



2012 Vermont PACE Eligible Measures

Introduction

The Vermont PACE Program can be used to finance residential (1-4 unit) energy efficiency and renewable energy improvements.¹ This document provides an overview of PACE eligibility requirements, including minimum requirements for energy efficiency and renewable energy measures. It has been developed by Efficiency Vermont and the Burlington Electric Department (BED) in accordance with Act 45, the Vermont Energy Act of 2009, which states that “energy efficiency projects shall be those that are eligible under section 3267 of this title”.

§3267. ELIGIBLE ENERGY EFFICIENCY PROJECTS

Those entities appointed as energy efficiency utilities under subsection 209(d) of Title 30 shall develop a list of eligible energy efficiency projects and shall make the list available to the public on or before July 1 of each year.

To be eligible for PACE financing, homeowners must have an analysis performed to quantify the project costs, energy savings, and estimated carbon impacts of the proposed energy improvements, including an annual cash flow analysis. This analysis may be conducted by Efficiency Vermont or BED (in Burlington), as Vermont’s designated “Energy Efficiency Utilities,” or other qualified entities designated by participating cities and towns. All analyses will be reviewed by Efficiency Vermont or BED.

PACE Eligibility

Residential dwellings, including primary residences, vacation homes, 1-4 unit owner-occupied structures, manufactured homes and condominiums, are eligible to participate in the PACE Program if property taxes are being paid on the dwelling by the owner of the dwelling. The minimum amount that can be financed through the PACE Program is \$3,500. The maximum amount that can be financed is 15% of the assessed value of the property, capped at \$30,000. The total amount financed by PACE plus any outstanding mortgages on the property cannot exceed 90% of the assessed value of the property.

All installation costs associated with eligible energy efficiency and renewable energy measures may be financed under the PACE Program. Measure installation must be completed by or under the guidance of professional installation contractors who are properly insured and appropriately licensed or certified for

¹ A dwelling, as defined by the federal Truth in Lending Act, is a residential structure or mobile home which contains one to four family housing units, or individual units of condominiums or cooperatives.

the measure(s) being installed.² Installation costs may include, but are not limited to, materials, labor, energy audits, design, engineering, permit fees, and taxes. For home remodeling projects, only that portion of the costs used to complete eligible energy measures is eligible for PACE financing. Repairs and new construction costs do not qualify for financing under the PACE Program, with the exception of health and safety measures necessary to safely complete proposed energy improvements. Health and safety repairs may not exceed 50% of the total energy improvement project cost.

Efficiency Vermont or BED will review the costs and energy savings of the proposed energy improvements and perform a cash flow analysis. Positive cash flow is not required, but homeowners proposing projects with negative cash flow will receive information on the financial implications, as well as potential opportunities to improve cash flow. In addition, both the estimated annual energy savings as determined in the energy analysis and the PACE annual assessment payments will be considered in determining eligibility in the underwriting process.

Energy Audit Recommendation

The energy efficiency and comfort of many buildings can be improved cost-effectively by increasing insulation levels, reducing air infiltration, and addressing other thermal efficiency issues. Projects that include cost-effective energy efficiency improvements are more likely to result in positive cash flow and properly sized heating and renewable energy systems.

Prior to participating in the PACE Program, in order to identify the energy improvements that save the most energy and money, homeowners are encouraged to have an energy audit of the property by a participating Home Performance with ENERGY STAR® contractor or Vermont Gas energy auditor (if a Vermont Gas customer). The intent of the energy audit is to inform the homeowner about efficiency opportunities, estimated costs and savings, and available incentive and financing options. The costs of the energy audit may be included in the amount financed under the PACE Program, and additional incentives to help pay for the improvements may be available from Efficiency Vermont, Vermont Gas, and/or BED. Contact information for energy auditors may be obtained from:

- Efficiency Vermont: Call 888-921-5990 or visit www.encyvermont.com/homeperformance
- Vermont Gas customers: Call 802-863-4511 or visit www.vermontgas.com/efficiency_programs/audit.html
- Burlington residents: Call 865-7342 or visit www.burlingtonelectric.com/page.php?pid=38&name=for_residential

Eligible Energy Efficiency Measures

As a condition to participating in the PACE Program, homeowners are required to fully participate in all available energy efficiency rebate and incentive programs for the measures that they are installing. In order to meet this requirement, it is recommended that homeowners work with the Vermont Gas Retrofit Program (if a Vermont Gas customer) or a participating Efficiency Vermont Home Performance with ENERGY STAR contractor to complete energy efficiency improvements.

² The DIY Home Performance with ENERGY STAR Program allows homeowners to self-install air sealing and insulation measures and access Efficiency Vermont incentives, working under the guidance of a participating Home Performance with ENERGY STAR contractor who performs an energy audit and test-out of the project.

Energy Efficiency Measure	Minimum Requirement
Blower-door assisted air sealing	Installed to Building Performance Institute (BPI) standards by or under the guidance of a Vermont Gas auditor or Home Performance with ENERGY STAR contractor
Insulate building envelope (e.g., attic, basement, walls, crawl space, kneewall, etc.)	Installed to BPI standards by or under the guidance of a Vermont Gas auditor or Home Performance with ENERGY STAR contractor
Seal and insulate heating and cooling distribution systems (e.g., ductwork, piping)	Installed by or under the guidance of a Vermont Gas auditor or Home Performance with ENERGY STAR contractor
Install new efficient heating and/or cooling system	<p>Installed to one of the following standards by a licensed technician possessing the appropriate certification from the Vermont Department of Public Safety, if applicable:</p> <ul style="list-style-type: none"> • ENERGY STAR or equivalent boiler or furnace • Central wood pellet heating system meeting Efficiency Vermont program requirements • Central air conditioning meeting Efficiency Vermont program requirements • ENERGY STAR Tier 3 geothermal (ground source) heat pump <ul style="list-style-type: none"> ○ System design and installation by International Ground Source Heat Pump Association (IGSHPA) certified designer and installer recommended
Install new efficient water heating system	<p>Installed by a licensed technician to one of the following standards:</p> <ul style="list-style-type: none"> • ENERGY STAR natural gas or propane water heater • ENERGY STAR heat pump water heater <ul style="list-style-type: none"> ○ Reference Efficiency Vermont Quality Installation Guidelines for installation considerations
Replace windows, doors or skylights	ENERGY STAR-rated meeting minimum performance requirements for Northern Climate Zone installed by a licensed professional per manufacturer's instructions
Whole-home ventilation	<p>Installed by or under the guidance of a Vermont Gas auditor or Home Performance with ENERGY STAR contractor to one of the following standards:</p> <ul style="list-style-type: none"> • Heat recovery or energy recovery ventilation system • Exhaust-only ventilation fan meeting Efficiency Vermont minimum efficiency requirements³
Health and safety measures	Installed to BPI standards by or under the guidance of a Vermont Gas auditor or Home Performance with ENERGY STAR contractor. Health and safety measures necessary to safely complete

³ Efficiency requirements for exhaust-only ventilation fans:

- Efficient lighting if applicable (ENERGY STAR qualified)
- Efficient fan motor (CFM/Watt \geq 5.0 or "brushless DC" or split-capacitor motor)
- Efficient controls (bi-level or on/off cycling for minimum 8 hrs/day while occupied and/or in accordance with ASHRAE 62.2 ventilation rate for the building)
- Quiet operation (rated sound level < 2.0 sones at a static pressure of 0.1 inch of water)

	proposed efficiency measures (e.g., ventilation, venting, moisture remediation, vermiculite remediation, removal of knob and tube wiring, etc.) may be included in PACE financing but may not exceed more than 50% of the total efficiency project cost.
Energy audit	Audit completed by a participating Home Performance with ENERGY STAR contractor or Vermont Gas auditor; audit cost may be included in PACE financing

Eligible Renewable Measures

As a condition to participating in the PACE Program, homeowners are required to fully participate in all available renewable energy rebate and incentive programs for the measures that they are installing. In order to meet this requirement, it is recommended that homeowners work with a Vermont Solar and Wind Partnership Program installer to complete renewable energy improvements. These installers are eligible to receive financial incentives from the Vermont Small Scale Renewable Energy Incentive Program for their projects. Contact information for Vermont Solar and Wind Partnership Program installers may be obtained from Renewable Energy Vermont at: www.revermont.org/main/partnership-program/find-a-partner-installer/.

Renewable energy measures may be eligible for PACE financing, either alone or in combination with eligible efficiency measures, provided they fall under the definition in subdivision 8002(2) of Title 30, where "renewable energy means energy produced using a technology that relies on a resource that is being consumed at a harvest rate at or below its natural regeneration rate." The following renewable energy measures are eligible for the PACE Program using the standard application process:

Renewable Energy Measure	Minimum Requirement
Solar electric (photovoltaic) system	Meet the requirements of the Vermont Small Scale Renewable Energy Incentive Program: www.rerc-vt.org/incentives/elig.htm
Solar hot water system	
Small wind system	
Micro-hydro system	
Health and safety measures	Health and safety measures necessary to safely complete proposed renewable measures (e.g., roof improvements, larger circuit board, etc.) may be included in PACE financing but may not exceed more than 50% of the total renewable project cost

Other renewable energy measures meeting the legislative definition (e.g., switchgrass, biofuels) are eligible for PACE, but will be reviewed on a custom basis. Applicants may be required to produce their own cash-flow analysis and/or pay a higher application fee to cover the additional cost of generating energy savings estimates for custom measures.