



Program Guide for Solar Water Heating Allies

Developed by Energy Trust of Oregon

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Revisions

Energy Trust updates this Program Guide periodically. Revisions from the previous version are summarized in the table, below.

Version 3, October 2011 Revisions

Section	Revision
All	Changed terminology from “Inspector”/“inspection” to “Program Verifier”/“verification”
5.2	Updated SWH form numbers with PowerClerk® variants
6.1	Increased maximum number of active projects per trade ally from 12 to 30
6.2.3	For SWH, updated application process to include PowerClerk
6.2.4	Added section explaining PowerClerk and the online application process
6.4.4, 8.1.1, 8.1.2, 8.1.3, 8.2.3, 9	Generalized process to cover both PowerClerk for SWH and legacy forms for solar pool heating
9.2	Clarified option to assign payment to trade ally on PowerClerk application
Appendix A	Updated matrix to reflect currently available Program forms

1 Introduction

1.1 Purpose of the Program Guide

This Program Guide provides an overview of Energy Trust's Solar Water Heating Program (also referred to in this Guide as the "Program") requirements, processes, and policies. Approved Solar Water Heating Program trade allies are required to comply with this Program Guide as a condition of their agreement with Energy Trust.

1.2 Revisions to the Program Guide

This Program Guide undergoes occasional revisions as policies and processes change. When changes are made, a new version of the Guide will be issued and posted to the solar trade ally pages on the Energy Trust website at energytrust.org. Energy Trust will typically announce any new versions in the *INSIDER*—a monthly newsletter distributed by Energy Trust electronically to all active Energy Trust trade allies. Program trade allies should check the solar trade ally pages on Energy Trust's website to ensure they are using the current version of the Guide.

2 Program Overview

2.1 Energy Trust

Since 1999, the Oregon legislature has required Portland General Electric (PGE) and Pacific Power to collect "public purpose funds" from their Oregon customers to support energy conservation, renewable energy and energy market transformation efforts. The Oregon Public Utility Commission ("OPUC") was authorized to direct the manner in which the collected funds would be spent.

Energy Trust, a 501(c)(3) non-profit, was formed to manage the investment of the bulk of these funds in energy efficiency, renewable energy and energy market transformation pursuant to a grant agreement with the OPUC. Today, Energy Trust also receives funds from NW Natural and Cascade Natural Gas customers to support gas-saving efficient technologies.

Energy Trust expects all Solar Water Heating Program trade allies to be generally aware of the background and history of Energy Trust and the Program, and to review the Energy Trust policies which can affect the Program's requirements.

More details on Energy Trust's history, mission, programs, and policies, as well as a copy of the Energy Trust grant agreement with the OPUC, by-laws, and strategic plan posted on the website. Please contact Energy Trust with questions.

2.2 Program purpose and design

The Solar Water Heating Program is one of Energy Trust's energy efficiency offerings. Solar energy is available throughout the state and is an effective way to heat water for residential, commercial and industrial uses.

The purpose of Energy Trust's Solar Water Heating Program is to develop the solar market across all sectors and gain long-term energy savings to benefit the Oregon customers of PGE, Pacific Power, NW Natural and Cascade Natural Gas.

The Program is structured to address the primary market barriers of cost, quality and awareness. Energy Trust provides:

- cash incentives to eligible Program participants to reduce the up-front costs of installing solar water heating and solar pool heating systems
- minimum installation standards for systems applying for Program incentives to help promote system performance and longevity
- a network of trade ally installers who are familiar with the Program requirements
- industry support in the form of trainings and cooperative marketing assistance for active trade allies
- consumer outreach and education to help inform Oregonians about their solar options

3 Policy Overview

Complete copies of all of Energy Trust's Board of Director-approved policies are available for review on the Energy Trust website. The following is an overview of some of the policies that directly affect the Program and that all Program trade allies should be aware of.

3.1 Confidentiality of Program participant information

Program trade allies are obligated to maintain the confidentiality of all information submitted by Program participants under the Program.

3.2 Cost-effectiveness

Before offering incentives, Energy Trust evaluates the economic benefit-to-cost ratio of investments in energy-saving technologies in comparison to alternative sources of gas and electric energy. The solar water heating incentive levels offered by Energy Trust are determined based on this cost-effectiveness policy.

3.3 Self-direction

If a site is certified for self-direction¹ by the Oregon Department of Energy (ODOE), that "self-director" may receive self-direct credits from ODOE in exchange for investing in an ODOE-certified energy efficiency project at its site. The self-director may then use these credits to reduce the conservation portion of the 3% public purpose charge included in its electric bill. If a Program participant is currently self-

¹ Under the OPUC grant agreement, Energy Trust receives and invests a portion of the funds generated by the 3% public purpose charge collected from certain PGE and Pacific Power. Although payment of the public purpose charge is generally mandatory, Oregon law recognizes a special group of large electric energy users (those using over one average megawatt a year at a site) who can "self-direct" a portion of their public purpose charge to fund electric energy efficiency and renewable energy investments at their own sites.

directing, or decides to in the future, it can affect the amount of incentive funding they will be eligible to receive from the Program.

4 Program Incentive Offerings

4.1 Energy Trust solar water heating incentives

Energy Trust's solar water heating incentives are paid in a lump sum to lower the initial cost of solar water heating and solar pool heating systems. For simplicity, the Program offers standard incentive rates based on the expected annual energy savings of a system in kilowatt-hours or therms. For small pool heating systems, the incentive is based on the square footage of solar collector area, which relates to expected annual savings. The rates are set in consideration of many factors, such as technology and project type, system costs, available tax credits, market demand and available budget. They are also based on an expectation that each solar water heating system will remain operational for at least twenty years, and solar pool heating systems will operate for at least fifteen years.

The funds Energy Trust receives from PGE, Pacific Power, NW Natural and Cascade Natural Gas ratepayers are managed separately. As a result, solar water heating incentive rates and maximum incentive amounts may be different for different utility customers, and the incentive budget for one utility may be exhausted before the incentive budget for the another utility. Energy Trust strives to set incentive rates to manage consumer demand such that the Program can continue to accept new project applications throughout the year.

Current incentive rates can be found on the residential, business and public/nonprofit solar pages of the Energy Trust website. Incentive rates are subject to change. Incentive reservations for qualifying projects are subject to funding availability and processed on a first-come, first served basis.

5 Project Eligibility

5.1 Pre-screening for project eligibility

Program trade allies are required to perform some initial project pre-screening to help determine whether or not a solar water heating or solar pool heating project is eligible to apply for Program incentives. Final determination of eligibility for the Program shall always rest with Energy Trust.

5.1.1 Electric or gas utility

In order to be eligible for Energy Trust incentives, the solar water heating or solar pool heating system must be located on real property and offset electric or gas energy that would otherwise be purchased from PGE, Pacific Power, NW Natural or Cascade Natural Gas. Floating homes with electric or natural gas utility service are considered real property. RVs, sailboats or other portable applications are not allowed.

If the backup water heater is electric, your customer must be an Oregon customer of PGE or Pacific Power; if the backup water heater is gas, your customer must be an Oregon customer of NW Natural or Cascade Natural Gas. Customers with propane water heaters are not eligible for Energy Trust incentives.

5.1.2 Acceptable solar resource

Solar resource assessments evaluate the impact of shading and collector tilt and orientation on the annual production of the solar water heating or solar pool heating system. Energy Trust requires the entire site where the collector(s) will be located to have a Total Solar Resource Fraction (TSRF) of 75% or greater in order to be eligible for Program incentives. For seasonally used solar pool heaters, TSRF may be calculated based on only the months of pool usage.

To demonstrate compliance with the TSRF requirements, Program trade allies must submit a shade evaluation (“sun chart”) with the incentive application for the location on the collectors where the shading is greatest.

NOTE: It is important that Program trade allies be as accurate as possible during the solar resource assessment. If, upon inspection, an installed project does not meet the TSRF requirement it can void the project's eligibility for Energy Trust incentive funding. For this reason, Program staff strongly recommends that if a solar resource estimate is dependent on a project owner addressing any issues with trees or other shading barriers at the site property, that such impacts be remedied prior to the Program trade ally moving forward with installation.

- Acceptable shade evaluation methods: Program trade allies may submit either (i) a sun chart developed for Energy Trust by University of Oregon’s Solar Radiation Monitoring Laboratory, available for download and use from the solar trade ally pages on the Energy Trust website, (ii) a sun chart included with the Oregon Residential or Business Energy Tax Credit application for solar water heating or solar pool heating systems, or (iii) the output from an approved site analysis tool. A list of currently approved site analysis tools and instructions on displaying the required information is also available on the solar trade ally pages of the website.
- Tilt and Orientation Factor (TOF): TOF is the percent of energy resource available after factoring in losses due to sub-optimal tilt and/or orientation of the collectors. TOF values vary by location, and are included on the Energy Trust sun charts and listed on the solar trade ally pages of the website.

At sites with collectors mounted at different tilts and/or orientations, Program trade allies should use the lowest TOF value when calculating the TSRF, as described below.

- *Total Solar Resource Fraction (TSRF)*: TSRF estimates the combined effect of shading, tilt and orientation on a system's performance.

The TSRF calculation must reflect the worst location on the collector(s)—the location with the most shading and lowest TOF value—and be 75% or greater in order to be eligible for Program incentives.

Shading = 100% - annual loss caused by shading

TOF = 100% - loss due to sub-optimal tilt and orientation

TSRF = Shading x TOF

TSRF ≥ 75%

5.2 Determining type of project

Program trade allies will need to determine the type of project in order to (i) calculate the correct incentive, (ii) identify the appropriate incentive application to complete with the customer and submit to Energy Trust and (iii) determine what additional documentation, if any, will need to be included with the application.

If a project ownership structure does not meet one of the descriptions below, contact the Program.

Residential Solar Water Heating - (submit **Form 223R-PC** via PowerClerk®)

- The system is an eligible system (defined in **Solar Water Heating Installation Requirements**, see **Section 7**) that serves a year-round single family residential domestic hot water load.
- The system owner is the owner of the site property at the time of installation (tenants may not install systems on homes they rent).
- The thermal energy produced by the solar water heating system will offset energy purchased from a qualifying utility by the occupant.

Commercial Solar Water Heating - (submit **Form 223C-PC** via PowerClerk)

- The system serves a year-round domestic hot water or process heat load for multifamily, commercial or industrial end use.
- The system owner is either (i) the owner of the site property, or (ii) a tenant who has obtained any necessary consent from the property owner to install and operate the system.
- The thermal energy produced by the solar water heating system will offset energy purchased from a utility by either the property owner or a tenant.

Small, Seasonal Use Solar Pool Heating - (submit **Form 224S**)

- The pool is seasonally used and less than 1,000 ft² in surface area.
- The system uses eligible unglazed collectors, defined in **Solar Pool Heating Installation Requirements** (see **Section 7**).
- The system owner is either (i) the owner of the site property, or (ii) a commercial tenant who has received written permission from the property owner to install and operate the system.
- The thermal energy produced by the solar pool heating system will offset energy purchased from a qualifying utility by the property owner or tenant.

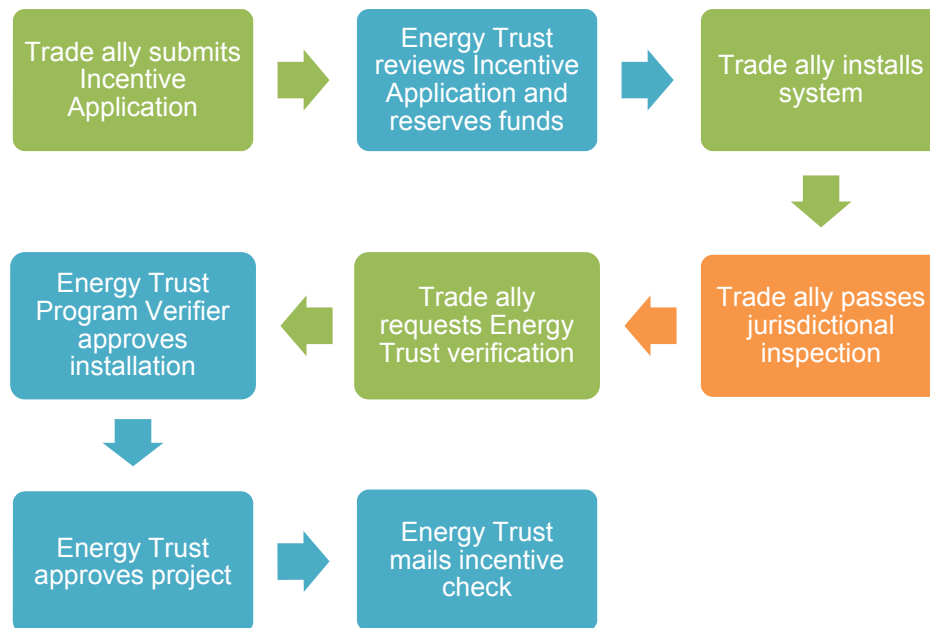
Large or Year Round Use Solar Pool Heating - (submit **Form 224C**)

- The pool is (i) larger than 1,000 ft² in surface area and/or (ii) used year-round.
- The system uses eligible collectors, defined in **Solar Pool Heating Installation Requirements** (see **Section 7**).
- The system owner is either (i) the owner of the site property, or (ii) a commercial tenant who has received written permission from the property owner to install and operate the system.
- The thermal energy produced by the solar pool heating system will offset energy purchased from a qualifying utility by the property owner or tenant.

6 Applying for Program Incentives

All Solar Water Heating Program trade allies are expected to understand the Program's incentive application forms, the submission procedure and the review and approval process to receive Program incentives. Typically, incentive applications are submitted to Energy Trust by the Program trade ally. The basics steps to submit incentive applications for systems seeking Program funding are shown in the diagram below.

While there are some variances to the steps shown below for small, seasonal use solar pool heating systems (see **Section 6.3**) and for Program trade allies that have been approved for "Random Verification" status (see **Section 8.2**), the fundamental process is the same.



6.1 Maximum number of active projects per Program trade ally

A Program trade ally is not allowed to have any more than 30 solar water heating (including solar pool heating) projects pending with reserved Energy Trust incentives at any one time. When a Program trade ally has the maximum number of projects pending, Energy Trust will not accept a new project application from the Program trade ally until after a pending project has been completed and approved.

6.2 Applying for incentives on behalf of customers

Incentive rates are subject to change. Incentive reservations for qualifying projects are subject to funding availability and processed on a first-come, first served basis.

6.2.1 Providing information to the customer

The Program trade ally must give customers time to read and understand the terms and conditions of the incentive application form before obtaining a signature. Trade allies must also explain, at a minimum, the subjects listed below when providing an application to a customer for review. If a potential Program participant has questions about the incentive application or the process, have them contact the Program *before* they sign the application.

Solar resource information: Explain TSRF and the project's solar resource compared to optimal.

Performance estimate: Educate the system owner about the amount of energy the system should save annually, de-rated for TSRF or lower-than-average hot water use, so that they have a realistic expectation for performance.

Incentive process: Explain Energy Trust's incentive rate, the incentive application and incentive reservation process, that the installation must be completed, inspected and receive final approval during the incentive reservation period, and who will be the recipient of the incentive payment (customer directly or Program trade ally in exchange for a lower price, depending on the type of project – see **Section 9.2**).

Ensure Program participant(s) understand that incentive rates for a project are subject to change at any time prior to reservation, and that incentive reservations for qualifying projects are subject to funding availability and processed on a first-come, first served basis. The final incentive may vary from the estimate included in the initial application depending on the actual system installed and Energy Trust verification. See **Section 6.4** for details on notification of incentive reservation.

6.2.2 Submitting applications on time

To apply for and reserve funding for residential and commercial solar water heating systems, or large/year-round use solar pool heating systems, the incentive application must be submitted to program staff before a Program trade ally begins installation. Systems installed prior to Energy Trust's receipt and approval of an incentive application will not be eligible for incentives.

Until Energy Trust issues an incentive reservation notice following its review of an incentive application, there is no commitment by Energy Trust to reserve funding for that project. See **Section 6.4** for details on notification of incentive reservation.

For small, seasonal use solar pool heating systems, Program trade allies may submit the incentive application any time prior to requesting verification from an Energy Trust Program Verifier. See **Section 6.3** for more details on small, seasonal use pools.

NOTE: Program trade allies are expected to help their customers apply for Oregon Energy Tax Credits. Oregon Department of Energy (ODOE) administers these tax credits and has very specific timing requirements for application. To ensure a customer is eligible for Oregon Energy Tax Credits, read and follow ODOE's instructions carefully and contact them at **1-800-221-8035** or **www.oregon.gov/energy** with questions.

6.2.3 Submitting a complete application package

Incentive applications are submitted to Energy Trust by the Program trade ally, not by the customer.

A complete application package includes, at minimum, the following elements:

Incentive Application form, appropriate for the project type, filled out in its entirety and signed by all necessary parties.

Sun chart, showing shade analysis. See **Section 5.1.2** for information on acceptable shade evaluation methods and sun charts.

Schematic diagram, showing detailed system design. This should accurately depict all planned components, plumbing design, and relative location of valves and monitoring devices. Include plumbing material and diameter and length of plumbing runs.

Other documents, as needed, to demonstrate project eligibility and compliance with Program requirements

Solar water heating incentive application packages must be submitted online via PowerClerk.

Solar pool heating incentive application packages can be submitted to Energy Trust Program staff via fax at 503.546.6863 or e-mail at SWH@energytrust.org.

Energy Trust will not review any incomplete applications. Complete applications must include all required application documents and be signed by all necessary parties. Because incentive funds are not reserved until Energy Trust's review is complete and an incentive reservation notice has been issued, it is imperative that Program trade allies ensure that all required documents are submitted together in order to avoid delays in the application review process.

Incentives are subject to availability of funds, reservations for funding are provided on a first-come, first served basis and incentive rates may change at any time prior to reservation.

6.2.4 PowerClerk®

PowerClerk is the online project management and tracking system used by the Program for solar water heating projects. All solar water heating project communications from Energy Trust are sent via PowerClerk.

PowerClerk allows Program trade allies to enter application information through a secure web environment. Based on the inputs, the system will automatically generate a prefilled incentive application form of the selected type (**223R-PC or 223C-PC**) which can then be printed and signed by trade ally and the applicant(s) in accordance with Program requirements.

The signed incentive application, along with the other elements of a complete application package mentioned in **Section Error! Reference source not found.**, can be uploaded directly to the secure website.

Prior to obtaining access to PowerClerk, qualified trade allies must participate in a mandatory training and sign a user agreement. Once approved to use PowerClerk, trade allies are required to submit all solar water heating

incentive applications through that system. Requests to use PowerClerk should be sent to PowerClerk@energytrust.org

6.3 Expedited application process for small, seasonal use solar pool heating

For solar pool heating systems installed with pools less than 1,000 ft² in surface area that are only used seasonally, there is an expedited incentive application and verification process.

Program trade allies may submit applications for small, seasonal use solar pool heating systems any time prior to requesting verification from Energy Trust. After submitting a complete incentive application, the Program trade ally requests verification from an Energy Trust Program Verifier (Program trade allies should contact Program staff if they do not know their Program Verifier). The verification process then proceeds as described in **Section 8.1**.

If the Program trade ally is on Random Verification status for solar pool heating, they may perform their own self-verifications and submit a signed **Installation Checklist** to Energy Trust along with their Incentive Application. These projects will be subject to the random verification process described in **Section 8.2.3**.

The installed project must meet Energy Trust's Program requirements and be verified in order to qualify for incentives. Incentives are subject to availability of funds. Program details, including rates, may change.

6.4 Energy Trust review and incentive reservation process

Solar water heating incentive applications must be submitted to Energy Trust for review *before* a Program trade ally begins installing a system (with the sole exception of incentive applications for small, seasonal use solar pool heating systems as detailed in **Section 6.3**). The review process is intended to protect the Program trade ally from purchasing equipment or doing other installation preparation work for a system or customer that may not meet Program requirements.

First, Program staff reviews the application for completeness and eligibility. Then a Program Verifier performs a technical review. The Program Verifier will notify Energy Trust whether the system design, as submitted, appears to meet Program requirements.

Program trade allies on Random Verification must also submit incentive applications for review. However, the review turnaround time is typically shorter (see **Section 8.2.1** for information on qualifying for Random Verification status).

6.4.1 Communications

Unless otherwise stated, all project review, revision, reservation and verification communications from Program staff to Program trade allies and participants are made by email. This helps maintain accurate project documentation. Accordingly, Program staff prefers to receive communications from Program trade allies electronically as well. Email and fax contact information is provided in **Section 11**.

6.4.2 Timing of review process

Energy Trust's application review process typically takes ten business days, but can take longer if the submitted incentive application is incomplete or includes incorrect information, or if there are concerns with Program eligibility or the system design.

6.4.3 Incomplete or incorrect applications

If a submitted incentive application is incomplete or requires design changes to be eligible, the Program trade ally will be notified and asked to submit additional information. The Program trade ally has thirty days from the date of notification to submit the requested information. If the requested information is not received within the thirty day period, the Program will abandon and destroy the application and notify the trade ally and the applicant(s).

After an application is abandoned, the Program trade ally must to submit an entirely new incentive application package in order for that project to be reconsidered for an incentive.

6.4.4 Notification of incentive reservation

Once Energy Trust completes its review of an application, an ***Incentive Reservation*** notice will be sent to the system owner and Program trade ally. After receipt of this notice, the Program trade ally may move forward with system installation.

The ***Incentive Reservation*** notice states the estimated annual energy savings, reserved incentive amount and the reservation period.

In addition to the reservation notice, the Program trade ally will also receive notice of any comments on the system design from the Program Verifier, as well as the Program Verifier's contact information.

6.4.5 System design changes during an incentive reservation period

If the system owner and Program trade ally make any changes to the system during the reservation period, the Program trade ally must submit, at a minimum: (i) a revised plumbing schematic, and (ii) a letter explaining the revisions.

The revised system information must be submitted to Energy Trust for review *before* implementing any changes and must again go through Energy Trust's review process to determine whether or not the system is still eligible for our incentives. If the design changes are eligible, Energy Trust will send a ***Revised Incentive Reservation*** notice to the Program trade ally and system owner acknowledging the changes.

All changes to system designs and reserved incentive amounts are subject to fund availability and Energy Trust approval.

7 Installation Requirements

All installations performed by a Program trade ally must meet the solar water or pool heating installation requirements in effect at the time of incentive reservation in order to be eligible for Program incentives. Copies of the ***Solar Water Heating Installation Requirements*** and ***Solar Pool Heating Installation Requirements*** documents can be found on the solar trade ally pages of the Energy Trust website. Installations will be verified by Energy Trust in accordance with Program requirements. See **Section 8** for more information on Energy Trust's verification process.

Energy Trust reviews and revises its ***Installation Requirements*** documents annually. Program trade allies wishing to comment on current requirements or suggest changes are encouraged to participate in the Program's annual revision process.

7.1 Timing of installation

Solar water heating incentive applications must be submitted to Energy Trust for review *before* beginning installation (with the sole exception of incentive applications for small, seasonal use solar pool heating systems as detailed in **Section 6.3**). Furthermore, until Energy Trust issues an ***Incentive Reservation***, there is no commitment by Energy Trust to reserve any incentive funding for that project.

Program trade allies may *choose* to begin construction of a project after submitting an application but before receiving an ***Incentive Reservation***. However, any purchase of equipment or other work towards an installation before Energy Trust has notified a Program trade ally of an incentive reservation is done solely at a Program trade ally's risk.

7.2 Required actions prior to Energy Trust verification

7.2.1 Jurisdictional inspections

Program trade allies must successfully pass any and all jurisdictional inspections required by the city or county where the project is located *before* the Energy Trust verification. Projects that cannot provide proof of passing their jurisdictional inspections at the time of the Energy Trust site visit will be found not to meet Program requirements and be subject to any applicable verification fees (see **Section 8.1.3**).

7.2.2 Contractor full system warranty

Program trade ally must provide participant with a written warranty providing, at a minimum, that: System installation and equipment shall be free from all defects in workmanship and materials for at least two years from the date of final approved building inspection. The warranty must cover all labor for repairs resulting from workmanship or equipment defects.

7.2.3 Customer education

Prior to verification by Energy Trust, Program trade allies must instruct the customer in the operation and maintenance of the system, including how to identify if the system is operating normally, what to do in case of poor

performance, routine maintenance activities and emergency shut down and start up procedures. Program trade allies must also provide a customer manual that complies with the appropriate **Installation Requirements** documents.

8 Energy Trust Verification Process

Energy Trust inspects solar water and pool heating systems to ensure that they meet the Program requirements and qualify to receive reserved Program incentives.

Energy Trust' installation verification is not a health and safety inspection, which is one reason why projects must pass their jurisdictional inspections first. Unlike jurisdictional inspectors, Energy Trust Program Verifiers determine whether the system appears to meet Program requirements. Among other things, Energy Trust Program Verifiers verify the system installed matches the system approved, help identify issues that might affect system performance or shorten the anticipated operating life of the system, and verify that the customer manual has been provided to the Program participant(s).

8.1 Mandatory verification

Verification is mandatory for all systems seeking Program incentives, unless a Program trade ally has been approved for "Random Verification" status (see **Section 8.2**).

8.1.1 Scheduling

It is the Program trade ally's responsibility to contact their assigned Program Verifier directly to schedule a verification site visit. During the initial design review process, Energy Trust provides Program trade allies with the appropriate Program Verifier contact information.. Either the customer or the Program trade ally must be present during the verification site visit. Energy Trust highly recommends that the Program trade ally be present at the site visit.

Program trade allies must provide a Program Verifier with no less than 3 business days notice for cancellation or rescheduling. To reschedule a site visit, contact the Program Verifier directly.

8.1.2 Site visit documentation

During the site visit, the Program Verifier will complete a **Solar Water Heating** or **Solar Pool Heating Installation Checklist**. After completing the site visit, the Program Verifier will provide review comments and indicate whether the installation has been verified. Program staff will review the results and, if approved, notify the Program trade ally with an **Installation Verified** notice (for solar water heating projects) or a **Project Inspection** report (for solar pool heating projects.)

8.1.3 Required installation corrections

If the Program Verifier finds that the installation does not meet Program requirements, Energy Trust will notify the Program trade ally with an ***Installation Corrections Required*** notice. The Program trade ally must make all the required corrections *within thirty days of notification*. If the corrections are not made within the thirty days, the Program trade ally will be placed in suspension status (see **Section 10.3**), the system owner will be notified of the unresolved corrections and, at the Program's discretion, the incentive reservation may be terminated.

Once the corrections have been made, the Program trade ally must contact the Program Verifier to schedule a new site visit. In certain circumstances, and at Energy Trust's discretion, verbal or photographic verification of the changes may be allowed in place of a new site visit.

- *Repeat violations*

If the violation(s) identified by the Program Verifier have also been the cause of corrections required on previous projects, the Program may, at its discretion, place the Program trade ally on Program suspension (see **Section 10.3**). If the violation is particularly egregious and/or chronic, the Program trade ally may be subject to termination (see **Section 10.4**).

- *Verification fees*

Program trade allies may be required to pay for additional site visits that result from Program violations. Program trade allies will be notified prior to charging for a verification site visit. The verification fee is subject to change by Energy Trust and is currently \$150 per site visit.

If the project incentive is to be paid to a Program trade ally, any verification fees will be deducted from the incentive payment.

If the incentive payment is to be paid to the Program participant, the Program trade ally will be invoiced for the verification fee.

8.2 Random verification

8.2.1 Qualifying

Verification is mandatory for all systems seeking Program incentives, unless a Program trade ally has been approved as qualifying for "Random Verification" status. Energy Trust will evaluate each Program trade ally's performance under the Program based upon verification results and adherence to Program requirements.

In order to be considered for Random Verification status, a Program trade ally must have completed at least five solar water heating or solar pool heating projects with no Program violations. It is solely Energy Trust's decision to place the Program trade ally on Random Verification status

8.2.2 Maintaining Random Verification status

In order to maintain Random Verification status, the Program trade ally must:

- Complete a project within six months of the date the Program trade ally becomes eligible for Random Verification status
- Complete a minimum of one project every six months
- Maintain an 80% pass rate on random verifications

A Program trade ally on Random Verification status that does not meet these requirements will be immediately returned to mandatory verification status, and will be responsible for scheduling subsequent project verification site visits. Random Verification status will be reinstated at Energy Trust's discretion.

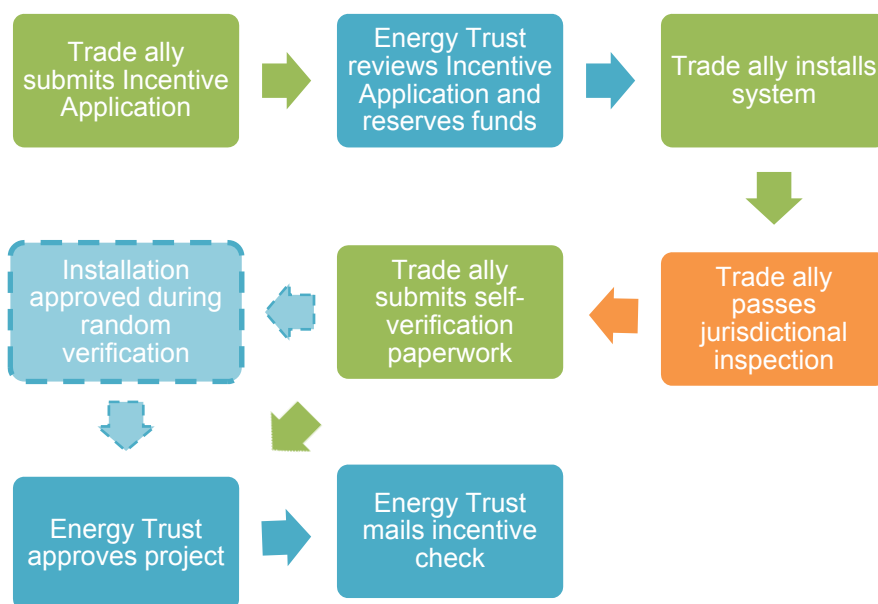
8.2.3 Review and random verification process

Program trade allies approved for Random Verification are still required to submit incentive applications for Energy Trust's review and incentive reservation prior to beginning work on a project (with the exception of small, seasonal use pools), though the review turn-around time is typically shorter. However, Program trade allies approved for Random Verification will perform their own self-verifications and submit a signed **Installation Checklist** to Energy Trust after completing a project.

Upon Energy Trust's receipt of the completed and signed **Installation Checklist** from the Program trade ally, the Program will issue the **Self-Verification Accepted** notice and initiate final approval and incentive payment for the project.

Energy Trust verifies a sampling of self-verified projects. Program staff will select a project for random verification after receipt of an **Installation Checklist** from the Program trade ally. If a project is selected for random verification, Energy Trust will notify the Program trade ally and appropriate Program Verifier of the selection. The Program Verifier will schedule the site visit directly with the system owner. The verification process will proceed as described in **Sections 8.1.2** and **8.1.3**.

If a Program trade ally's verification approval rate falls below 80%, the Program trade ally will be immediately returned to mandatory verification status.



9 Payment of Incentives

Once an installation has been verified, Energy Trust will begin processing the incentive payment.

9.1 Timing

Incentive checks are paid after Energy Trust receives written confirmation from the Program Verifier that the installation meets Program requirements or a signed **Installation Checklist** from a Program trade ally on Random Verification status.

Incentive payments are approved weekly, and incentive checks are typically mailed within thirty days of Energy Trust's receipt and approval of all required final verification paperwork.

9.2 Incentive payee

For residential and small, seasonal use solar pool heating projects, incentive payments are always made directly to the Program trade ally, who is required to reduce the customer's project cost by an equivalent amount. The Program trade ally **may not** charge the full project cost at the time of contracting and reimburse the customer with the value of the incentive after the Program trade ally receives the incentive payment from Energy Trust.

For commercial solar water heating projects, the incentive may be paid either to the system owner or the Program trade ally. The chosen payee is indicated in the **Payee** section of the **Form 223C-PC Incentive Application** and confirmed by the system owner and Program trade ally signatures on the form.

For large/year-round use solar pool heating projects, the payment will be made directly to the system owner unless Program trade ally and the customer sign the **Option to Assign Incentive Payment** section located at the end of the **Form 224C Incentive Application**.

Program trade allies may receive incentive payments for multiple projects in a single check. The individual project incentive amounts will be listed on the check stub.

9.3 Questions about status of incentive check

Energy Trust asks Program trade allies to wait the full 30 days before contacting the Program about the status of an incentive payment. If a Program trade ally discovers an overdue or missing incentive payment, they should contact the Program staff to resolve the situation.

10 Maintaining Program Trade Ally Status

10.1 Annual Program participation requirements

In addition to complying with all terms and conditions of the Program trade ally agreement with Energy Trust, Program trade allies must do the following each calendar year to remain eligible to be a Program trade ally:

- Successfully apply for and obtain an Energy Trust incentive (as the trade ally contractor, not as a subcontractor) for at least one solar water or pool heating system,
- OR**
- Attend a Program training session. This option is available as an alternative to installation only for two years. After two years, Program trade allies that do not meet the minimum installation requirement will be terminated as a Program trade ally.

Program training sessions are typically offered quarterly via online webinar. Check the solar trade ally pages of the Energy Trust website to learn when sessions will be offered and how to register to participate.

10.2 Program trade ally listing on Energy Trust website

Energy Trust maintains a searchable database of all current trade allies for its various programs on its website. For Solar Program trade allies, this list is broken into two categories:

(1) A short list, the default view for website users that only lists Program trade allies that have successfully installed at least one project through the Program during the preceding year.

(2) A long list that includes all approved Program trade allies.

To be added to the short list, a Program trade ally must successfully complete a project with the Program and then proactively contact Program staff to request that their listing be updated.

Program trade allies that do not wish to be listed on Energy Trust's website should notify the Program.

10.2.1 Specialties

Program trade ally website listings include one or more “Specialties.” These Specialties reflect the sector (commercial or residential) and technology of projects a Program trade ally completed in the past year.

The Program currently includes the following Specialties for Solar Water Heating Program trade allies:

- Residential/small commercial solar water heating
- Residential/apartment/condo solar pool heating
- Large commercial/industrial solar water heating
- Commercial/municipal solar pool heating

To add Specialties to a website listing, a Program trade ally must successfully complete a project of that Specialty with Energy Trust and notify the Program staff to update the list.

To maintain Specialty listings, a Program trade ally must install at least one project of a given Specialty each year. Specialties that are not demonstrated annually will be removed from the Program trade ally’s online listing after the end of the calendar year.

10.2.2 Professional certifications

While the Solar Program does not currently require any professional certifications, Program trade allies are encouraged to obtain third-party certification, such as NABCEP (www.nabcep.org). Energy Trust will include such certifications on Program trade ally website listings.

10.3 Suspension

Certain actions may result in suspension from the Program. A Program trade ally will be notified in writing if they have been placed in Program suspension, and will have 30 days from the notice date to resolve the situation to the Program’s satisfaction. Actions resulting in suspension may include, but are not limited to:

- Failure to make installation corrections identified by the Program Verifier within the 30 day timeframe
- Failure to follow a required Program process
- Chronic required installation corrections or repeated violations of installation or Program requirements
- Failure to attend any required Energy Trust trainings
- Allowing insurance, licenses or other required certifications to lapse
- Failure to resolve any reasonable Program participant complaint regarding the Program trade ally’s work under the Program

- Failure to accurately inform Program participants of current Program requirements, including but not limited to incentive levels

10.3.1 Effect of suspension

During Program suspension, a Program trade ally may not submit any new incentive applications to Energy Trust, nor will Energy Trust issue any new incentive reservations for the Program trade ally's projects. In addition, the Program trade ally will be removed from the searchable trade ally database on the website and Energy Trust may impose other restrictions on the Program trade ally's participation in the Program.

Program trade allies must resolve violations resulting in suspension within 30 days. If the violations pertain to a specific project, the system owner will be notified at the time of the Program trade ally's suspension. Failure to do so may result in the Program terminating a Program trade ally.

10.4 Termination

In addition to any other termination provisions set forth in the Program trade ally agreement with Energy Trust, certain actions may result in Energy Trust immediately terminating a contractor from participating as a Program trade ally. In the event of termination, the contractor will be notified by Energy Trust in writing. Actions resulting in immediate termination of Program trade ally status may include, but are not limited to:

- Failure to resolve any action resulting in suspension within 30 days
- Repeated Program violations
- Passing or attempting to pass any required verification fees on to a Program participant
- Violation of license laws
- Misrepresentation of system components or installation characteristics at more than one site
- Failure to pass the full value of the Energy Trust incentive on to the customer in cases where the incentive payment is issued to the Program trade ally

10.4.1 Effect of termination

Effective upon notice of termination, Energy Trust will not accept any new incentive applications, will not process any submitted incentive applications that have not yet received an incentive reservation, and will remove the terminated contractor from the Program's searchable trade ally database on Energy Trust's website. Energy Trust will continue to process, in accordance with Program requirements, any incentive applications that were provided an incentive reservation by Energy Trust prior to the notification of termination.

Energy Trust may, in its sole discretion, allow a terminated contractor to re-apply for participation in the Program at a later date. However, Energy Trust will most likely require additional documentation and proof from that contractor that it has taken appropriate measures to prevent further Program violations.

11 Program Contact Information

In general, incentive application materials and other Program paperwork should be submitted to the contact information at the bottom of the applicable Program form. The Program prefers to receive documents via fax or electronically as attachments to email. If necessary, written documents can be delivered to Energy Trust's mailing address: Solar Water Heating Program, Energy Trust of Oregon, 851 SW 6th Avenue, Suite 1200, Portland, OR 97204. Please note that all hard-copy documents received via mail or other courier will be stamped with the date they were received and a time stamp of 5:00 pm, regardless of the exact time of arrival.

Fax

The general fax number for the Program is **503-546-6863**.

Email

The general email for Program staff is SWH@energytrust.org.

Phone

To reach a staff member in the Program, call the main Energy Trust office number at **503-493-8888** and ask for a Solar Water Heating Program staff member.

11.1 Questions and Feedback

It is extremely important that Program trade allies have a thorough understanding of all of the Program documents, so please contact the Program immediately if there are any questions about this ***Program Guide for Solar Water Heating Allies***, the ***Solar Water Heating Installation Requirements***, ***Solar Pool Heating Installation Requirements*** or any other related Program document.

Program trade allies are also welcome to participate in Energy Trust's public meetings. The Renewable Energy Committee, Conservation Advisory Committee and the Energy Trust Board of Directors generally meet monthly. See the Energy Trust website for more meeting schedules and agendas.

Appendix A: Forms Matrix

All forms are available for download in Excel and PDF formats on the solar trade ally pages of the Energy Trust website. The Excel form has formula calculations, incentive rates and solar resource values built directly into the document to make it easier and faster to fill out, and to minimize errors. For this reason, it is preferable for Program trade allies to utilize the Excel version, though handwritten applications are permitted.

Form Number	Form Name	Intended User	Purpose of Form
117A + 271W	Solar Water Heating Program Trade Ally Application	Trade Ally	Application to become a Solar Water Heating Trade Ally (becomes Program trade ally agreement once approved by Energy Trust)
201S	Impact of Self-Direction	System owner or Host	Requirements for current or potential self-directing entities (required for large commercial or industrial participants who are or may be eligible to self-direct their renewable public purpose charge)
214	Substitute W-9	System Owner or Trade Ally	Tax identification information that allows Energy Trust to report incentive payments to the IRS
223R-PC	Solar Water Heating Incentive Application - Residential	Trade Ally, System Owner	Project incentive application for residential solar water heating systems (created in PowerClerk)
223C-PC	Solar Water Heating Incentive Application - Commercial	Trade Ally, System Owner	Project incentive application for commercial/industrial solar water heating systems (created in PowerClerk)
224S	Solar Pool Heating Incentive Application – Small Seasonal-Use Pool	Trade Ally, System Owner	Project incentive application for solar pool heating systems serving <1,000 ft ² and seasonal use pools
224C	Solar Pool Heating Incentive Application - Commercial	Trade Ally, System Owner	Project incentive application for solar pool heating systems serving >1,000 ft ² and/or year round use pools

N/A	Incentive Reservation	Solar Program Staff	Written notice of incentive reservation. Includes system performance estimate, incentive amount and reservation period
N/A	Revised Incentive Reservation	Solar Program Staff	Written notice of a revised incentive reservation sent after receipt of system design or incentive changes
230	Project Review	Program Verifier, Solar Program Staff	Notifies Program trade ally of any system design issues identified during solar pool heating application review process
233	Solar Water Heating Installation Checklist	Program Verifier, Random Verification Trade Ally	Checklist used to verify if a solar water heating system meets the Solar Water Heating Installation Requirements
234	Solar Pool Heating Installation Checklist	Program Verifier, Random Verification Trade Ally	Checklist used to verify if a solar pool heating system meets the Solar Pool Heating Installation Requirements
N/A	Installation Verified	Program Verifier, Solar Program Staff	Documentation that a solar water heating installation has been verified and approved for incentive payment
N/A	Installation Corrections Required	Program Verifier, Solar Program Staff	Documentation that a solar water heating installation has not met Program requirements and requires corrections
232	Project Inspection	Program Verifier, Solar Program Staff	Documentation of whether a solar pool heating installation has been verified and/or approved for incentive payment