

State of New Hampshire Public Utilities Commission Sustainable Energy Division



21 S. Fruit Street, Suite 10, Concord, NH 03301-2429

STEP 1: REBATE PRE-APPROVAL APPLICATION
FOR RESIDENTIAL BULK-FUEL FED WOOD PELLET
BOILERS AND FURNACES
REVISED 07-08-16

PROGRAM SUMMARY

- The Public Utilities Commission (the Commission) will provide a rebate payment of 40% of the system and installation cost, up to a maximum of \$10,000, for investments in residential high-efficiency (80% or greater), bulk-fuel fed wood-pellet central heating boilers and furnaces that become operational, serving designed intent and installer-certified on or after July 9, 2016.
- A supplemental adder of \$100 per ton for fuel storage systems larger than the three ton minimum requirement, up to a maximum of \$500.
- Pre-approval is required to reserve your place in the funding queue. Once the facility has been installed at the site, applicant must then complete and submit the Step 2 application to receive a rebate.
- The incentive pre-approval expires three months from the date this application is pre-approved and funding is reserved.
- When all available program funding has been reserved for approved projects, applicants that meet all program and project requirements will be placed on a waitlist. Projects placed on the waitlist are not guaranteed funding.

Because this application requires original signatures, paper copy submission is required

Funds for this program are made available through New Hampshire's Renewable Portfolio Standard (RPS) statute, RSA 362-F, which requires each electricity provider to meet a percentage of customer load by purchasing or acquiring certificates representing generation from renewable energy based on total megawatt-hours supplied.

PROGRAM RECOMMENDATIONS

Thermal Storage - Applicants are encouraged to consider the benefits of thermal storage which may include:

- 1) Improved seasonal efficiency
- 2) Reduced emissions;
- 3) Decreased boiler run time;
- 4) Decreased wear and tear on moving parts;
- 5) Decreased power consumption for motors and fuel ignition;
- 6) Higher occupant comfort because a boiler and tank respond immediately to heating loads. (If the pellet boiler must first light itself and heat up before it supplies heat there can be a lag.)

The ideal volume of thermal storage for pellet boilers is 20 gallons per 10,000 Btus. It is essential that the thermal storage tank and the pipes between the boiler and tank be extremely well insulated.

System Warranties – Carefully review all warranties for the parts, labor and the pressure vessel. This will ensure that the system is handled and maintained according to manufacturer's specifications.

Premium Quality Wood-Pellets – Warranties for many systems require the use of premium pellets. The life expectancy of the system will be significantly reduced and the operation and maintenance will be considerably greater if lower quality fuel is used. For more information on pellet fuel standards, visit the <u>Pellet Fuels Institute</u> website.

For questions regarding this rebate program, e-mail PUC-ThermalRebates@puc.nh.gov

PROGRAM ELIGIBILITY, TERMS AND CONDITIONS

Please read all Program Eligibility, Terms and Conditions carefully prior to completing the form.

Any applicant requesting a rebate payment for any renewable energy system is responsible for meeting all terms and conditions of the program as follow:

- 1. The rebate payment is 40% of the system and installation cost, up to a maximum of \$10,000. A supplemental adder of \$100 per ton for fuel storage systems larger than the three ton minimum requirement, up to a maximum of \$500, is available to program applicants.
- 2. The rebate pre-approval expires three months from the date this application is approved. An extension may be secured by contacting the Sustainable Energy Division.
- 3. Applicants must complete a Final Rebate Request Form (Step 2) to receive a rebate payment.
- 4. The wood-pellet central boiler or furnace system must be located within the applicant's New Hampshire primary residence. Second homes do not qualify. A primary residence is defined as the place where the NH resident lives the majority of the calendar year and is used as the residential basis for tax or voting purposes. Owner-occupied apartment buildings of four units or less qualify for this program; all other multi-family buildings do not.
- 5. This one-time rebate payment must be used for the installation of new, commercially available, high thermal efficiency¹, bulk-delivery capable wood-pellet central boilers and furnaces utilized as a central heating system where:
 - a. The system has a thermal efficiency rating of 80% or greater.
 - b. The particulate matter emissions rating is 0.10 lb/MMBtu heat output or less.²
 - c. Basic attributes include:
 - i. The heating system turns itself on in response to a demand for heat.
 - ii. The heating system is designed to be capable of being located inside the residence, either in a basement or a room designed specifically to accommodate the heating system, although if space does not permit, it may be installed in a separate structure.
 - iii. The heating system modulates to lower output and/or turns itself off when the heating load decreases or is satisfied.
 - iv. The system automatically cleans the burn chamber <u>and</u> the heat exchanger, or, the system requires routine cleaning for approximately each ton of premium pellets used, or more frequently to maintain optimal efficiency and safety.
 - v. Based on the consumption of premium pellet fuel, ash may be required to be automatically or manually removed from the system about once per month.
 - vi. Other routine maintenance, including cleaning, may be required annually and is strongly recommended.
 - vii. Fuel can be automatically conveyed from the bulk storage container/area (device) to the burn chamber in a planned/integrated path without operator intervention of any sort.
 - d. Bulk fuel capability features include:

i. The heating system has built-in fuel conveyance capability that can be pneumatic (suction) or mechanical (auger) or a combination of two transport mechanisms from the bulk storage device. The fuel conveyance can also be an add-on feature as long as it allows for seamless and safe conveyance of fuel from the storage device to the burn chamber without operator intervention of any sort.

ii. The heating system can convey fuel from almost any appropriately adapted bulk storage device to allow flexibility in placement and design. The heating system shall not be restricted to any one bulk storage

¹ For the purposes of this program, high efficiency is defined as boilers/furnaces that operate at a minimum of 80% lower heating value (LHV) of wood. Efficiency rates may be determined by third party testing laboratories approved and recognized by authorities having jurisdiction in the United States, Canada, and/or the European Union.

² Emissions may be determined by third party testing laboratories approved and recognized by authorities having jurisdiction in the United States, Canada, and/or the European Union.

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device, for instance one made by the same manufacturer as the appliance.

- iii. The pellet-fuel storage bin shall have a minimum capacity of three tons.
- iv. Pellet fuel storage bin access (by pipe or auger or both) is located 100 feet or less from the street or driveway. Contact your local distributor of wood pellets to ensure that delivery is possible to your location.
- e. Key safety features include:
 - i. There is a positive closure and/or fire extinguishing device and/or emergency disconnection device between the burn chamber and the bulk storage device to keep the fire from reaching the bulk pellets.
 - ii. The fuel fill pipe to the storage bin must be grounded or anti-static.
 - iii. A placard is attached to the bin with safety precautions.
 - iv. A carbon monoxide detector (CO) is installed in the room with the pellet boiler or furnace and internal pellet storage or hopper. A carbon monoxide detector is not necessary for outdoor storage.
- f. Wood pellet fuel is a condensed, uniformly sized form of biomass energy. Wood pellets are compressed by-products from the forest products industry, often woodchips and sawdust. Voluntary industry standards for wood pellets have been specified by the <u>Pellet Fuels Institute</u>.
- g. A central heating system provides warmth to the whole interior of a building (or portion of a building), through an air or water distribution system, from one point to multiple rooms, not direct space heating. A pellet central boiler or furnace to be funded under this rebate program must be capable of being the home's only or primary central heating system, though it may also provide domestic hot water through a heat exchanger and may be interconnected with a supplemental solar hot water heating system. There may also be other supplemental space heating sources or interconnected back-up systems in the home, though none should be required.
- 6. The wood-pellet central boiler and furnace system must be installed by a qualified installer who is a sole proprietorship, company, corporation, limited liability company, or other organization authorized to conduct business in the State of New Hampshire that is normally commercially engaged in the installation of wood-pellet central boiler and furnace systems, or who is a licensed New Hampshire plumber, and in each case who has received training from the manufacturer in the installation of the system installed.
- 7. Only systems that become operational on or after July 9, 2016 are eligible. Residents receiving this rebate may combine other local, state, or federal financial incentives with this rebate, but must meet the requirements of this rebate program.
- 8. Outdoor wood-pellet boilers are eligible for this program if they meet the efficiency requirements listed on page 2. Wood pellet stoves, regular stick or cord wood stoves, and cord wood boilers and furnaces are <u>not</u> eligible for this program.
- 9. Replacement or expansion of system components does not constitute an eligible project unless it includes installation of a new eligible boiler.
- 10. Do-It-Yourself installations do not qualify.
- 11. Used parts cannot be included in the cost of the wood-pellet central boiler or furnace system used to calculate the incentive payment. The boiler or furnace and conveyance system must be new.
- 12. Residents who choose to install systems, in whole or in part, prior to approval by the Commission may still apply for this rebate payment by submitting both the Step 1 and Step 2 applications, but the rebate payment is conditioned on meeting the requirements listed herein and available funding.
- 13. Any wood-pellet central boiler or furnace system must comply with all manufacturers' requirements and the State Building Code pursuant to RSA 155-A:1, IV including the National Electric Code 2008 and any applicable local codes or ordinances.
- 14. Manufacturers must provide third-party testing data to verify that their systems meet the efficiency requirements specified on page 2.
- 15. Any wood-pellet central boiler or furnace system is subject to inspection and monitoring by the Commission, the State Fire Marshal and local code authorities or their agents for safety and performance.

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- 16. Rebates are subject to the availability of funds; complete applications will be processed in the order in which they are received.
- 17. All program requirements and documentation must be complete and submitted in order to receive approval for a rebate payment. Payment of the rebate may be subject to inspection of the facility by an agent of the Commission to confirm that the system is operational and consistent with the application, with appropriate advance notice to the owner. For the purposes of this rebate, operation is defined as providing at least 75% of home heating load needs.
- 18. Certain information, including rebate recipients' system details, town or zip code, and total costs of systems installed with program support, may be available to the public and may be publicly posted. Additional information may be released upon official request. Specific personal information including Social Security Number, telephone numbers, and email addresses will remain confidential to the extent permitted under State law.
- 19. The Commission reserves the right to request system performance data for a period of ten (10) years after issuing the rebate. Such information may include fuel use, equipment service needs, and boiler cycling information.
- 20. The rebate recipient may be liable to the State of New Hampshire for the entire amount of the rebate if the rebate is obtained fraudulently.
- 21. Any rebate received under this program may be treated as taxable income by the IRS. It is the responsibility of the recipient of this rebate payment to consult with his or her tax advisor to determine the correct tax treatment of these payments.
- 22. Applicants who do not provide their Social Security Number on the Step 2: Final Rebate Request Form will not be eligible for reimbursement rebate payment.
- 23. The rebate covers the entire installed system, including pellet storage and conveyance, boiler, controls, thermal storage tank, and installation, up to the point where the system interconnects with the dwelling's heat distribution system.

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STEP 1 APPLICATION: REBATE PRE-APPROVAL FOR RESIDENTIAL BULK-FUEL FED WOOD PELLET BOILERS AND FURNACES

APPLICANT INFORMATION **Because this application requires original signatures, paper copy submission is required**						
Contact	: Name					
Mailing	Address		City		State	Zip
Installation Address (if different)			City		State	Zip
Telepho	one	Cell				
Email Address				County		
	Please check if you would like to receive per Alert List regarding grant opportunities, edu	•			•	_

Hampshire.

Briefly state your primary reason for installing a pellet central heating system:												
				D	WELLI	NG INI	ORMA	TION				
Please indicat	e the typ	e of d	welling bei	ng used	for th	e insta	llation:					
Single Family H			plex/Townh	ouse 🗆	С	ondo [□ 0	ther \square	Pl	ease descri	be:	
Year Original [Owelling I	Built										
			EX	(ISTING I	HEATI	NG SYS	STEM IN	IFORM	ATIO	N		
FUEL USED	Oil 🗆	١	latural Gas [Propar	ne 🗆	Woo	od 🗆		Electric	Other	Please describe:
Estimated Anr	nual Fuel	Use (g	gallons/cord	ds/etc.) c	over th	ne past	three y	ears				
Last year				2 Ye	ars ag	0			3 ye	ars ago		
·					_				·			
Approximate A Existing System	_		d Burner or em Efficiend		Sour	ce of R	lating:					
				New Installer			r 🗆	Burner Service Other Company		Please describe:		
				INS	TALLA	ATION	INFORM	OITAN	V			
Anticipated St	art Date			Anticipated Date of Completion				Rated Efficiency of New System:				
NEW HEATING SYSTEM INFORMATION												
Manufacturer Appliance Type Product (Model) Name Model #												
Boiler □ Furnace □												
Size of New Heating If your system includes t			des th	s thermal storage: Are			Are you	Are you removing your old heating				
System Manufacturer: Size		Size c	e of Tank: system?									
	Btu/ho	our						gall		Yes 🗆		No □
				LET FUE								
Manufacturer			Product I	dentifica	tion #	!	Capaci	pacity (tons) Conveyance		I =		
										Auger \square		Vacuum 🗆

INSTALLER								
Installer Name			Company					
Mailing Addr	ess		Town/Cit	У		State	Zip Code	
Telephone			Email					
Company Type:			Has the installer completed approved manufacturer or distributor installation training?					
HVAC □	HVAC □ Plumbing □ Other □ Please Describe:		Yes □	No □	Manufacturer a program req		installer training is	
		If the installation is being done by a NH licensed plumber, please provide the						
			licensed pi		nease provide tr	ie		

PROJECT COST SUMMARY A				
Project Components	Rebate			
Appliance (Boiler or Furnace)	\$			
Fuel Storage Bin			\$	
Fuel Conveyance			\$	
Controls & Circulators			\$	
Thermal Storage Tank			\$	
Indirect Hot Water Heater	\$			
Labor		\$		
Carbon Monoxide Detector			\$	
Other - eligible components up to the point of into distribution system.	erconnection with h	ieat	\$	
The rebate covers the entire installed system, inclication conveyance, boiler or furnace, controls, thermal structure to the point where the system interconnects with distribution system.	\$	Total Project Cost * 40% up to \$10,000		
	\$			
Wood Pellet Fuel Storage Adder		(#tons – 3) x \$100 up to \$500		
Add \$100/ton for bins over 3 tons up to \$500	to	ons	Total Storage Adder	\$
	\$			

REQUIRED ATTACHMENTS						
Attached	These items (copies) must be attached to the application:					
	Signed contract with qualified installer.					
	Photos of the old system.					
	Documentation that the system will be installed by a qualified installer who is a sole proprietor, company, corporation, limited liability company, or other organization authorized to conduct business in the State of New Hampshire that is normally commercially engaged in the installation of wood-pellet central boiler and furnace systems or who is a licensed New Hampshire plumber who has received training in the installation of the system installed. If this documentation has been provided to the New Hampshire Public Utilities Commission as of April 30 of this year, there is no need to re-submit this information. Check here \Box if this information has been filed.					

Note: For the STEP 2: REBATE REQUEST FORM you will be expected to provide the following:

- Paid invoices
- Pictures of the final installation, including the heating system, the fuel storage system, and the carbon monoxide detector.
- A copy of the building permit and documentation that the system has been inspected by a local building code official and/or sign-off from a local fire jurisdiction.

DECLARATION

The Undersigned applicant declares under penalty of perjury that:

- 1. the applicant intends to purchase and install the wood-pellet central boiler or furnace system described in this application;
- 2. the applicant has read and understands the terms and conditions set forth in this application with attachments and has agreed to abide by all of those requirements;
- 3. the information provided in this application is true and correct to the best of the applicant's knowledge and belief;
- 4. the applicant agrees that the system and documents supporting the application may be audited and inspected by the Commission or an agent of the Commission; and,
- 5. the applicant gives permission to the PUC to contact the applicant's installer in order to notify the installer of pre-approval of the rebate.

Applicant Signature Only one signature needed per ho	usehold.	Date
Subscribed and sworn before me this	(day) of	(month) in the year
County of	State of	
	_	Notary Public/Justice of the Peace
	My Commission Expires	