integrator in the U.S. We have installed over 400MW of solar PV systems worldwide, with over 55MW in California.



Carport/DSA Experience: Since 1999, SunPower has installed 12 MWs of carport systems, of which 8.4 MWs are located in California. SunPower's carport and rooftop systems have been approved by the Department of State Architect (DSA). Example DSA projects include Foothill/De-Anza College, Pierce College, Ohlone College, Napa Valley College, and CSU East Bay.

Vertical Integration: SunPower manufactures, installs, and maintains its own systems. This reduces headaches and possible delays during construction and will improve service response times throughout the life of the system.



High-Efficiency PV Modules: SunPower PV cell efficiency exceeds 22%, significantly higher than standard efficiency cells. Our modules deliver up to 50% more power per unit area. More power per module = smaller footprint, faster construction time, and lower costs. Additionally, SunPower's high-efficiency modules will provide Peralta CCD with greater flexibility in optimally locating the systems.

Green Job Training: With over 500 employees in the Bay Area, and a world class professional training center located here, SunPower will collaborate with the District to develop job training and employment opportunities in the local community, leveraging Merritt College's solar project. In so doing, SunPower will ensure that our efforts in this regard are synchronized with Merritt College's existing resources and curriculum. This may provide grant opportunities for the District. How we will work with the Peralta CCD is further detailed in the "Green Job Training" section of this proposal.



Lowest Cost of Ownership: SunPower's modules include a 25-year warranty on output. SunPower manufactures, installs, and maintains its own systems. This reduces headaches and possible delays during construction and will improve service response times throughout the life of the system.

We look forward to providing you with not only the world's best solar power system, but also our experience, expertise, service and quality workmanship. Thank you for your consideration.

Kind regards,

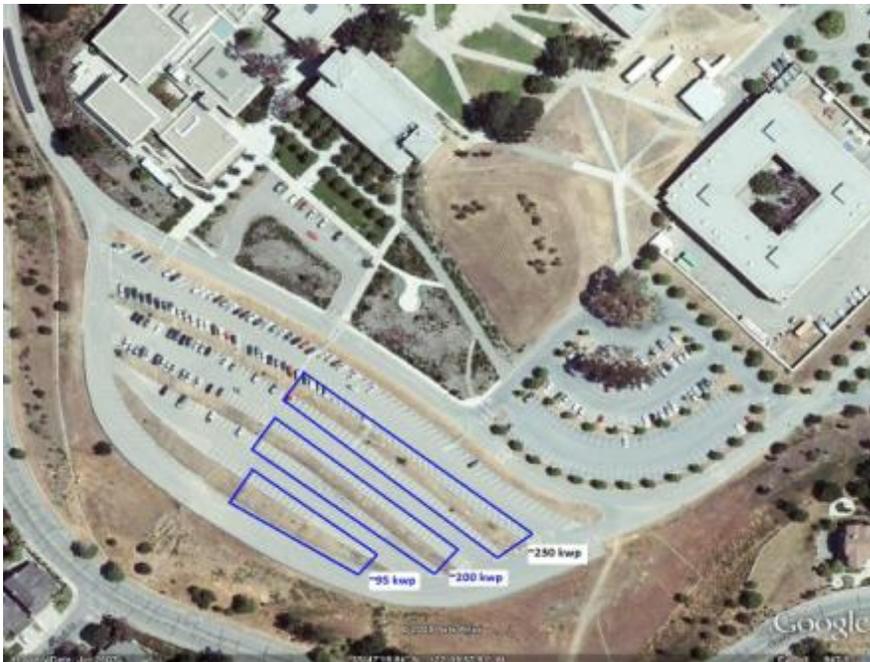
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PROPOSED SYSTEM LOCATIONS

Ground System: 600 kw



Carport System: 526 kw



SUNPOWER TECHNOLOGY ADVANTAGE

SunPower Fixed-Tilt Parking Structures

The SunPower Fixed-Tilt Parking System provides premium shading and protection from the weather for your students, staff, and faculty. Lighting is an available optional feature with the Fixed-Tilt Parking System.

The system features a complete covered space with integrated solar modules to generate maximum electrical power. The system is fully engineered and architecturally designed to maximize performance *and* aesthetics.

The SunPower Fixed-Tilt System uses high-efficiency photovoltaic modules to generate the maximum power output per square foot.



COMPONENTS

The Fixed-Tilt Parking System proposed includes six major components:

Elevated Solar Structure. The architecture of the canopy structure is designed to balance form and function, and to accommodate unique site characteristics and customer's needs. Consistent material and architectural themes are used to retain high performance and aesthetic standards required by the project.

PV Modules. These UL-listed, crystalline modules are protected from impact by maximum light-emitting tempered glass, and feature factory applied UV- and weather-resistant quick connectors and inter-module wiring.

Mechanical Attachment Assemblies. These incorporate Unistrut® Metal Framing, module frames, IFF or EFF clips, and stainless steel bolts.

DC-AC Inverter. The high-efficiency, utility interactive, three-phase inverter meets all applicable UL, Institute of Electrical and Electronics Engineers (IEEE), and National Electrical Code (NEC) standards. Automatic operation includes start-up, shutdown, self-diagnosis, and fault detection. Anti-islanding protection prevents the back-feeding of system-generated power to the grid in the event of a utility outage, and user-definable power tracking matches the inverter to the array. In addition, adjustable delay periods enable you to customize system shutdown sequences.

Combiner Boxes. These merge the module wiring into a single high-current cable and provide overcurrent protection.

Data Acquisition System. Integrated with the inverter, this system includes a data logger and sensors to record AC power (kW), ambient temperature (°C), irradiance (W/m²), and wind speed (m/s), and enables system data transfer and performance monitoring via the SunPowerMonitor website.

Photovoltaic Modules

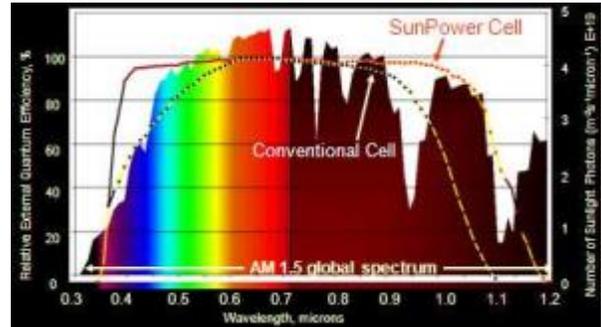
SunPower manufactures the highest efficiency modules commercially available, composed of monocrystalline silicon wafers, field-proven as the most stable and reliable of the PV cell types. To further amplify efficiency, SunPower designed cells locating the electrical contacts on the back surface, achieving conversion efficiencies up to 50% higher than conventional solar cells.

Conventional solar cells are not able to efficiently convert very short wavelength (blue) and longer wavelength (infra-red) light into electricity. SunPower solar cells convert virtually every available photon into electricity.

Conventional solar cells convert light into electricity at about half of their theoretical efficiency, wasting the other half as heat. By minimizing these losses, SunPower panels are 18.7% efficient.

Advantages of SunPower's all-back-contact, back-junction solar cells compared with conventional solar cells:

- Higher voltage due to reduced metal/silicon interface area (contact made through small holes in insulating oxide)
- Higher current since no light is blocked at the front surface by electrical contacts
- Better aesthetics, with no highly visible reflective grid lines and metal interconnect ribbons
- Ease of module assembly since all electrical contacts are in-plane behind the cell circuit.



High Efficiency = More Power on Less Land

SunPower

Conventional

Thin Film



21 Acres
19.3% efficiency



32 Acres
12.6% efficiency



41 Acres
9.5% efficiency

PV Module Data Sheet

SUNPOWER™

305 SOLAR PANEL
EXCEPTIONAL EFFICIENCY AND PERFORMANCE

BENEFITS

Highest Efficiency
SunPower™ Solar Panels are the most efficient photovoltaic panels on the market today.

More Power
Our panels produce more power in the same amount of space—up to 50% more than conventional designs and 100% more than thin film solar panels.

Reduced Installation Cost
More power per panel means fewer panels per install. This saves both time and money.

Reliable and Robust Design
Proven materials, tempered front glass, and a sturdy anodized frame allow panel to operate reliably in multiple mounting configurations.



The SunPower™ 305 Solar Panel provides today's highest efficiency and performance. Utilizing 96 SunPower all back-contact solar cells, the SunPower 305 delivers a total panel conversion efficiency of 18.7%. The 305 panel's reduced voltage-temperature coefficient and exceptional low-light performance attributes provide outstanding energy delivery per peak power watt.

SunPower's High Efficiency Advantage - Up to Twice the Power

	Thin Film	Conventional	SunPower
Peak Watts / Panel	65	215	305
Efficiency	9.0%	12.8%	18.7%
Peak Watts / ft ² (m ²)	8 (90)	12 (128)	17 (187)

About SunPower

SunPower designs, manufactures and delivers high-performance solar electric technology worldwide. Our high-efficiency solar cells generate up to 50% more power than conventional solar cells. Our high-performance solar panels, roof tiles and trackers deliver significantly more energy than competing systems.



SPR-305-WHT-U



SUNPOWER

305 SOLAR PANEL

EXCEPTIONAL EFFICIENCY AND PERFORMANCE

Electrical Data

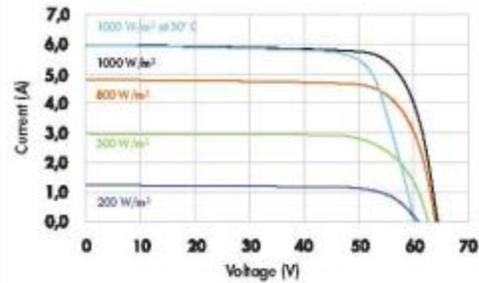
Measured at Standard Test Conditions (STC): irradiance of 1000W/m², AM 1.5, cell temperature 25° C

Peak Power (+/-5%)	P _{max}	305 W
Rated Voltage	V _{mpp}	54.7 V
Rated Current	I _{mpp}	5.58 A
Open Circuit Voltage	V _{oc}	64.2 V
Short Circuit Current	I _{sc}	5.96 A
Maximum System Voltage	UL	600 V
Temperature Coefficients		
	Power	-0.38% / K
	Voltage (V _{oc})	-176.6mV / K
	Current (I _{sc})	3.5mA / K
NOCT		45° C +/-2° C
Series Fuse Rating		15 A

Mechanical Data

Solar Cells	96 SunPower all-back contact monocrystalline	
Front Glass	high transmission tempered glass	
Junction Box	IP-65 rated with 3 bypass diodes Dimensions: 32 x 155 x 128 (mm)	
Output Cables	1000mm length cables / MultiContact (MC4) connectors	
Frame	Anodized aluminum alloy type 6063	
Weight	41 lbs. [18.6 kg]	

I-V Curve



Current/Voltage characteristics with dependence on irradiance and module temperature.

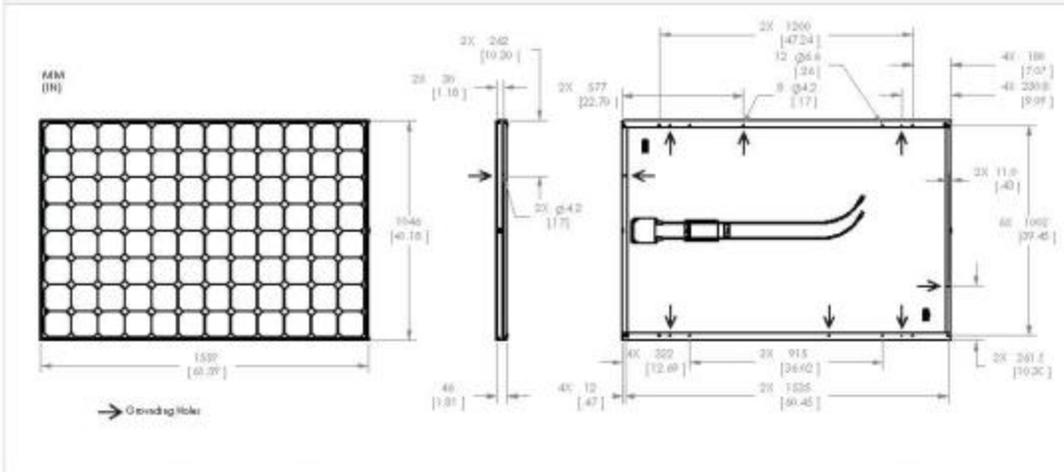
Tested Operating Conditions

Temperature	-40° F to +185° F (-40° C to +85° C)
Max load	50 psf (245 kg/m ²) (2400 Pa) front and back - e.g. wind
Impact Resistance	Hail 1 in (25 mm) at 52mph (23 m/s)

Warranty and Certifications

Warranty	25 year limited power warranty
	10 year limited product warranty
Certifications	Tested to UL 1703, Class C Fire Rating

Dimensions



CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT

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Document #001-4209 Rev C / DR_EH

SUNPOWER “GREEN JOB” TRAINING FOR PERALTA CCD

SunPower will collaborate with Peralta CCD to both create job training support and employment opportunities in the local community, leveraging Peralta CCD’s Merritt College solar project. In so doing, SunPower will ensure that our efforts in this regard are synchronized with Peralta CCD’s existing resources and curriculum

If selected by Peralta CCD, SunPower will provide Peralta CCD the following:

Enrollment and tuition in a “Train the Trainer” PV course series at SunPower University. This training would be provided for up to 4 teachers at Peralta CCD. The aim of the training will be to equip the teachers to support students in their pursuit of jobs in the solar industry.

SunPower will provide a lab training kit, including a complete residential PV system, for use by the District to support its development of solar industry job training.

SunPower will closely collaborate with Peralta CCD staff and jointly pursued grant programs to support the Peralta CCD solar project.

As evidence of SunPower’s extensive experience in supporting Green Job training programs, the following is summary information and photos of the SunPower University training facility.

SunPower University Overview

The mission of the SunPower Training Program is to ensure the execution of the highest standards of PV design, installation and sales practices. We group training offerings into three categories: online lessons and exams, instructor-led classes, and written materials. We integrate and manage these elements of training through our SunPower University website and learning management system (LMS). SunPower training culminates in three levels of certification: Associate Level, Advanced Level; Masters Level.



SunPower Bay Area Training Facilities

Rendering of SunPower University Rooftop Technician Laboratory



SunPower University Training Class after completion of residential solar arrays



Technicians in training startup systems, and trouble shoot electronics



COLLEGE EXPERIENCE

Napa Valley College: 1 MW Tracker System



Foothill DeAnza College: 250 KW Carport Tracker System



LACCD: Pierce Community College – 191 KW Carport



Cal State Hayward: 1 MW Rooftop Systems



Loyola Marymount: 373 KW Rooftop Systems



Deep Springs College – 182 KW Tracker System



Sonoma State University: 96 KW Rooftop System



SELECT CARPORT SYSTEMS

Springs Preserve, Nevada – Fixed-Tilt System



Springs Preserve, Nevada – Tracker System



Elsinore Valley Municipal Water District, Lake Elsinore, CA



Los Angeles Community College District, Pierce College, Los Angeles, CA



US Postal Service, Sacramento



Belmar Center (Continuum Partners), Colorado



United States Navy, USNB, Coronado, CA



United States Air Force, March Air Force Base, Moreno Valley, CA



City of Pacifica, Calera Creek Water Recycling Plant



City of Chico



Alameda County Water District, Peralta, CA



Sonoma County Water Agency, Sacramento, CA



Solano County Government Center, Fairfield, CA



Federal Correctional Institution, Victorville, CA



WARRANTIES

There are three separate warranties that accompany a solar system: for installation, for the inverter(s) and for the photovoltaic panels.

SUNPOWER'S PHOTOVOLTAIC MODULE WARRANTY

SunPower Solar Power Systems come with a 25-year output warranty on the photovoltaic modules.

INVERTER WARRANTY

The inverter manufacturer warranties their equipment for five years. Under CSI program rules, the warranty is extended to ten years and is included in the solar system offer.

To the extent permissible by the contract between SunPower and the Inverter Manufacturers, SunPower assigns to the Customer any applicable warranties. SunPower will act as an Agent in resolving disputes between Customer and the PV Module or Inverter Manufacturer, but makes no representation or warranty itself for these third-party components, and customer shall seek no recourse from SunPower, regarding the warranties of Other Manufacturers.

SUNPOWER INSTALLATION WARRANTY

SunPower includes a 10-year comprehensive materials and workmanship warranty on the remainder of the system.

SunPower warrants that the Equipment—except for modules and inverters—will be free from defects in materials and workmanship under normal operating conditions, as determined by SunPower.

If during the warranty period, for any properly installed Equipment that does not comply, the liability of SunPower under this warranty is limited to repairing the defect, replacing the defective component, or accepting the return of the Equipment and providing a refund in an amount not to exceed the original purchase price actually paid for the specific Equipment.

The warranty requires that (a) SunPower is promptly notified in writing by the Customer during the applicable warranty period, including a detailed description of the Equipment defect or nonconformance, and (b) SunPower confirms to its satisfaction that a defect or nonconformance actually exists. These provisions do not extend the original warranty period of the Equipment, or any part thereof, which has either been repaired or replaced by SunPower.

BONDING CAPACITY

Since 2007, SunPower's bonds are backed by Travelers Casualty and Surety, the largest writer of surety in the U.S. Travelers is A+ XV rated, treasury-listed and admitted in all 50 states. To maintain this high rating, Travelers is exceptionally selective of companies for which it will agree to provide surety, regularly reviewing their balance sheets and demanding a proven history of successfully completed projects. SunPower has earned an aggregate bonding capacity of \$100 million with the ability to grow beyond that amount as needed. Due to the variety of delivery methods for PV systems, our team has developed surety solutions to fit each type of contract. Our surety program has been administered for over 12 years by our broker, Sharon Rusconi of Lesron Insurance Agency, surety specialists with 30+ years of experience.

SUNPOWER SERVICES

Operations & Maintenance Services

O & M EXPERIENCE

SunPower is currently managing over 400 MW of solar power. In 2008 alone, we commissioned over 120 MW of new capacity.

SunPower's in-house staff of trained field technicians and engineers are teamed with our knowledgeable customer service professionals and are dedicated to the successful operation of each of our customers' solar power systems. These individuals are available to perform reliability centered maintenance services, answer questions and concerns regarding system operation, performance, warranties, and monitoring, and to assist in other needs.

Benefits of SunPower Solar O&M

- 1 Maximized performance
- 2 Minimized downtime
- 3 Rapid notification for outages
- 4 Performed by solar technology experts
- 5 Care-free with 24x7 monitoring
- 6 Problems identified and resolved before they occur

PROJECTED VS. ACTUAL ENERGY OUTPUT

The following table provides some examples of how SunPower systems performed, relative to the prediction. Each of these system was installed in 2005 or earlier. SunPower's overall expected system output has been within +/- 1% accurate.

Customer	System Size (kWdc)	Expected kWh to date	Delivered kWh to date	Performance
Bavaria Solar I	10,000	19,694,795	23,607,092	120%
City of Oakland	1,100	2,106,007	2,287,924	109%
Sonoma County Water Agency	1,044	758,852	841,448	111%
US Navy	924	497,208	633,936	127%
FedEx	904	1,974,117	2,136,915	108%

Service Contract Options

SunPower offers a range of client service levels that enable customers to choose the services and terms that best match their needs for the maintenance of their SunPower Solar Power System. Each successive package is designed to further enhance the performance of the solar system. Service offering lengths may vary from warranty and each other and may be extended at the conclusion of each agreement. Under the CSI program, ten years of level 3 is included in the offer.

Packaged Services Level 1: “Performance Monitoring”

This level covers system start-up and a standard set of monitoring, notification and technical support services that are included in all maintenance packages.

SERVICES AT PROJECT COMPLETION

Commissioning Inspection. A multi-point solar array and system inspection, functional testing, and initial performance verification to ensure your system meets SunPower’s rigorous standards for lifetime performance.

Facility Staff Training. SunPower Customer Service personnel conduct on-site training with related documentation for the facility’s staff at the completion of the system installation. Staff members are trained on system design and operation, safety precautions and routine minor maintenance procedures. An additional training to demonstrate the features and capabilities of SunPowerMonitor is conducted through a web based demo.

Owner’s Manual. This manual describes your system, all necessary safety precautions, and basic system maintenance responsibilities. The Owner’s Manual also includes project reference drawings, module specifications, the inverter operating manual and specifications, SunPower Data Acquisition System specifications, SunPowerMonitor User Guide, warranty registration, and project contact information.



24 X 7 SERVICES

Online Monitoring. SunPower provides a password-protected system performance tracking website that we update daily with information regarding the status and performance of your system. Facilities and energy managers can query for, display, and print charts and graphs detailing the performance of their system. Historical data from system start-up to the present is available for download and export.

“Follow the Sun” Technical Support. Our toll-free number is staffed 24 hours a day, 7 days a week with solar monitoring engineers.

Performance Monitoring and Notification. The SunPower Operations Center provides real-time monitoring of system operational status and performance daily, and promptly notifies customers of outages or a decrease in system performance.

WARRANTY ADMINISTRATION

Each system typically has separate warranties for the PV modules, the inverters and the system performance. Should the need to make a claim arise, SunPower’s close relationships with its suppliers greatly improves the timeliness of claim process and eliminates this potential hassle for our customers.

Packaged Services Level 2: “Performance Basic”

This package includes all the services in Level 1 and adds hands-on testing and care of each component of the solar system as well as elevating the information provided on system performance.

Preventative Maintenance and Inspections. SunPower technicians perform industry-leading, 21-point inspections, meticulously taking the time to identify and fix potential problems before they occur. Through the process of examining and tuning and making repairs on hundreds of systems over the last 13 years, our Services Department has developed deep expertise and invented methodologies proven to preempt failures and malfunctions, thus serving our customers in a proactive, performance-enhancing manner.

System Performance Report. In addition to the online access to system performance, SunPower customers receive a standardized performance report that compares actual to expected energy production while taking into account weather conditions and other variables.



Packaged Services Level 3: “Performance Plus”

This package includes all the services in Levels 1 and 2 and adds the next level attention to ensure optimum system performance. Under the CSI program, ten years of level 3 is included in the offer.

Corrective Maintenance. SunPower technicians have the expertise and equipment to perform the necessary corrective action to rapidly restore your system to service.

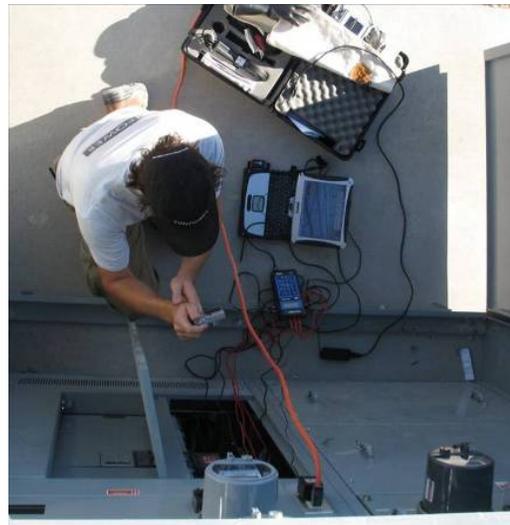
Additional, Stand-Alone Services

These services are designed for customers with existing maintenance agreements that do not include these services.

Inverter Servicing. SunPower technicians provide inverter trouble-shooting and servicing to ensure minimized downtime.

Module Cleaning. For systems located in climates with prolonged periods of sparse or no rainfall, module cleaning can significantly impact the total energy output of a system. SunPower’s proprietary module wash calculator takes historic rainfall data to calculate the optimal time to wash your PV modules to gain 10 to 20% back on lost system performance.

Spare Parts Program. This service takes advantage of SunPower’s buying power of OEM-certified spare parts and can include field service technicians to deliver and install the parts.



System Performance Monitoring and Support

EXPERIENCE

SunPower currently monitors over 500 solar systems, totaling more than 280 MW. Because SunPower has systems across three continents, our Global Monitoring and Diagnostics Center operates 24/7/365 for the sole purpose of ensuring each system performs as expected.

SUPERIOR PERFORMANCE MONITORING CAPABILITIES

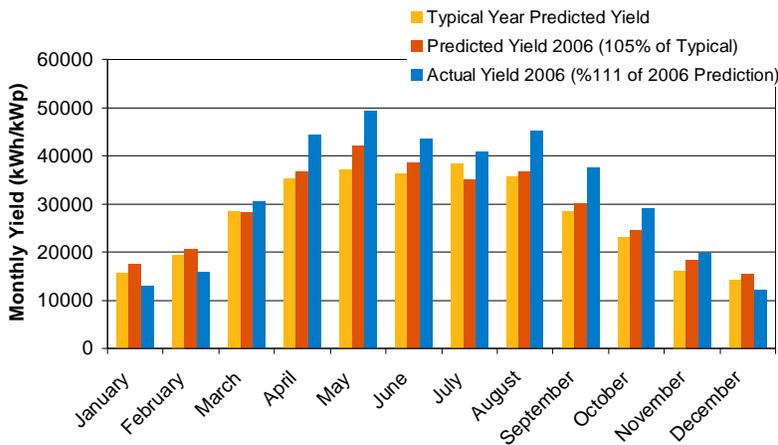
SunPower's System Performance Monitoring program is designed to ensure the continuous, optimal performance of your solar power system. We use state-of-the-art hardware to gather, transmit, and make available timely system performance data to you and to our dedicated team of performance engineers and expert service technicians, thereby ensuring fast, reliable, and effective response to any field issues. **Only SunPower combines this degree of data collection, visualization services, and responsiveness. This powerful combination is what enables**



SunPower to deliver systems that consistently meet—and often exceed—system performance expectations.

Quality of performance monitoring varies on two parameters: technical and skill. Virtually all monitoring systems will display and record some type of energy use produced by the solar system. The accuracy of the record is dependent on the monitoring hardware and the extensiveness of what's being recorded. To some extent, the accuracy factor is addressed by the CEC equipment requirements, but only as pertains to the energy output of the PV system (the technical component of monitoring).

A technically sound monitoring system can, at best, only record accurately what the system *actually is* (or has been) producing. To determine what the system *should be* producing requires skill in modeling and interpreting the data. In addition to recording energy production, SunPower's monitoring system also includes weather-sensing components in its proprietary hardware configuration because it considers this data indispensable for **interpreting** performance measurements.



The greatest value of any monitoring system is its ability to increase system reliability and performance by enabling faster, more effective responses to problems. SunPower will be monitoring your system on a daily basis, alerting you to any problems and dispatching resources as necessary. More than ten years of system

performance monitoring experience has enabled SunPower to develop a comprehensive set of evaluation algorithms designed to quickly recognize operational and performance issues. In addition, SunPower's Customer Service department includes one of the largest, most experienced, and knowledgeable field service teams in the industry. Working together, our dedicated team can identify problems and dispatch resources quickly, ensuring that your system performance remains optimal at all times.



Because SunPower has hundreds of live solar systems it monitors every day, it has been able to continually refine its modeling of these data inputs to accurately identify when a particular system needs attention. **No other company has this capability because no other company has so many of the live systems that are needed to perfect the means by which to interpret the data.**

DATA ACQUISITION SYSTEM

The heart of SunPower's System Performance Monitoring is the on-site data acquisition system (DAS). Using proven, robust sensors and recording equipment, the DAS logs information critical to the evaluation of system performance, including AC energy production, solar irradiance, ambient temperature, and wind speed. This information is stored on the logger as 15-minute averages and is transmitted to SunPower for processing, storage, and backup. AC energy is measured using a utility-grade meter to ensure accuracy and to facilitate reporting of energy generation and Renewable Energy Certificate (REC) creation. For added security, the DAS includes a battery backup, and can store up to four weeks of data to prevent losses during communications outages.

DATA HANDLING

For the duration of your service agreement, SunPower's data services include the processing, quality assurance, storage, and backup of all of your system performance data. SunPower's central data processing system checks data as it is transmitted for accuracy and completeness, alerting technicians when necessary to provide rapid problem resolution. System performance data is processed and stored in SunPower's secure database for evaluation by SunPower's performance monitoring team and for presentation on SunPowerMonitor.com. The system performance database is backed up nightly.

ANNUAL REPORTING

For each system that is under warranty or service agreement, SunPower delivers a standard annual report on the anniversary of the system's start date. This performance update provides key information about system energy generation and performance once per year. The report includes a full-color chart showing the predicted energy output for a typical year, the predicted energy for the current year, and the actual energy produced in each month of the year, enabling you to quickly view and assess the performance of your system, both as an aggregate as well as broken out into individual systems. This email report can be easily forwarded so that others in your organization can view the system's performance.

SunPower Monitor: Performance Data Website

SunPowerMonitor serves both as a means for you can access the information in the Data Acquisition System as well as a tool to showcase your solar system for the public.

PUBLIC-ORIENTED SOLAR DESCRIPTION PAGES

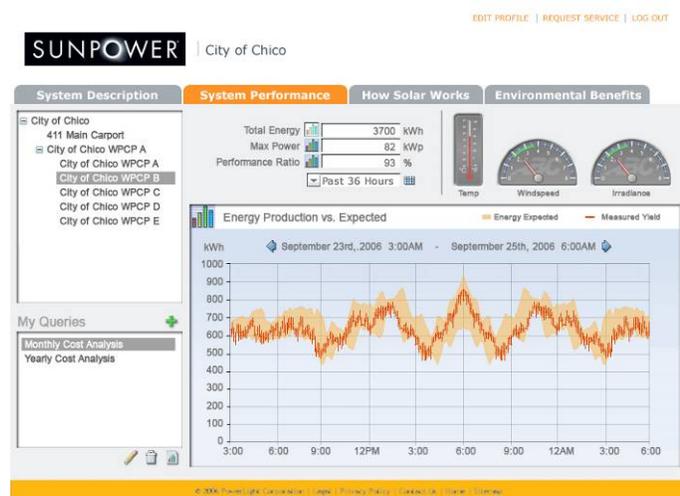
These pages can be made available through your web site or via a display that can access url addresses.

- **System Description**—This is your home page, suitable for both internal and external display. It summarizes the size of your different solar arrays and the amount of kWh produced that day, that month, and overall since the system's inception. It also indicates an equivalency comparison, such as the number of homes that could be powered by the energy the system has produced.
- **How Solar Power Works**—This page describes solar electric power and displays an animated simulation of the sun generating power over the course of a day.
- **How This System Works**—This page displays a cutaway view of a sample solar system and its components. The user can click any of the information buttons to learn more about how each component contributes to the system's functionality.
- **Solar Power System Environmental Benefits**—This page highlights the positive environmental aspects of implementing solar. A supporting page shows the different ways in which the system reduces and offsets toxic emissions and other negative impacts on the environment.

PASSWORD-ACCESSED SYSTEM PERFORMANCE PAGES

Only individuals possessing a login and password—both provided by you—can access this section. The Systems Performance page displays all of your sites and systems, as well as extensive system performance and meteorological data. One graph shows the **Expected Energy** production overlaid with the actual **Measured Yield** in time periods of either the past 36 hours, 30 days or 12 months. This page also displays the following amounts for the system (in aggregate):

- Total Energy in kWh
- Maximum Power in kWp
- Performance Ratio as a percentage of expected vs. actual system performance
- Temperature adjacent to the system
- Wind Speed adjacent to the system
- Irradiance adjacent to the system



Performance Queries

SunPower predefines and delivers some of the more common queries for you, such as monthly and yearly cost analyses and daily energy production. In addition, you have the ability access the energy production and site meteorological data and define the parameters for new queries and present the data in the format that you choose. You can also download results of any query.