



Application Form for Residential Energy Tax Credit Certification — Instructions
Solar Water Heating Systems
Oregon Department of Energy

The Oregon Residential Energy Tax Credit Program provides a tax credit for solar domestic water heating systems of 60 cents per kilowatt hour (kWh) saved during the first year of operation, up to \$1,500. Spa and pool heating systems are eligible for a tax credit of 15 cents per kWh saved, up to 50 percent of the cost, with a maximum tax credit of \$1,500.

To qualify for a tax credit, you must have an Oregon income tax liability and the solar water heating system must be located in an Oregon dwelling that is your primary or secondary residence. If you are an Oregon resident and do not have a state tax liability, you may opt to use the Pass-through Option (see below).

Don't wait to apply for the tax credit. It usually takes at least four to six weeks to get the certification you need to claim the credit on your tax return. Applications must be received at the Oregon Office of Energy **no later than April 1** of the year following the purchase, even if the tax credit is carried forward.

Take the following steps to receive your tax credit:

1. Complete a sun chart for your location. On the attached sun chart, draw the south-facing skyline (horizon, trees and other objects) your solar equipment will be exposed to. Use a protractor and compass. To determine the percentage reduction in system yield, simply add the numbers in the blocks that contain obstructions. For detailed instructions on completing a sun chart, call 1-800-221-8035 to request the publication "Plotting Skylines with Easy-to-Build Skyline Plotters."

2. Determine the first-year kWh savings and tax credit amount.

Domestic Water Heating Systems

Look up the kWh/year savings for your solar water heating system and climate zone in the Yield Table for Solar Domestic Water Heaters provided in the Solar Water Heating Information Packet from the Oregon Department of Energy. Adjust this value by the percent loss due to the shading and orientation determined by the sun chart. Multiply by \$0.60 to determine the qualifying tax credit amount, up to \$1,500. Any system that is not OG 300-Certified by the Solar Rating and Certification Corp. (SRCC) must be pre-approved by the Oregon Department of Energy to be eligible for the tax credit.

Spa Heating Systems

Look up the kWh/year savings in the Yield Table for Solar Spas. Adjust this value by the percent loss due to shading determined by your sun chart. Multiply by \$0.15 to determine the qualifying tax credit amount, up to 50 percent of the cost of the system.

Pool Heating Systems

Use the equation in the Yield Table for Solar Pools to determine the first-year kWh savings. Adjust this value by the percent loss due to shading determined by the sun chart. Multiply by \$0.15 to determine the qualifying tax credit amount, up to 50 percent of the cost of the system.

3. Submit a completed Application and Verification Form for Tax Credit Certification Solar Water Heating System. The form may be filled out on your computer. Please print it, sign it and mail it with your receipt to the Oregon Department of Energy. The forms can NOT be filed on-line.

Continued on back

Contractor Installed Systems

If your system is installed by a contractor that is tax credit certified by the Oregon Department of Energy, the contractor will help you complete the application. Attach proof of payment (receipt or invoice marked "paid" that is signed and dated by the contractor.)

4. **Complete the pass-through option section on the form if you are using this option.** The pass-through option allows an applicant to transfer the tax credit to a pass-through partner in return for 95 percent of the value of the tax credit. If you choose the pass-through option, you transfer your tax credit and may not claim it. The tax credit is issued in the name of the pass-through partner. Check the pass-through option section and submit your completed application. The Department of Energy will review your application and send you a Pass-through Option Application form and additional instructions. You and your pass-through partner (the tax credit recipient) must sign the form. You must find your own pass-through partner.
5. **Claim the tax credit on your state income tax form.** Keep your Certification, a copy of your application, and proof of payment with your tax records. (Do not attach them to your tax return.) If your return is audited, the Oregon Department of Revenue will request copies of the information from you. Tax credits not taken in the first year may be carried forward up to five years.

If you have any questions, please call the Oregon Department of Energy toll-free: 1-800-221-8035. (In Salem, call 503-378-4040.) Or consult the Department of Energy Web site (www.energy.state.or.us).

Tips for Buying, Installing, and Operating a Solar Water Heating System

- Ask how much experience the contractor has installing solar water heating systems. Ask for references and check them.
- If you are purchasing a solar water heating system from a certified solar contractor, ask to see proof of his/her contractor certification from the Department of Energy.
- Check that the system is OG 300-certified and installed in accordance with the Oregon Solar Energy Industry Association tank insulation standard. For more details, check the Web site: www.solar-rating.org.
- Be sure you understand how to operate and maintain your system, including what steps to take to avoid freezing or overheating. Your contractor should provide you with an owner's manual with operation and maintenance instructions. In the rare event that your system freezes or overheats, know what steps to take to shut off or bypass your system.
- Compare annual performance estimates of different models you are considering. These values are shown on the Office of Energy solar water heating yield tables.
- Set the thermostat to 125 degrees F. and install low-flow showerheads on all showers.





**Application and Verification Form
for Residential Energy Tax Credit Certification**

**Solar Water Heating System
Oregon Department of Energy**

625 Marion St. NE
Salem, OR 97301-3737
Toll-free: 1-800-221-8035
Salem: (503) 378-4040 Fax (503) 373-7806
Web site: www.energy.state.or.us

Don't forget...
...to sign your application
and include your receipt

1. APPLICANT INFORMATION

Name:		Social Security No.*:	
Mailing address:		Daytime phone:	
City:	Oregon County:	State:	Zip:
Site address (if different):			
City:	Oregon County:	State:	Zip:
If different than mailing address, please explain:			
Name of electric utility company:			
Name of natural gas utility company:			
Installation date:		Number of people in household:	
Cost of system: \$			

2. SYSTEM DESCRIPTION

System Type (check one)

Solar domestic water heater

Solar pool heating system

Spa heating system

System Configuration (check one, and circle type)

Active (Drainback, Antifreeze, Open-loop, Other)

Passive (Thermosyphon, Geysers pump, Batch, Other)

*OAR 330-070-0025 authorizes the Oregon Department of Energy to request that you voluntarily provide your social security number for use as an identification number in maintaining internal records and may be shared with the Department of Revenue to establish the identity of an individual in order to administer state tax law. If you provide your social security number and consent to its use, it will be used only for the purpose(s) stated above.

FOR OFFICE USE ONLY	
File no.:	
Date received:	
Tax credit amount: \$	
Tax year:	

5. PASS-THROUGH OPTION

I want to transfer my tax credit using the tax credit Pass-through Option. Yes* No

*The Pass-through Option will allow you to transfer your tax credit to an individual with an Oregon tax liability who will make a lump-sum payment to you equal to 95 percent of the certified tax credit amount. To use this option, complete this application form first. Your application will be reviewed for eligibility. A Pass-through Option Application will be sent to you in return. You and your pass-through partner (the tax credit recipient) will complete and sign the Pass-through Option Application and mail it to the Oregon Department of Energy. The Department of Energy will then issue the tax credit certification to the pass-through partner.

6. INSTALLER SIGNATURE

Please have installer read and complete this section. If homeowner installed the system, he/she must complete.

I certify that the system(s) described in this application is (are) installed and that the information contained herein is accurate and true. Complete and initial each item below:

_____ The owner has received proper instruction for the operation and maintenance of the system.

_____ The owner has received a system manual and an estimate of the annual energy savings.

_____ The owner has received a written _____ month full warranty for the system. Department of Energy Tax Credit Certified Contractors are required to provide at minimum a 12-month full warranty. The Oregon Department of Energy recommends a minimum 24-month full warranty on all parts and labor.

_____ If solar domestic water heating, the system **has been properly permitted and inspected** by your local jurisdiction

_____ Was installed in accordance with SRCC OG-300 approved specifications.

I declare that this system meets all the requirements of ORS 469.160 through 469.180 and complies with all local building code requirements. Should the Oregon Department of Energy require changes in the system to make it conform to ORS 469.160 through 469.180 and OAR 330-70-010 through 330-70-097, the installer/contractor agrees to make such changes. By signing below, I certify that the system described in this application is installed and that the information contained herein is accurate and true.

Installation company: _____

Installation company address: _____

City: _____ State: _____ Zip: _____ Phone: _____

Installer name (please print): _____

CCB no.: _____ Oregon Department of Energy Tax Credit Certified? Yes No

Installer's signature: _____ Date: _____

7. DECLARATION, VERIFICATION AND APPLICATION SIGNATURES

I understand that the Oregon Department of Energy does not make any warranty concerning the performance, operation, installation, or any other characteristic or feature of this system. Department of Energy approval is only for purposes of obtaining the Oregon Residential Energy Tax Credit. By signing below, I (we) certify that the system(s) described in this application is (are) installed and that the information contained herein is accurate and true. System Owner must initial each item below:

_____ I give the Oregon Department of Energy permission to inspect this installation upon agency request.
Note: Refusing access for inspection may result in denial of this application.

_____ The installer has provided me with an owner's manual, a written warranty and instructed me in its proper operation.

_____ I have completed the attached sun chart for the site where this system is installed.

_____ I have set the backup tank temperature to 125°F as required.

_____ **I have attached proof of payment** for this installation (an **itemized** receipt of payment from your contractor, marked "paid" and dated; a copy of the contract with your utility for the system; or, for do-it-yourself systems, an itemized receipt of payment for materials).

Have you received a prior tax credit through the Oregon Residential Energy Tax Credit Program in this tax year? Yes No If yes, for what type of system(s)? _____

We do not sell information from this application as a mailing list. However, the Oregon Department of Energy may be required to disclose the name, address and phone number from your application under the Oregon Public Records law ORS 192.410 et seq. We can withhold this information following a written request explaining personal safety concerns, such as a temporary restraining order. The Oregon Department of Energy does not endorse any company that requests the information.

Signature of Purchaser: _____ Date: _____

Signature of Joint Purchaser: _____ Date: _____

Complete the following if two or more persons are purchasing this system and file separate tax returns.

Name: _____ Address: _____ % ownership: _____

Name: _____ Address: _____ % ownership: _____

Name: _____ Address: _____ % ownership: _____

Note: The Oregon Department of Energy certifies the energy efficiency of systems and equipment for the Oregon Residential Energy Tax Credit program. It is the applicant's responsibility to ensure compliance with all other eligibility requirements. See the Oregon Department of Revenue Information Circular 150-101-641, "Residential Energy Tax Credit."

Sun Chart Worksheet – Solar Water Heating

A Tool for Estimating Impacts of Shading, and Collector Orientation

The sun chart is a tool used to estimate the impact of shading on the annual performance of solar water heating or solar electric systems. The impact of shading on a solar collector is influenced not just by how much shading, but by what time of day it occurs and the tilt and orientation of the solar collector. In addition, because deciduous trees lose their leaves during the winter, the impacts of shading may also depend on what is causing the shading.

To simplify this evaluation, we will separate the impacts of tilt and orientation from shading. Graphs 1 and 2 show the impact of tilt and orientation on annual performance of a solar collector. The Tilt and Orientation Factor (TOF) values range from 100 percent (no loss) in the center of the inner circle to less than 60 percent (over 40 percent loss) in the upper left and right corners. You will notice that TOF value is greater than 95 percent over a large range of collector tilts and orientations. West of the Cascades (Graph 1) this is especially true because much of the annual solar energy arrives during the summer when the sun is high in the sky.

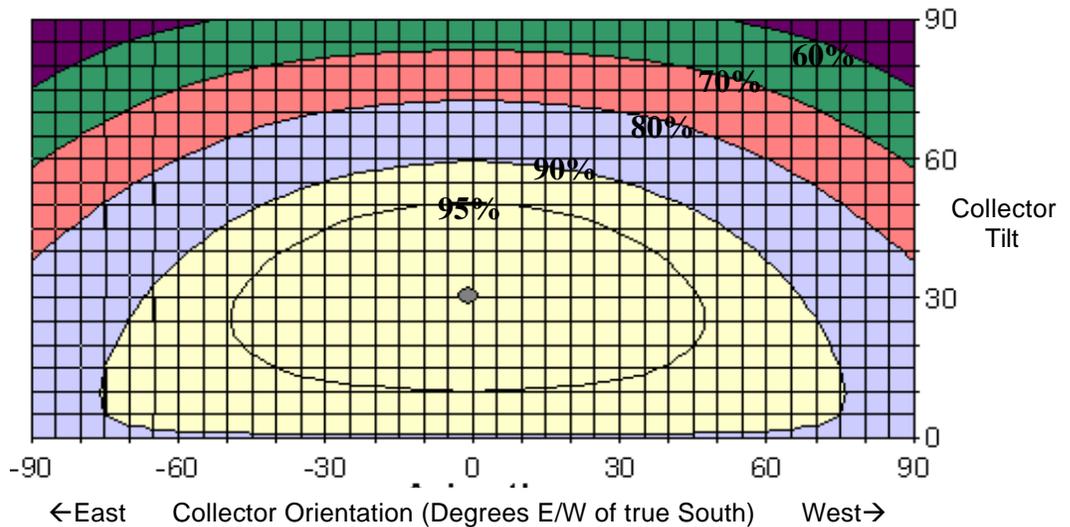
For the tax credit program, place a dark **X** mark on the location graph that indicates the tilt and orientation of the collector. Estimate the TOF value to the nearest 1 percent.

Graph 1 – TOF values West of the Cascade Mts.

Tilt: _____

Orientation: _____
(E or W of South)

TOF Value: _____

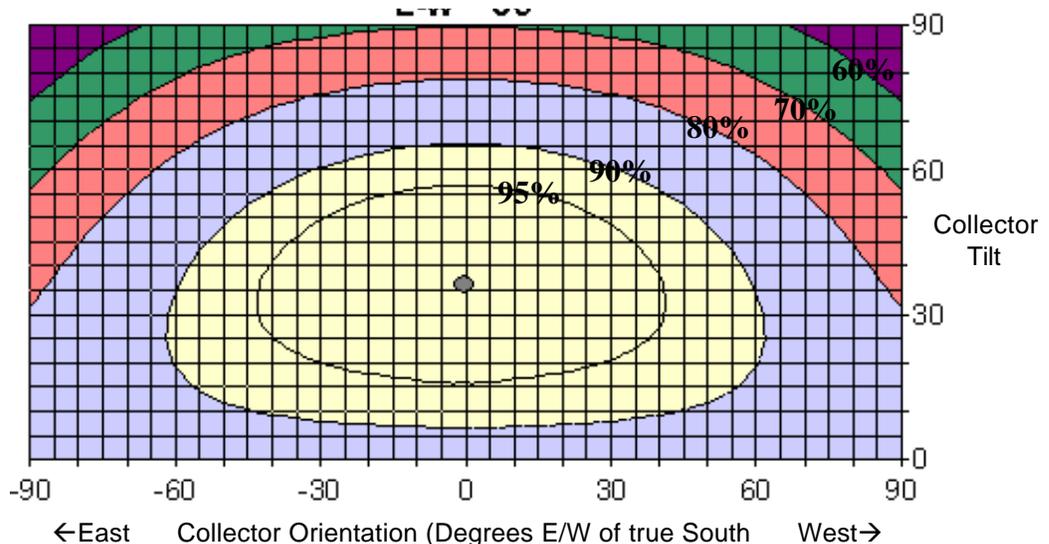


Graph 2 – TOF values East of the Cascade Mountains

Tilt: _____

Orientation: _____
(E or W of South)

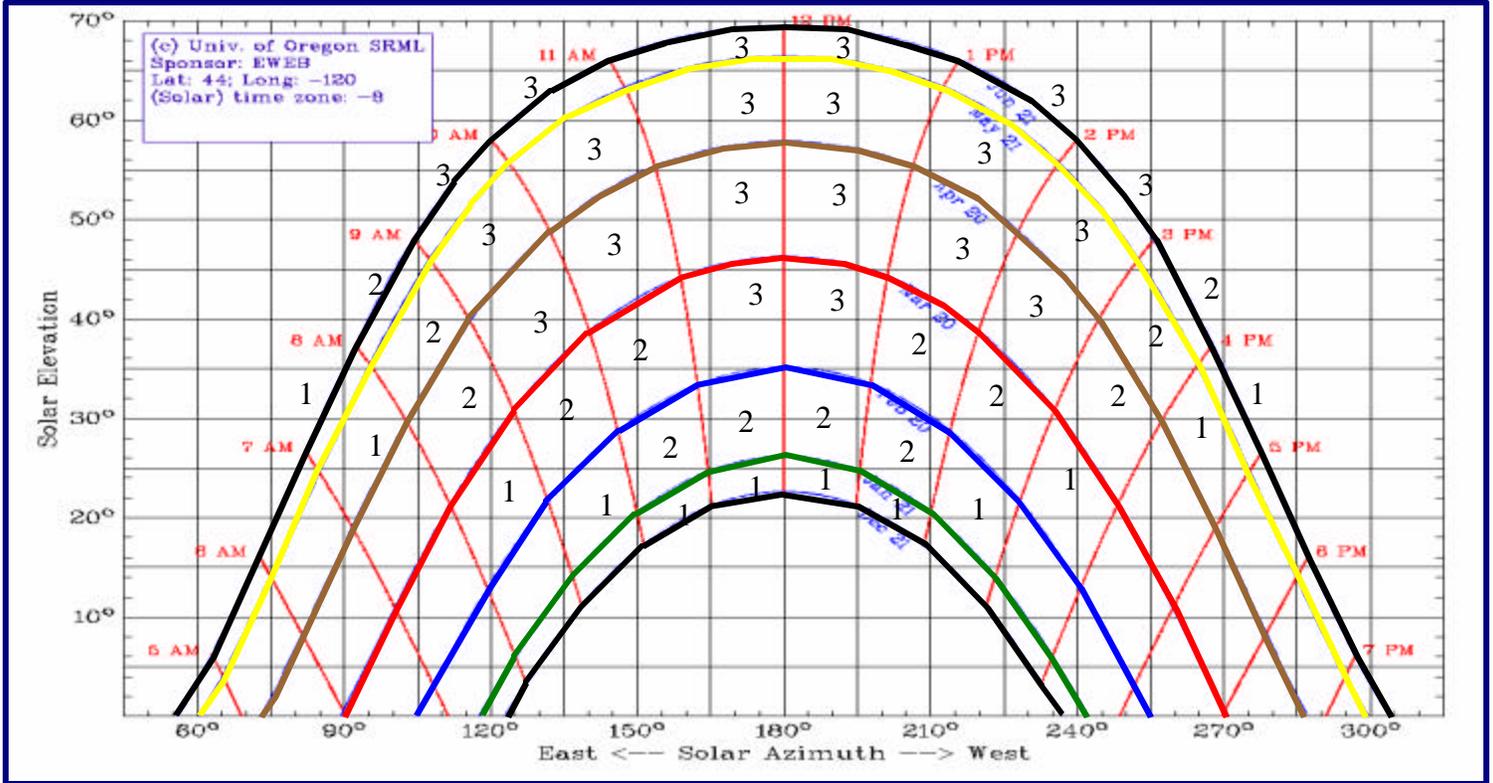
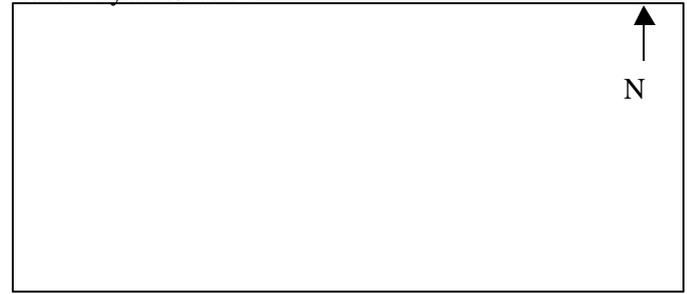
TOF Value: _____



Sun Chart - Solar Water Heating

Job Name: _____
 Contractor Name: _____
 Date: _____
 Tilt of Collector: _____ degrees
 Orientation of Collector: _____ degrees

Roof Layout Sketch



Draw an outline of the shading obstructions. This should be done from lowest point on the roof where the collector will sit. Indicate deciduous trees with a dashed line outline and fill with light shading. Year-round (solid) obstructions should be shown with a heavy dark line and heavy shading inside the shape. To calculate the percent shading, add all the values in the sections that are shaded (these may be fractional) of the sun chart. Shading caused by deciduous trees below the March 20th line may be counted as half values.

Shading = Add the values shown that are in the shaded cells= _____

Total solar resource fraction = $\frac{(1 - \text{shading determined above}) \times \text{TOF (line 23)}}{(1 - \text{_____}) \times \text{_____}}$ = _____