

Pennsylvania Sunshine Guidelines for the Residential and Small Business Solar Program



pennsylvania
DEPARTMENT OF ENVIRONMENTAL
PROTECTION

0340-BK-DEP4245 Rev. 1/2013

I. Introduction

The Pennsylvania Sunshine Solar Program was allocated \$100 million in rebates to help fund solar electric (solar photovoltaic), solar hot water (solar thermal) projects, and battery back-up systems for homeowners and small businesses in Pennsylvania. This program was authorized by section 306 of the Alternative Energy Investment Act, Act of July 9, 2008, Spec. Sess., P.L 1873, No. 1 (73 P.S. §§1649.101 *et seq.*) and is administered by the Department of Environmental Protection (DEP).

II. General Provisions

Changes and Important Information

Effective immediately, PA Sunshine Solar Program rebates will no longer require the two-step process of first obtaining approval prior to project implementation to reserve funding (*i.e.*, obtaining a Rebate Reservation) and then submitting documentation of project completion to obtain payment. To obtain a rebate for a new project (one not previously approved for a Rebate Reservation), a PA Sunshine Rebate Application Package (a project completion application form along with supporting documentation) must be submitted. A Rebate payment will be processed upon approval of the application package by PA Sunshine staff. Please see the application procedure in Section V for details. Requests for Rebate Reservations will no longer be accepted.

Effective immediately, all approved projects currently with a Rebate Reservation (*i.e.*, at reservation complete status in Power Clerk) will have until June 1, 2013 to complete the project. These reservations will be reimbursed only if funding is still available at the time of approval and a completed Part 2 application has been processed and approved by the Sunshine Program.¹ No extensions will be provided to the new project completion date of June 1, 2013.

The PA Sunshine Solar Program will continue to track the processing of rebate requests through Power Clerk using rebate processing status categories. See Section VIII for procedures.

Rebates disbursements for all projects will be paid in order that PA Sunshine Application Packages are received and approved, not the order in which projects were completed.

Projects will only be deemed approved if all of the requested information is administratively complete and accurate.

Applications provided an approval will only receive a rebate if funding is available.

Participation will be voluntary and the application/processing fee will remain non-refundable.

End of Program

No rebate applications will be accepted after Dec. 31, 2013. Funds available for rebates are expected to be exhausted prior to the end of 2013. All applications received on the day that insufficient funds are available to provide the requested rebates will be pro-rated to all approved projects received on that day, not to exceed the maximum amount of rebate claimed. Any applications received after the date that the funds have been exhausted will not be processed and the application fee will be returned.

Eligibility and Application Fees

Funding will continue to be deployed in the form of rebates for residential and small business projects. Households may receive one solar photovoltaic (PV) rebate for up to 10 kilowatts (kW) of installed PV generating capacity plus one solar thermal rebate which is capped at \$5,000 plus one battery back-up system. A small business may only submit one PV and one solar thermal application at a time and must complete the project and rebate process prior to submitting another

¹ Applicants with a Rebate Reservation will only be required to provide information not previously submitted to obtain their reservation, unless that information has changed.

application. For purposes of this program, all small businesses under common ownership shall be considered a single small business applicant.

All rebate applications will require a non-refundable application fee. Residential applicants will submit a fee of \$100. Small business applicants will submit a fee of \$150. Residential applicants that have a household income of less than 60 percent of the state median income, as defined by Pennsylvania's Department of Public Welfare, will be eligible for an application fee waiver. (Click [here](#) for a listing of income guidelines.) In addition to the application fee, all applicants must provide proof of a minimum \$250 deposit with an approved solar installer.

Combining Rebates, Retroactivity and Other

The PA Sunshine rebate may not be combined with other such rebates or subsidies to receive multiple benefits for the same solar project. Projects for which other rebates or subsidies are accepted are not eligible for the PA Sunshine rebate. This policy does not extend to the use of federal tax credits in conjunction with Sunshine rebates, which is encouraged where applicable.

This program will not be retroactive. To ensure that all installed systems comply with the eligibility requirements of this program, applicants may not receive reimbursements for systems installed before the opening of the rebate program. Once program guidelines have been published, and the program begins accepting applications, applicants may begin incurring costs. However, all costs incurred prior to receiving confirmation of a reservation are incurred at the applicant's risk.

Rebate funding will not reimburse for the costs associated with any roof repairs.

Please note that rebates and rebate applications are public documents and subject to disclosure to the public upon request.

III. Eligibility

A. Eligible Applicants

The following applicants are eligible for rebates:

Residential Applicants: Residential applicants must be Pennsylvania residents. The applicant must be the owner of the home where the project will be installed. All residential projects must be completed on the homeowner's primary residence. Vacation homes and investment properties will not qualify for funding as a residential project.

Small Business Applicants: Small business applicants must be a for-profit business located within Pennsylvania. To qualify for small business funding, the business must have no more than 100 full time employees. The term includes an agricultural producer of a farm commodity.

Applicants must not have any outstanding obligations to the state, including but not limited to outstanding taxes.

B. Eligible Projects

1. PV systems must meet the following requirements:

- a. The rebate program will cover residential PV systems rated no less than one kW and up to 10 kW. Larger residential systems are eligible, but will only receive rebates equivalent to the costs of the first 10 kW.
- b. The rebate program will cover small business PV systems rated no less than three kW and up to 100 kW. Larger small business systems are eligible, but will only receive rebates equivalent to the costs of the first 100 kW.
- c. PV components must be new equipment (with the exception of the utility grade meter described further below) and must be on the California Solar Initiative's list of eligible equipment. The design and installation must be in

compliance with the Pennsylvania Uniform Construction Code (for more information, see:

<http://www.dli.state.pa.us/landi/cwp/view.asp?a=310&q=210892>).

- d. The system installer must be on the DEP list of approved installers as further described below.
- e. Any new construction home that is including PV as part of, or simultaneously with, the initial construction process must be Energy Star qualified. See www.energystar.gov.

2. Solar thermal systems must meet the following requirements:

- a. The program will cover residential and small business solar thermal systems excluding those that are used for heating swimming pools, hot tubs and radiant floor heating.
- b. Eligible residential solar hot water projects may receive a rebate up to 35 percent or a maximum of \$5,000.00 for residents.
- c. Eligible small business solar hot water projects may receive a rebate up to 35 percent or a maximum of \$50,000.00 for businesses.
- d. Solar thermal systems must be new equipment, and solar collectors must be SRCC OG-100 rated or equivalent. The design and installation must be in compliance with the Pennsylvania Uniform Construction Code (for more information, see: <http://www.dli.state.pa.us/landi/cwp/view.asp?a=310&q=210892>).
- e. The system installer must be on the DEP list of approved installers as further described below.
- f. Solar shade analysis must be completed and a system performance calculation must show that the system will produce no less than 80 percent of the annual output of a system with optimal placement and orientation, and no shading between 10 a.m. and 2 p.m. whatsoever.
- g. Any new construction home that is including solar thermal as part of, or simultaneously with, the initial construction process must be Energy Star qualified. See www.energystar.gov.

3. Battery back-up systems must meet the following requirements:

General provisions: Rebate funding will reimburse for costs associated with battery back-up systems. Additional cost of batteries will be considered a reimbursable cost. (Associated costs, manufacturer's specifications and an electrical live drawing identifying and including the battery back-up system should be submitted in the Part 1 rebate reservation packet.)

- a. The rebate program will cover battery back-up installation in conjunction with residential PV systems rated no less than one kW and up to 10 kW only.
- b. Components must be new equipment. The design and installation must be in compliance with the Pennsylvania Uniform Construction Code (for more information see: <http://www.dli.state.pa.us/landi/cwp/view.asp?a=310&q=210892>).
- c. The system installer must be on the DEP list of approved installers as further described below.
- d. The battery capacity rating must be based on a 20-hour discharge rate.
- e. The dollar/amp-hr. rebate is based on the sum of the individual battery capacities.
- f. Eligible residential projects may receive a rebate on a maximum of 400 amp-hrs/kW.

- g. Any new construction home that is including battery back-up as part of, or simultaneously with, the initial construction process must be Energy Star qualified. See www.energystar.gov.

All projects must be in compliance with all applicable laws.

Construction projects receiving state rebates and having a cost in excess of \$25,000 may be subject to Pennsylvania's Prevailing Wage Act requirements. For information about the applicability of Prevailing Wage, applicants should contact the Pennsylvania Department of Labor and Industry at 717 705-7256 or 800 932-0665 or visit the website at www.dli.state.pa.us. It is solely the responsibility of a rebate recipient to ensure the act is followed if applicable.

IV. Installer Requirements

Applicants must use an installer who is on DEP's approved list. All participating contractors and anyone working under their direction or control must:

1. Be in good standing as evidenced by favorable reports from three customer references and no negative report from the Better Business Bureau;
2. Maintain in full force at all times, commercial general liability insurance with a bodily injury and property damage combined single limit of liability of at least one million dollars (\$1,000,000) for any occurrence;
3. Carry workers compensation insurance for all employees of the company;
4. Contractors are required to comply with the requirements of the Home Improvement Consumer Protection Act, Act 132 of 2008; and
5. Submit insurance documentation annually to demonstrate the renewal of insurance on or before the renewal date.

Upon project completion, the installer is required to provide the homeowner or small business owner an owner's manual including the following minimum installation and operating documentation:

1. Name and address of the seller;
2. System model name or number;
3. Identification and explanation of system components;
4. Single line drawing of system;
5. Description of system operation;
6. Description of system maintenance;
7. Description of emergency procedures;
8. Vacation or extended time away from the building procedures;
9. Contractor's parts and labor warranty;
10. Copies of manufacturer's warranties for all major system components; and
11. Manufacturer's user's manuals.

A. PV Installer Requirements and Battery Back-up Installer Requirements:

To be approved and maintain approved status, a solar PV installation company must employ at least one qualified employee on staff. A qualified employee is one who meets or exceeds one of the following requirements:

1. Is a certified North American Board of Certified Energy Practitioners (NABCEP) PV installer, **or**
2. Has successfully installed a minimum of three PV systems and has completed one of the following three training programs:
 - a. Interstate Renewable Energy Council (IREC), Institute for Sustainable Power Quality (ISPQ) accredited PV training program; or
 - b. an International Brotherhood of Electrical Workers (IBEW), National Electrical Contractors Association (NECA) apprenticeship training program that included the course entitled "Installing Grid-Connected Photovoltaic Systems;" or
3. If an installer has completed either an IREC ISPQ accredited PV training program or an IBEW/NECA apprenticeship training program that included the course entitled "Installing Grid-Connected Photovoltaic Systems" and met all other program requirements but not yet installed three PV systems, they may be accepted on a probationary basis.

B. Solar Thermal Installer Requirements:

To be approved, a solar thermal installation company must employ at least one qualified employee on staff. A qualified employee is one who meets or exceeds one of the following requirements:

1. Is a certified NABCEP solar thermal installer; **or**
2. Has completed an IREC ISPQ accredited solar thermal training program.
 - a. If an installer has completed an IREC ISPQ accredited solar thermal training program and met all other program requirements but not yet installed three solar hot water systems, they may be accepted on a probationary basis.
3. Has completed IBEW Thermal Approved Training or Battery Installation Training.

C. Removal or Suspension:

DEP reserves the right to suspend or revoke any PV or solar thermal installer's program participation at its discretion, if deemed necessary by the program administrators. Possible reasons for removal/suspension include but are not limited to:

1. Intentionally misleading or misinforming customers about the PA Sunshine Program or specific solar system details. The DEP will take action only after securing confirmation of any accusations against the installer.
 - a. The above-referenced actions may lead to the suspension or removal of an installation company or its qualified employees.
 1. DEP may, at its discretion, readmit installers and employees that have been removed or suspended for the reasons referenced above after the department verifies that any pending customer issues have been resolved to DEP's satisfaction.

2. Inadequate supervision of solar installations by an approved installer.
 - a. The above referenced actions may lead to the suspension of a qualified solar installer.
 1. DEP may, at its discretion, allow the installation company to continue working in the program. However, DEP reserves the right to: require any pending customer issues be resolved to DEP's satisfaction; require the inspection of 100 percent of the qualified employee's projects; require submission of a list of new qualified employees; or require additional training for the qualified employee(s) currently on suspension.
3. Poor workmanship as demonstrated through failed inspections.
 - a. Poor workmanship will include but not be limited to severely under-performing systems, installed systems that pose serious safety issues, installed systems that have multiple, obvious National Electric Code violations, installed systems that have not followed the manufacturer's specifications for the solar equipment, etc.
 - b. The above referenced actions may lead to the suspension or removal of a qualified solar installer depending on the severity of the issues.
 1. DEP may, at its discretion, allow the installation company to continue working in the program. However, DEP reserves the right to: require any pending customer issues be resolved to DEP's satisfaction, require the inspection of 100 percent of the qualified employee's projects, require submission of a list of new qualified employees, require additional training for the qualified employee(s) currently on suspension, require professional engineer sealed designs for 100 percent of the installer's project submissions until further notice.
4. Evidence of fraud
 - a. The above-referenced actions may lead to the immediate removal of the solar installation company and all of the company's qualified employees until further notice. Additionally, DEP will refer the company's customers to the Pennsylvania Office of the Attorney General as appropriate.
5. Discovery of new Better Business Bureau complaints/negative ratings after a company's qualified employees have been approved for participation in the program.
 - a. The above-referenced actions may lead to the suspension of a solar installation company and all of its qualified employees until the company demonstrate to DEP that the complaint has been resolved.
6. Failure to submit an annual insurance renewal certificate for general liability insurance and workman's comprehensive insurance.
7. Failure to submit annual meter reading reports.

V. Application Procedure

New Application Procedure

When a project has been completed the applicant may apply for a rebate. To apply for a rebate, the installer must fill out a rebate form in Power Clerk. The resultant application ID number (PSP XXXX) shall be used on the Project Completion Form. A PA Sunshine Rebate Application Package (a Project Completion Application Form signed by the applicant and the contractor and any supporting documentation) must be submitted to the PA Sunshine Program via mail. Rebate payments will be made only after the installation is demonstrated to be complete; the application

package is submitted and is approved by the PA Sunshine Program. The appropriate non-refundable application fee must be submitted with the PA Sunshine Application Package. Application forms are available at www.padep.powerclerk.com/.

A. PV Application Procedures:

The installer must submit a PA Sunshine Project Completion Application Form signed by the applicant and the contractor as well as the following supporting technical documents as appropriate:

1. Copy of the Rebate form as input into Power clerk.
2. Copy of the manufacturer's specification for the components selected for the installation;
3. Copy of system schematic or line drawing;
4. Copy of plot plan illustrating the location of the PV array, inverter and point of interconnection on the property;
5. For rooftop installations, copy of roof diagram illustrating the following:
 - a. Roof dimensions (angle, length and width);
 - b. Location of PV modules on roof or other location; and
 - c. Orientation and tilt of PV modules.
6. If a battery back-up system is installed, the following is needed:
 - a. Line drawings;
 - b. Manufacturer's specifications; and
 - c. Include associated costs of battery back-up system.
7. Proof that the PV system meets the following requirements:
 - a. Systems were installed according to industry and code standards and as specified in the equipment manufacturer's manual;
 - b. All applicable local government permits and zoning approvals were obtained; and
 - c. The installed system complies with the Pennsylvania Uniform Construction Code and all local laws and codes.
8. Supplemental materials:
 - a. Copies of manufacturer's and contractor's labor warranties. Equipment must carry the following warranties:
 1. Inverters (five years);
 2. Panels (20 years); and
 3. Systems eligible for a rebate must be covered by a full five-year warranty for PV systems in addition to any manufacturer's warranties on specific components. Coverage must include all parts and labor, plus the cost of removing, shipping and reinstalling or replacing a defective component. A warranty statement, included in the contract, will clearly state who is responsible for labor, material and shipment of defective parts.
 - b. PV interconnection and net metering paperwork must be completed and approved by a utility. An applicant, whose entire home or small business is independent of the grid, may request an exception from this requirement which DEP will evaluate on a case by case basis;

- c. Copies of all electrical, plumbing or building permit inspection approvals, where applicable;
- d. Copy of final sales invoice marked paid in full; and
- e. A picture of the installed utility grade PV meter-zeroed.

B. Solar Thermal Application Procedures:

The installer must submit a completed PA Sunshine Project Completion Application Form signed by the applicant and the contractor including the following supporting technical documents, as appropriate:

1. Copy of the Rebate form as input into Power clerk;
2. Copy of the manufacturer's specification for the SRCC OG-100 certified collector selected for the installation;
3. Copy of Solar Pathfinder, Solmetric or Wiley Asset analysis and calculations showing that a minimum of 80 percent of optimal solar hot water production is expected from the system, no shading between 10 a.m. and 2 p.m. whatsoever;
4. Copy of system schematic or line drawing;
5. Copy of plot plan illustrating collector location on property; for rooftop installations, copy of roof diagram illustrating the following:
 - a. Roof dimensions (angle, length and width);
 - b. Location of collectors or modules on roof or other location; and
 - c. Orientation and tilt of collectors.
6. Proof that the solar thermal system meets the following requirements:
 - a. Systems must be installed according to industry and code standards and as specified in the equipment manufacturer's manual;
 - b. All applicable local government permits and zoning approvals were obtained; and
 - c. Installed systems must comply with the Pennsylvania Uniform Construction Code and all local laws and codes.
7. Copies of manufacturer's and contractor's labor warranties. Equipment must carry appropriate warranties as further described below:
 - a. Solar collector(s) 10 years; and
 - b. Systems eligible for a rebate must be covered by a full three-year warranty for solar water heating systems in addition to any manufacturer's warranties on specific components. Coverage must include all parts and labor, plus the cost of removing, shipping and reinstalling or replacing a defective component. A warranty statement, included in the contract, will clearly state who is responsible for labor, material and shipment of defective parts.
8. Copies of all electrical, plumbing or building permit inspection approvals, where applicable;
9. Copy of product specification sheets; and
10. Copy of final sales invoice marked paid in full.

VI. Funding Amounts

For all solar photovoltaic (PV) projects and solar thermal projects, the program will offer rebates up to a maximum of 35 percent of the costs of project design, installation and equipment.

Residential applicants, who have a household income of less than 60 percent of the state median income, as defined by Pennsylvania's Department of Public Welfare, will be eligible for the maximum rebate level permitted under the Act (35 percent). Low-income applicants must verify that their income is 60 percent of the state median income. The gross income limits, based on household size for tax reporting purposes, can be found at <http://edocket.access.gpo.gov/2011/pdf/2011-8993.pdf>. Applicants who apply for low income solar assistance will be required to report and verify all earned and unearned income to determine eligibility. Sources of income verification include but are not limited to: tax returns (federal or state); employer's statement of past or anticipated earnings; statements documenting income. Verification documents must be included when submitting the solar application package.

Below are the steps for the PV and Solar Thermal Rebates. The bolded numbers denote the current incentive level. We anticipate Residential and Small Business Solar Thermal rebates may reach Step #2 in the 2013 calendar year.

Residential PV - Battery Back-up Rebates

Step #	Megawatt (MW) in Step	Rebate Amount (\$/amp-hr.)
1	10	1.00
2	10	0.85
3	10	0.60
4	10	0.35

Residential PV Rebates

Step #	Megawatt (MW) in Step	Rebate Amount (\$/Watt)
1	10	2.25
2	10	1.75
3	10	1.25
4	10	0.75

Small Business PV Rebates

Step #	Megawatt in Step	3-10 kW Rebate Amount (\$/Watt)	10-100 kW Rebate Amount (\$/Watt)	100-200kW Rebate Amount (\$/Watt)
1	10	2.25	2.00	1.75
2	10	1.75	1.50	1.25
3	10	1.25	1.00	0.75
4	5	0.75	0.50	0

Residential and Small Business Solar Thermal Rebates

Step #	Number of Systems in Step	Rebate Amount
1	1,500	35%
2	1,500	20%
3	1,500	15%
4	1,500	10%

A running tally of completed projects will be kept on the rebate program's web page so prospective applicants and solar developers will be able to project when the current step of installed solar will be reached and a decrease in the per-watt matching rebate funds will occur.

VII. Inspections and Reporting

All applicants must allow inspection of the project at DEP's request.

All PV installations must, at a minimum, include a utility-grade kWh meter. These meters may be new or refurbished. Refurbished meters are available for purchase at <http://www.hialeahmeter.com/index.html>. All meters must be zeroed at the time of installation, must be spinning forward, retain cumulative lifetime readings and do not zero out in the event of a power loss. Annual readings of this meter must be reported to DEP for a minimum of two years following completion of the project. The solar installer will be responsible for ensuring that DEP receives these readings. Missed readings may be cause for removal of a solar installer from DEP's qualified installer list. Annual meter reading forms are required². The meter reading report should be submitted with a picture of the meter at the time of the reading.

Elkor Model 1100/1200 Series devices are acceptable. Elkor PV meters are acceptable provided they are accompanied by local reporting capabilities. Third party Sunshine Elkor inspectors must have access to data via website and or in home display.

Fronius IG and Fronius CL inverters are not acceptable in place of a utility grade kwh meter. The utility grade meter cannot be a technology that is integrated within the circuit board of the inverter. Utility grade PV meters must be separate meters.

Solar thermal installers should submit an annual report³ to certify the system is operating satisfactorily, signed by the homeowner and installer.

VIII. Project Tracking Procedures

The approval list will not be available for release to the public. Projects will have statuses in Power Clerk which will describe their progression through the approval process.

Power Clerk Statuses and Timeline Information (underline/italic are new statuses)

- **Application received and under review**
- ***Application incomplete***
- **Approved Completed Project** project has been installed, all technical documentation has been submitted & is complete³
- **Transferred to the Grant Center** – funding is available, request for rebate processing has been submitted
- **Approved by the Grant Center** – request approved, payment request sent to comptroller
- **Payment issued**

System owners will be notified via e-mail if rebate funds have been allocated for their approved and completed project. Only projects which receive rebates are required to submit annual meter reading reports.

Following exhaustion of funding, remaining projects will be removed from the program records and Power Clerk statuses.

² Annual meter reading forms are available at www.depweb.state.pa.us/pasunshine (See Attachment B)

³ Annual solar hot water forms are available at www.depweb.state.pa.us/pasunshine (See Attachment C)



ATTACHMENT A
PA SUNSHINE PROGRAM PROJECT
COMPLETION FORM

__/__/20__

From: _____

To: PA Sunshine Program Administrators
 Special Deputy Secretary for External Affairs
 Rachel Carson State Office Building
 Harrisburg, PA 17101

Re: Completion of Solar (select one) PV / SHW Project and Request for Rebate
 PSP# _____

To Whom It May Concern:

This form certifies that the (select one) _____ kW solar PV system or _____ gallon solar hot water system installed at our (select one) home / small business has been completed to my satisfaction.

Please accept this form, with the supporting documents from (installer name) _____, to process our rebate request of \$ _____ (rebate reservation amount).

Please contact (installer email address) _____ with any questions or concerns.

Payee (Choose One)

- Rebate Applicant at address listed above
- Other Assigned Payee (All information is required)

Name: _____ Phone: _____
 Address: _____
 City: _____ State: _____ Zip: _____
 Federal ID Number: _____ Pennsylvania Vendor ID Number: _____

By signing this form, I hereby authorize payment to be made to the Payee listed above.

Rebate Recipient's Signature	Date	Installer's Signature	Date
Rebate Recipient's Printed Name		Installer's Printed Name	
Rebate Recipient's Signature	Date		
Rebate Recipient's Printed Name			

For DEP Internal Use		
Rebate #: _____	SDS Approval: _____ Date: _____	GC Approval: _____ Date: _____
SS#/Fed. ID: _____		
Coding: 6025800000-3590340000-3503435035-6602015		Sunshine
Backup documentation is kept on file with Pollution Prevention and Energy Assistance Office		

ATTACHMENT B

PA SUNSHINE PROGRAM PROJECT FORM

- 1ST ANNUAL METER REPORT
 2ND ANNUAL METER REPORT

___/___/20__

From:

To:

PA Sunshine Program Administrators
Special Deputy Secretary for External Affairs
Rachel Caron State Office Building
Harrisburg, PA 17101

Re:

Completion of Solar PV
PSP# _____

To Whom It May Concern:

This form certifies that the _____ kW solar PV system installed at our (select one) home /
 small business has been operational for one year.

Please accept this form from (installer name) _____, to comply with the annual reporting requirements in the Pa. Sunshine Guidelines (rebate reservation amount).

Meter # _____ Meter Reading _____

Please contact (installer email address) _____ with any questions or concerns.

Installer's Signature Date

Installer's Printed Name

Meter start online date _____ date reading was taken _____.

Note any off line time when system was turned off for an extended period of time _____ i.e. turned off while in Europe for three (3) months.

