

Duct Sealing Contractors

<p>Compton's Furnace Cleaning/Sealing (0998) 3526 Royal Crest Dr. The Dalles, OR 97058 (541) 296-5652 Duct Sealing PTCS-1245</p>	<p>A N A Air Duct Cleaning (0136) PO Box 74 Bickleton, WA 99322 (509) 250-0927 Duct Sealing PTCS-1754</p>
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Residential Conservation Customer Participation Agreement

Klickitat PUD
1313 S. Columbus Ave.
Goldendale, WA 98620

Customer Name: _____ Date: _____

Mailing Address: _____

Account # _____ Telephone number: _____

1. I certify that I am the legal owner of the residence located at:

2. I hereby request Klickitat PUD to financially assist in the conservation measures for this residence.

3. I understand that:

a) I, or the person authorized below, must be present at the time inspections are conducted. _____ is authorized to represent me and will be present during the inspection of my home.
This person is, is not, an authorized to sign the necessary paperwork.

b) The PUD will provide me with a list of approved installers.

- Self install is allowed.

c) Kickbacks, rebates, non-authorized discounting of bids or other non-program benefits from the installers are prohibited, and may be subject to federal law.

d) All materials and installation must comply with current KPUD/BPA conservation specifications in order to be eligible for funding through this program.

e) Any structural defects in this residence (e.g. dry rot, roof leaks, water pipe leaks, etc.) must be repaired prior to the installation of any PUD approved measures, and paid by the customer.

f) I must secure bids, and work must commence within ninety (90) days in order to receive PUD funds.

g) If I perform any of the work myself, none of my labor charges can be added to cost.

h) The PUD shall not be liable for the tortious acts or omissions of the installers or other independent contractors.

- i) Installers, participating in the program shall not be considered officers, agents or employees of BPA or PUD.
- j) Funding for conservation measures is available only for homes that have electric as its primary heat. Heat pump measures are available for heat pump upgrades and conversions from any other source of electric heat only. Converting from another fuel source (e.g. natural gas, propane, wood, etc.) is not allowed.
- k) These measures shall not be installed unless the home is in the Klickitat PUD service territory and is either site-built or a permanently installed mobile or manufactured home. (Homes and mobile/manufactured homes may be classified as permanent when the following conditions are met: The dwelling has been permitted for occupancy and if it is a mobile/manufactured home, it was manufactured to HUD standards).

* Klickitat PUD will pay the lesser of the deemed savings and may change rebate prices without notice. Please check with your Energy Services Specialist for rebate prices, which are pending on an approved inspection

4. I certify that:

- a) I have received and read the privacy act notice of the PUD, and will comply with the conditions therein.
- b) I have received and read the paperwork describing the measures and maximum funding amounts available under this program.
- c) Electric heat is my primary heat and is installed at the address listed under number one (1) above.

Customer Signature

Date

Supplemental Information

RESIDENCE INFORMATION:

Put year home built, in box that applies:

Site Built	Mobile Home Permanently Installed	Multifamily Unit – 4 or less (on Insulation call for rebate prices)	
			Occupied Year Round
			Occupied Seasonally
			Rental
			Number of Units

HEATING INFORMATION:

Electric Heat - Primary Yes No
 Existing Electric system: Baseboard___ Furnace___ Heat pump___
 Radiant___ Other_____

Notice

Privacy Act

Klickitat PUD
1313 S. Columbus Ave.
Goldendale, WA 98620
(509) 773-7622 or (800) 548-8357

Privacy Act Notice:

Your interest in our conservation program is appreciated. We hope that you will decide to participate in these energy savings activities. If you do, it is necessary for you to provide some information to us, which will enable us to run this program successfully.

The information to be collected includes the names and addresses of customers participating in the program technical data about energy use and efficiency. We need this information to determine whether you are eligible for the program. Beyond this, the information collected will be used to evaluate and audit the conservation program.

Upon BPA's request, we will provide them with this information. BPA may also wish to make certain site visits to evaluate the installations and the performance of the program.

This and the data listed above will then be used to assist us in developing new programs and in assessing energy savings obtained by existing programs in the region. This information will be retained for three years. It may be released to the public, but only in anonymous statistical form.

1. Application

Enclosed you will find general information on the measures and rebates available, along with all the applicable paperwork needed to submit for any rebate.

Please note that with the exception of the clothes washer rebate, the rebates are only eligible for existing structures, not new construction and the residence must have electric heat (furnace, baseboard, wall, etc.) as its primary source. There can be some other back-up source of heat.

2. Participation

Along with the forms you will find a list of approved installers. Sign and return the Participation Agreement. Get two or more bids if possible, (suggestion, not requirement) from contractors included in the list. If you or the contractor are not sure your home qualifies for the rebate, call the Energy Services Department for instructions. You if want to use a contractor not included on the list, have the contractor contact the PUD to get approved. A homeowner may install their own windows or insulation, however only materials, not labor, are eligible costs.

3. Installation

Once you choose your installer, they should enter into a contract with you for the work proposed. (Not required) **Note: Heat pump proposals have to be approved by the PUD prior to installation.**

When the work is completed, submit the enclosed Rebate Coupon/Installer's Warranty Certification, and a copy of the original receipt/invoice. For window installation, leave the stickers on the windows until the PUD inspects them.

*With the installation of all heat pumps, duct sealing will be necessary for rebate. All heat pump and duct sealing must meet Performance Tested Comfort Systems (PTCS) standards air testing before rebate can be issued.

If loose-fill insulation was installed, the Insulation Certificate must also be submitted.

Final payment and amounts will be subject to compliance with the program as determined by a final inspection by the PUD.

4. Inspection

When the completed paperwork has been submitted, an inspection will be scheduled to verify installation. The homeowner or their representative must be present at the inspection. If a heat pump was installed, in certain cases, the contractor also needs to be present for the inspection.

5. Payment

When the work has been approved, the PUD will issue a check to the customer or installer, as selected by the homeowner on the coupon. Please allow 3 weeks for processing of payment.

6. Questions?

If you have any questions about this program contact *Sharon Ohnstad* at 509-773-7622 or 1-800-548-8357. I will be glad to assist you.

We have a loan program for 4.9% fixed APR for installing any measure that qualifies for a rebate. If you are interested, let me know and I will send that packet, as the process is different.

February 1, 2007

Klickitat Residential PUD Customer

RE: Residential Conservation Program Information and Forms

Attached is the general information on the residential conservation program. Please fill out the application/Participation Agreement and send back to me at the Goldendale office.

Please note that with the exception of the clothes washer rebate, these measures are only eligible for existing structures, not new construction. Also, the primary source of heat in your home must be electric.

Any of the weatherization measures can be self-installed, however if you want to use a contractor you must use one from our "Authorized" list. If you are self-installing, submit an invoice for materials only. See bullets below for the basic specifications on the measures available. These are not the complete specifications, contact me for a copy.

- ◆ **Insulation** self-install: Contact me before the job is started so I can do a pre-insulation check. This is to verify what, if any, insulation is already in the residence. If the project is a blow-in, call for an in-progress inspection. All insulation jobs need a vapor barrier installed on the conditioned side of the cavity. Most batt type insulation comes with this on one side of the batt. Floor insulation jobs must also have either an existing ground cover of 4-mil polyethylene or 6-mil new polyethylene that completely covers dirt. All exposed uninsulated ducts located in the crawlspace shall be insulated to R-11 if flex or R-19 if rigid. If project is an attic or includes the attic, contact me for ventilation requirements. Call for an inspection when the job is complete.
- ◆ **Window** self-install: Buy windows that have a U-factor of .30 or less. Patio sliding glass doors or French doors shall have a U-factor rating or .35 or less. Completely install and finish the windows and call for an inspection. Leave the tags on so I can verify the U-Factor of the glass, and have at least one old window there for verification of what type window came out. Follow building code as to appropriate location of safety glass and building code on patio doors. If you are replacing bedroom windows in mobile homes, there is an issue with egress code. Call me for more information.
- ◆ **Heat Pump** Klickitat PUD is not able to offer rebates on self installs. Heat pumps and duct sealing must pass a Performance Tested Comfort Systems - PTCS air flow test from an approved PTCS certified installer. Contractors certify that jobs are approved, and provides the utility a certificate and test results.

When inspection passes, the rebate will be processed and payment made on the next available Commissioner's meeting.

If you wish to use the PUD's low interest loan program for your weatherization project, contact me for forms and information, as the process is different from that listed above.

If I can be of further assistance, please contact me at the number listed below or sohnstad@klickpud.com.

Sharon Ohnstad
Energy Services Specialist
(509) 773-7622

Duct Sealing: Performance Tested Comfort System (PTCS) Program Standards

New Construction: Based on the protocol for "Total Leakage Testing", or "Leakage Testing to Exterior" duct leakage in new construction shall not exceed 0.06 CFM50 x floor area served by the system (in square feet), or 75 CFM50 whichever is greater.

Exception 1: If the air handler is located completely within conditioned space, it is not required to be in place during the test.

Exception 2: If the air handler is located in unconditioned space, it is not required to be in place during the test, the leakage limit shall be decreased to 0.04 x floor area served by the system (in square feet) or 50 CFM50, whichever is greater.)

In addition the following requirements must be met:

1. All *testing* must be done by a PTCS Certified Technician or Inspector;
2. Duct systems must be designed, sized and installed using recognized industry standards so that calculated heating and/or cooling loads are delivered to each zone (documentation may be required);
3. Based on the protocol for "Combustion Appliance Zone Pressure Testing" forced air system operation shall not depressurize a combustion appliance zone by more than 3 Pascals.
4. When combustion appliances are located within a conditioned space a UL listed carbon monoxide alarm, or equivalent must be installed.

Sealing Materials: All duct sealing shall be done with mastics that meet the UL-181 AM or BM standard. Where taping is necessary (to provide service access), only UL-181 listed tape shall be used. Cloth duct tape is not acceptable.

Performance Tested Comfort System (PTCS) Program Standards

Existing Home, New Ducts: Based on the protocol for "Total Leakage Testing", or "Leakage Testing to Exterior" duct leakage for new systems in existing homes shall not exceed 0.10 CFM50 x floor area served by the system (in square feet), or 75 CFM50, whichever is greater.

In addition the following requirements must be met:

1. All testing must be done by a PTCS Certified Technician or Inspector;
2. Duct systems must be designed, sized and installed using recognized industry standards so that calculated heating and/or cooling loads are delivered to each zone (documentation may be required);
3. Based on the protocol for "Combustion Appliance Zone Pressure Testing" forced air system operation shall not depressurize a combustion appliance zone by more than 3 Pascals.
4. When combustion appliances are located within a conditioned space a UL listed carbon monoxide alarm, or equivalent, must be installed.

Sealing Materials: All duct sealing shall be done with mastics that meet the UL-181 AM or BM standard. Where taping is necessary (to provide service access), only UL-181 listed tape shall be used. Cloth duct tape is not acceptable.

Performance Tested Comfort System (PTCS) Program Standards

Existing Homes, Existing Ducts: Based on the protocol for testing "Duct Leakage to the Exterior", duct leakage in a retrofitted system shall:

A) Not exceed 0.10 CFM50 x floor area (in square feet) served by the system;

Or

B) Document a 50% reduction* in leakage to the outside by comparing duct leakage to the outside before and after sealing;

Or

C) In extreme cases where return ducts are inaccessible, compliance with either A or B may be accomplished by testing the supply side only.

Regardless of qualifying path, all accessible components of the supply plenum and all accessible take offs including the gores on flexible elbows shall be sealed with approved materials. In addition the following requirements must be met:

1. All testing must be done by a PTCS Certified Technician or Inspector;
2. Based on the protocol for "Combustion Appliance Zone Pressure Testing" forced air system operation shall not depressurize a combustion appliance zone by more than 3 Pascals.
3. When combustion appliances are located within a conditioned space a UL listed carbon monoxide alarm, or equivalent must be installed.

*The leakage rate specified in A and B above is required for an existing system to be certified as meeting the PTCS standard. Some utilities may pay an incentive for "test only" (for less than a 50% reduction or greater than 10% of floor area). Contact the sponsoring utility for specific program details.

Sealing Materials: All duct sealing shall be done with mastics that meet the UL-181 AM or BM standard. Where taping is necessary (to

provide service access), only UL-181 listed tape shall be used. Cloth duct tape is not acceptable.

Performance Tested Comfort System (PTCS) Program Standards

For Manufactured homes: Based on the protocol for “Total Leakage Testing”, or “Leakage Testing to Exterior” duct leakage in manufactured homes shall document a 50% reduction* in leakage to the outside by comparing duct leakage to the outside before and after sealing.

In addition the following requirements must be met:

1. Be conducted by a PTCS Certified Technician or Inspector
2. Have an existing tested leakage rate of 100 CFM50 for single wide homes or 150 CFM50 leakage for two or more section homes
3. Based on the protocol for “Combustion Appliance Zone Pressure Testing” forced air system operation shall not depressurize a combustion appliance zone by more than 3 Pascals.
4. When combustion appliances are located within a conditioned space a UL listed carbon monoxide alarm, or equivalent must be installed.

*Some utilities or system benefits administrators may pay an incentive for “test only” or less than a 50% reduction. Contact the sponsoring utility for specific program details.

Sealing Materials: All duct sealing shall be done with mastics that meet the UL-181 AM or BM standard. Where taping is necessary (to provide service access), only UL-181 listed tape shall be used. Cloth duct tape is not acceptable.

PTCS™ Duct Sealing Certificate & NW Duct Sealing Form

Instructions: This form allows a certified duct sealing technician to certify a duct sealing installation as PTCS™ Duct Sealing. **Sections B, C, and D** must be filled out by the technician at the time of installation. A copy of this completed form must be promptly submitted to the utility and a copy provided to the home owner in accordance with utility policy. Also, **a copy must be faxed to Ecos Consulting at 503-961-1376.**

Technician Certification Number 1 PTCS - _____		Installation Company/Name 2 _____			Electric Utility Company 3 _____	
Customer Name 4 _____				Site Street Address 5 _____		
Site City 6 _____	Site State 7 _____	Site Zip Code 8 _____	Site County 9 _____	Site Phone Number 10 () - _____	Duct Sealing Install Date 11 / /	

**SECTION A
SITE INFORMATION**

PTCS™ Certification of Compliance – To be completed by technician at the time of installation
As a certified PTCS™ Duct Sealing Technician, I **certify** the Duct Sealing at this site and related equipment is in accordance with the standards set for the Performance Tested Comfort Systems (PTCS™) program.

PTCS™ Certified Technician Name (Print) _____ Date _____

PTCS™ Certified Technician Signature (Required) _____ PTCS™ Certified Technician Phone Number _____

Was this PTCS™ Duct Sealing/Certification performed in conjunction with a PTCS™ Heat Pump Installation? (check one) 12	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unknown <input type="checkbox"/>	Is this installation being submitted for Oregon State Energy Tax Credit? 13	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Funding Program (check one) 14	BPA Credit <input type="checkbox"/>	ENERGY STAR® Homes Northwest <input type="checkbox"/>	Other <input type="checkbox"/>	15 _____		

**SECTION B
PTCS™ DUCT SEALING CERTIFICATE**

Combustion Appliance Zone (CAZ) Test
If there are any combustion appliances at the site that are **NOT** a sealed combustion appliance, then a CAZ test is mandatory.

Baseline Pressure with reference to outside (all exhaust devices and air handler OFF) _____ Pa
16

Zone Description	With air handler ON, record gauge readings below		Internal Doors Open		Internal Doors Closed	
	Reading	Net	Reading	Net	Reading	Net
Zone 1 17	18 Pa	19 Pa	20 Pa	21 Pa	22 Pa	23 Pa
Zone 2 24	25 Pa	26 Pa	27 Pa	28 Pa	29 Pa	30 Pa
Zone 3 31	32 Pa	33 Pa	34 Pa	35 Pa	36 Pa	37 Pa

Net Depressurization Example
"Net" equals how much the pressure goes down when the air handler is turned ON (compared to baseline).
Air Handler ON Reading: -3 Pa -2 Pa -1 Pa 0 1 2 3 Pa
Air Handler OFF Baseline Reading: _____ Pa
Net Depressurization is -4 Pa

For systems to qualify, the air handler must cause no more than a -3 Pa net depressurization in any zone. Does this system qualify? (check one)
32 Yes No

If the CAZ test results in remedial action, describe actions taken in space provided.
33 _____

What were the conditions at the time the test was conducted? (check one) 34	Calm <input type="checkbox"/>	Windy <input type="checkbox"/>	An UL® approved Carbon Monoxide Detector is required when a combustion space heating appliance is located in a conditioned space. Is there a functioning UL® approved Carbon Monoxide Detector in the home? 35	Yes <input type="checkbox"/>	No <input type="checkbox"/>
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**SECTION C
COMBUSTION APPLIANCE ZONE (CAZ) TEST**

PRIVACY ACT STATEMENT

Basic authority for collecting this information is authorized by 16 U.S.C. §§ 832 et. seq., 838 et. seq., and 839 et. seq., pursuant to Bonneville Power Administration's Conservation Program system of records established in 48 FR 31700. This information is primarily intended to further, but is incidental to the performance of, BPA's overall Energy Efficiency Program, the objective of which is to acquire energy resources through energy efficiency, to determine what cost-effective conservation and direct application renewable resource measures should be installed or adopted under different circumstances, and to provide incentives for the installation of such measures.

Other routine uses of this information include: aggregation into a public database on energy efficiency; furnished to authorized personnel for installation/repair of equipment; aggregated into a database for program publicity; and in some instances information regarding buildings will be made available to subsequent purchasers of the buildings. Your disclosure of the requested information is voluntary, however failure to provide requested information means that it will not be possible for you to participate in this BPA Energy Efficiency program.

Customer _____

Residential Duct Sealing Rebate Coupon

Klickitat PUD
 1313 S. Columbus Ave.
 Goldendale, WA 98620
 (509) 773-7622 or (800) 548-8357

Customer Name: _____ Account #: _____ Date: _____

Mailing Address: (for rebate check) _____

Installation Address (if different) _____

I certify that this residence has an electric source of heat.

I agree to let KPUD verify this if needed:

Customer Signature _____

RESIDENCE INFORMATION:

Put year home built, in box that applies:

Site Built	Mobile Home Permanently Installed	Multifamily Unit – 4 or less	<i>(Mark the box that applies)</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Occupied Year Round
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Occupied Seasonally
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rental
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Number of Units

PUD OFFICE USE ONLY Amount of Rebate: _____ G.L. No. 908.93 11-61-57

PUD Account Number: _____

Rebate Payable to: _____

Payee Mailing Address: _____

Inspected/verified

Utility Representative _____ Date _____

**Important! Attach a copy of the original invoice/receipt to this coupon
 Along with the completed PTCS Duct Sealing Certificate from your contractor.**

Klickitat PUD reserves the right to make changes to the program based upon any changes BPA makes, with 30 days written notice to customers