

DRAFT

Pennsylvania Sunshine **Guidelines for Residential and Small Business Solar Program**

1. General Provisions

- This program is authorized by section 306 of the Alternative Energy Investment Act, Act of July 9, 2008 Spec. Sess., No. 1, (P.L. __, No. 1) (73 P.S. §§1649.101 *et seq.*)
- \$ 100 million in funding will be deployed in the form of reimbursement grants for residential and small business projects. These grants will be awarded on a first-come-first-served basis to approved applications.
- For solar PV the program will offer grant funding on a per watt basis, up to a maximum of 35%, of the costs of design, installation and equipment. Funding levels will be announced upon program opening and is likely to begin within the \$2.00 to \$2.50 per watt range for the smaller projects.
- For small business PV projects the level of funding will decline as the size of the project kilowatt increases.
- Funding levels will be set to a predetermined total installed megawatt target step that will be announced at the opening of the program. Once the published target step has been reached the funding level will be reduced.
- A running tally of completed projects will be kept on the grant program's web page so perspective applicants and solar developers will be able to project when the first step of installed solar will be reached and a decrease in the per-watt matching grant funds will occur.
- Solar thermal projects will have a 25% match up to a maximum award of \$2,000 for residential and \$20,000 for small business. The steps with decreasing matches have yet to be determined for solar thermal.
- Grant funding will not cover the costs of any roof repairs or battery backup systems.
- For the residential program applicants that meet specific income eligibility thresholds will be eligible for an increased rebate level.
- A household may receive one PV grant for up to 10 kW of installed PV generating capacity plus one solar hot water grant not to exceed \$2,000.
- A small business or business under common ownership may only submit one PV and Solar Thermal application at a time and must complete the project and grant process prior to submitting another application.
- DEP will require a non-refundable application fee of \$100 from residential applicants and \$150 from small business applicants. Residential applicants meeting specific income eligibility thresholds will be eligible for an application fee waiver.
- Along with proof of deposit with an approved solar installer the applicant must provide a project completion date within twelve months of the grant application submittal.
- This program will not be retroactive. To ensure that all installed systems comply with the strict eligibility requirements of this program, applicants may not receive reimbursements for systems installed before the opening of the grant program.

DRAFT

2. Applicant Eligibility

Residential:

- Must be a PA resident
- Must be the owner of the home where the project will be installed
- Must be for the homeowner's primary residence (no vacation homes or investment properties).
- This program will not be retroactive before the grant program opens. To ensure that all installed systems comply with the strict eligibility requirements of this program, applicants may not receive reimbursements for systems installed before the opening of the grant 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.

Small Business:

- Must be a for-profit business located within Pennsylvania.
- Must be an independent small business with no more than 100 full time employees.

3. Photo Voltaic Project Eligibility:

- PV systems must meet the following requirements **prior** to applying for a grant reservation:
 - The grant program will cover residential PV systems rated no less than 2kW and up to 10 kW. Larger residential systems may participate but will only receive rebates equivalent to the costs of the first 10 kW.
 - The grant program will cover small business PV systems rated no less than 3kW and up to 200kW. Larger small business systems may participate but will only receive rebates equivalent to the costs of the first 200 kW.
 - PV systems must be new equipment (with the exception of the utility grade meter described further below) and UL-listed. The design and installation must be in compliance with the Pennsylvania Uniform Construction Code (available at: <http://www.dli.state.pa.us/landi/cwp/view.asp?a=310&q=210892>).
 - Installer must be on DEP list of approved installers as further described below.
 - Solar shade analysis must be completed and show that the system will produce no less than 80% of the annual output of a system with optimal placement and orientation.
 - Optimum collector orientation is True South and tilt equal to the latitude of the installation. Collectors oriented up to 45 degrees east or west of True South are acceptable. Tilt orientation to conform to standard industry practices to optimize system performance.

DRAFT

- Any new construction home that is including PV as part of, or simultaneously with, the initial construction process must meet Energy Star requirements.
- Applicants will submit a Pre-Installation Application Form including the following supporting technical documents:
 - Copy of the manufacturer's specification for the UL-listed system selected for the installation
 - Copy of project cost estimate, purchase order, or letter of intent.
 - Copy of Solar Pathfinder, Solmetric, or Wiley Asset analysis showing a minimum of 80% annual sunshine available at the site.
 - Copy of system schematic or line drawing.
 - Copy of plot plan illustrating collector location on property.
 - For rooftop installations, copy of roof diagram illustrating the following:
 - Roof dimensions (angle, length and width).
 - Location of collectors or modules on roof or other location.
 - Orientation (True South +/-45 degrees) & Tilt of collectors.
- *Consider: During Step 2 of the funding, residential PV applicants will be required to undergo an energy audit prior to applying for this grant. During Step 2 and beyond:*
 - *To receive a full rebate, existing homes must complete a home energy audit. Existing homes that do not meet this requirement will be eligible for a smaller percentage rebate.*
 - *For residential the audit must be performed by a RESNET or BPI certified auditor.*
- PV systems must meet the following requirements **after installation** and when applying for reimbursement of the project:
 - Systems must be installed according to industry and code standards and as specified in the equipment manufacturer's manual.
 - Any applicable local government permits and zoning approvals must have been obtained.
 - Installed systems must comply with the Pennsylvania Uniform Construction Code and all local laws and codes.
 - Equipment must carry appropriate warranties as further described below.
 - Inverters (5 yrs)
 - Panels (20 yrs)
 - Systems eligible for a rebate must be covered by a full five (5) 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

DRAFT

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.

- PV interconnection and net metering paperwork must be completed and approved by utility. An applicant, whose entire home or small business is independent of the grid, may request an exception from this requirement, which the Department will evaluate on a case by case basis.
- A reimbursement form must be completed by the installer and include the following attachments:
 - Rebate Project Completion Form signed by Applicant and Contractor.
 - Copy of electrical, plumbing or building permit inspection approval, where applicable.
 - Copy of product specification sheets.
 - Copy of final sales invoice indicating payment in full.
 - Copy of Manufacturer's and Contractor's labor warranty.
- All applicants must allow inspection at the Department's request as further discussed below.

4. Solar Thermal Project Eligibility:

- Solar thermal systems must meet the following requirements **prior** to applying for a grant reservation:
 - The program will cover residential and small business solar thermal systems excluding those that are used for heating swimming pools or hot tubs.
 - Solar thermal systems must be new equipment, at a minimum SRCC OG-100 rated or equivalent. The design and installation must be in compliance with the Pennsylvania Uniform Construction Code (available at: <http://www.dli.state.pa.us/landi/cwp/view.asp?a=310&q=210892>).
 - Installer must be on DEP list of approved installers as further described below.
 - Solar shade analysis must be completed and show that the system will produce no less than 80% of the annual output of a system with optimal placement and orientation.
 - Optimum collector orientation is True South and tilt equal to the latitude of the installation. Collectors oriented up to 45 degrees east or west of True South are acceptable. Tilt orientation to conform to standard industry practices to optimize system performance.
 - Any new construction home that is including solar thermal as part of, or simultaneously with, the initial construction process must meet Energy Star requirements.

DRAFT

- Applicants will submit a Pre-Installation Application Form including the following supporting technical documents:
 - Completed Pre-Installation Application Form and the appropriate supporting technical documents.
 - Copy of the manufacturer's specification for the SRCC OG-100 Certified collector selected for the installation
 - Copy of project cost estimate, purchase order, or letter of intent.
 - Copy of Solar Pathfinder, Solmetric, or Wiley Asset analysis showing a minimum of 80% annual sunshine available at the site.
 - Copy of system schematic or line drawing.
 - Copy of plot plan illustrating collector location on property.
 - For rooftop installations, copy of roof diagram illustrating the following:
 - Roof dimensions (angle, length and width).
 - Location of collectors or modules on roof or other location.
 - Orientation (True South +/-45 degrees) & Tilt of collectors.
- Solar thermal systems must meet the following requirements **after installation** and when applying for reimbursement of the project:
 - Systems must be installed according to industry and code standards and as specified in the equipment manufacturer's manual.
 - Any applicable local government permits and zoning approvals must have been obtained.
 - Installed systems must comply with the Pennsylvania Uniform Construction Code and all local laws and codes.
 - Equipment must carry appropriate warranties as further described below.
 - Solar collector(s) (10 yrs)
 - Systems eligible for a rebate must be covered by a full three (3) 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.
 - A completed reimbursement form must be completed by the installer and include the following attachments:
 - Rebate Project Completion Form signed by Applicant and Contractor.
 - Copy of electrical, plumbing or building permit inspection approval, where applicable.

DRAFT

- Copy of product specification sheets.
- Copy of final sales invoice indicating payment in full.
- Copy of Manufacturer's and Contractor's labor warranty.
- All applicants must allow inspection at the Department's request as further discussed below.

5. Procedure

- Homeowners will first file for a "reservation" that will determine if they are eligible for a rebate. If the reservation is approved, the homeowner will have 9 months to move forward with installation and reimbursements will be made after the installation is complete. One 30 day extension may be requested, after which the funds would be released for other applicants. To request an extension, the homeowner must submit a project status update and a reason for the delay in writing fourteen business days prior to the expiration of the original reservation. If the project exceeds these time limits, the applicant may reapply to the program by starting the reservation process over. Project details may not be altered after a reservation has been approved unless the Department has provided a written approval for the alteration.

6. Homeowners must use an installer who is on DEP's approved list.

- PV installers must be:
 - NABCEP PV installer certified (There are currently 6 in PA. TRF included an additional 6 NABCEP certified installers on their eligible list from outside of PA: 1 CA, 1 DE, 2 NY, 1 NJ, and 1 TX.), or
 - Completed both an Interstate Renewable Energy Council (IREC) accredited PV training program and a PV manufacturer's training program and successfully installed a minimum of three PV systems.
- Solar thermal installers must have:
 - NABCEP solar thermal installer certification (There are only 72 in the entire US. There are 3 in PA, 1 in NY, 4 in MD, and 1 in OH.), or
 - HVAC, mechanical, plumbing-related experience including previous solar thermal installations.
- All participating contractors or anyone working under their direction or control must:
 - Be in good standing as evidenced by favorable reports from three references and no negative report from the Better Business Bureau.

DRAFT

- 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.
 - Carry Workers Compensation Insurance (only if the contractor is an employer of installers, laborers, salespeople, administrators, etc.)
 - Contractors are required to provide the residential or business owner an Owner's Manual including the following minimum installation and operating documentation:
 - Name and address of the seller
 - System model name or number
 - Identification and explanation of system components
 - Single line drawing of system
 - Description of system operation
 - Description of system maintenance
 - Description of emergency procedures
 - Vacation or extended time away from the building procedures
 - Contractor's parts and labor warranty
 - Copies of manufacturer's warranties for all major system components
 - Manufacturer's users manuals
7. Homeowners must allow inspection at the Department's request.
- The first 3 installations completed under this program by a qualified installer will undergo an inspection. In addition, the Department will perform random inspections of at least 10% of installations and will require certified installers' verification (via the rebate form) that the installation is complete and correctly operating.
 - All PV installations must, at a minimum, include a utility-grade kWh meter. These meters may be new or refurbished. Annual readings of this meter must be reported to the Department.
 - Solar thermal installation performance data will be estimated using the Retscreen model. System installers will be required to provide the Department with a Retscreen estimate for each installation.