

Efficiency Vermont

Guide to Savings

Helping Vermont rental property owners save energy and money.

Residential Rental Properties



INCREASE THE APPEAL OF YOUR RESIDENTIAL RENTAL PROPERTIES AND SAVE MONEY

A comfortable apartment with lower energy bills is a property that future tenants look for and that current tenants want to keep. The benefits of installing energy-efficient equipment and insulating go beyond lower water and energy bills. Efficient rental properties:

- Attract and keep tenants who want lower energy bills.
- Reduce tenant complaints.
- Reduce repair and upkeep costs for moisture-related damage.
- Enable you to receive a greater share of tenant housing costs.



Efficiency Vermont provides information and financial assistance needed to make energy-efficient choices that benefit both you as the property owner and your tenants:

- FREE energy-saving equipment and increased rebates for energy-efficient refrigerators and ventilation fans through an easy-to-use form.
- Comprehensive weatherization services for properties with income-qualifying tenants through partnerships with local agencies.
- A non-income-based “Building Performance” program that helps owners improve the insulation and air sealing of rental properties.
- ENERGY STAR® certification for new construction projects.
- Information at your fingertips at www.encyvermont.com.
- Expert technical assistance from our Customer Support team at info@encyvermont.com or **888-921-5990**.

This guide provides detailed descriptions and valuable savings information for energy efficiency measures that can help you save energy and money.

Get Started Today

Use our **Residential Rental Property Rebate Form** to have FREE compact fluorescent lightbulbs (CFLs), low-flow showerheads, and faucet aerators for tenant spaces shipped to you. You can also use the form for rebates on energy-efficient refrigerators, ventilation fans, and boilers. Steps to cashing in on standard rebates:

1. Review the **Residential Rental Property Rebate Form**. If you need a contractor or equipment supplier, find one at www.encyvermont.com/rental or call **888-921-5990**.
2. Review the rebate and equipment options with your contractor before buying equipment.
3. Install your purchased equipment and submit your completed rebate form to Efficiency Vermont.
4. Receive your rebate check and/or free product(s), and enjoy the lasting benefits to your properties.

Custom rebates and technical assistance may be available for technologies or systems not listed on our standard rebate forms, including central systems such as ventilation, laundry, and lighting.



ENERGY STAR Qualified Refrigerators

Although an existing refrigerator may still look good and work well, if it was bought before 1993, it's likely using more than twice the energy of a new ENERGY STAR qualified model. In addition, since refrigerant wears out and seals start to leak over time, the unit's performance may be declining. When replacing refrigerators, consider:

- On average, refrigerators manufactured before 1993 cost \$65 or more per year to operate than new ENERGY STAR qualified models. Refrigerators manufactured before 1980 can cost about \$200 more per year!
- ENERGY STAR qualified refrigerators and freezers use advanced features such as better insulation and more efficient technology to keep energy use low.
- *Refrigerator rebates for apartments are available from Efficiency Vermont for replacement refrigerators only. Disposal receipts are required. The rebates for rental property owners are higher than those for residential customers because we recognize that most property owners do not directly realize the energy efficiency benefits.*

	ANNUAL REFRIGERATION SAVINGS		
	kWh Savings	Dollar Savings	Energy Use Savings
NEW ENERGY STAR Qualified Refrigerators (compared to 10- to 20-year-old models 18 cubic feet in size)	350 - 680	\$50 - \$100	30 - 60%



Ventilation

Apartments that are not properly ventilated can be a hassle for many property owners, and cause good tenants to look elsewhere for housing. Ventilating your units for a minimum of eight hours per day improves building durability and indoor air quality by:

- Reducing odors from smoking, pets, and cooking.
- Reducing moisture levels from showers, cooking, and laundry.
- Reducing contaminants from some types of cleaning products, furniture, fresh paint, carpet, and building materials.
- Providing fresh air to occupants when seasonal temperatures reduce the natural airflow.
- Ensuring that moisture and odors are removed through a proper exhaust vent. This is greatly preferable to allowing warm, moist air to escape through cracks, where it can contact cold surfaces and create condensation.
- NOTE: Property owners are often concerned that adding ventilation will increase heating costs. In fact, a properly installed ventilation system will create only a negligible change in heating costs.

Efficiency Vermont recommends ventilation systems meeting the following requirements:

- **Continuous Duty:** Fans should be rated for "Continuous Duty" and be installed with an automatic control for continuous operation, such as the Tamarack Airetrak® Constant Duty (CD) control, or have a built-in control, such as the Panasonic WhisperGreen™ SmartFlow™ or SmartAction™ fans.
- **Efficiency:** Single-port fans (those with only one connection to the conditioned space) should not exceed 50 watts as listed by the manufacturer. This refers to fan power only; it does not include power used for lights, heaters, night lights, timers, etc. This power limit also does not apply to multi-port fans that have more than one connection to the living space.
- **Sound:** Tenants may be bothered by noisy fans and will be more likely to turn them off. A quiet fan, with a maximum sound level of 2.0 sones, may not even be noticed.
- ENERGY STAR qualified fans meet the requirements listed above when installed with an automatic, continuous-duty control. For complete details on fan requirements, please visit www.efficiencyvermont.com/fanrequirements.
- *Standard rebates are available from Efficiency Vermont for qualifying ventilation systems.*



Oil and Propane Boilers

- High-efficiency boilers can reduce heating energy consumption by 5–12% compared to standard boilers.
- Efficiencies are typically measured by annual fuel utilization efficiency (AFUE) for boilers up to 300 MBh, and thermal or combustion efficiency (Et or Ec) for larger boilers.
- Code requires oil and gas (natural and propane) boilers to be at least 84% efficient. Energy-efficient boilers have efficiencies as high as 88% for non-condensing boilers, and as high as 95% for condensing boilers (gas only).
- Boilers can be integrated into a range of heating distribution systems, including radiators, radiant slabs, hot water baseboard convectors, and even hot air systems.
- Additional efficiency options include:
 - “Low mass” (low water content) boilers
 - Increased boiler insulation
 - Modulating boilers, which vary the firing rates to more closely match the heating load
 - Variable-speed control of the heating water circulating pump operation and/or the ventilation fan operation
- Multiple boiler installations should include primary/secondary piping and controls that:
 - Stage boiler operation
 - Alternate lead and lag (to distribute operational hours evenly to all boilers)
 - Shut off the primary circulator when outside temperature rises above a pre-set outdoor temperature (example: no higher than 70°F)
 - Prevent unnecessary flow through “off line” boilers
- *Standard rebates are available from Efficiency Vermont for efficient oil and liquid propane gas boilers. For natural gas service and rebate availability, contact Vermont Gas Systems at 802-863-4511, ext. 321.*



Water Conservation

Easy-to-install water conservation devices reduce water use and also lower water-heating costs by decreasing the amount of hot water flowing through taps.

- A typical four-unit building with electric water heaters can save more than \$140 in electricity costs by using low-flow showerheads and faucet aerators.
- *Efficiency Vermont provides free low-flow aerators that are available in different flow rates, depending on the application. When filling out the rebate form, please indicate the number of aerators requested by room type (bathroom and/or kitchen) to ensure you receive the appropriate supplies.*

	ANNUAL WATER HEATER SAVINGS*		
	kWh Savings	Dollar Savings	Energy Use Savings
Low-Flow Water Conservation Device Installation	320 (per apartment)	\$35 (per apartment)	66%

*Assumes use of an electric water heater. Depending on your location and water source, your building may also benefit from savings on other utility bills.



Lighting

Lighting accounts for approximately 20% of annual household electricity bills, or almost \$200 per year. To reduce costs inside tenant units, consider installing compact fluorescent lightbulbs (CFLs):

- Each CFL you install uses approximately 66–75% less energy and lasts up to 10 times longer than a standard incandescent bulb.
- *Efficiency Vermont will ship FREE compact fluorescent lightbulbs to you for use in your apartments. (Free CFLs from Efficiency Vermont are for use in tenant spaces only and are not available for use in common spaces.)*

Common-area lighting often operates for 24 hours a day. Because of the high operating hours, energy efficiency improvements are typically cost-effective in these areas. Consider these opportunities:

- Upgrade linear fluorescent fixtures to high-performance T8 lamp and ballasts, and save at least 20% per fixture. If your current fixtures use the older T12 lamps (1.5" in diameter), savings can be up to 50%!
- Add motion detectors on hallway lighting to turn fixtures off when not needed. (In certain locations, however, tenants may appreciate having some lighting kept on for safety.)
- Add daylight sensors for exterior lighting and interior hallway lighting in areas with windows to ensure lights automatically turn off when not needed.
- Use LEDs, which are another option for interior and exterior common areas where lights operate more than eight hours per day. LEDs can offer energy savings of up to 80% versus incandescent lighting, and more than 50% versus fluorescent or high-intensity discharge (HID) lights. LEDs also produce less heat—reducing the need for air conditioning.
- *Standard rebates are available from Efficiency Vermont for efficient lighting and controls in common areas through the Commercial Lighting Rebate Form.*

	ANNUAL LIGHTING SAVINGS		
	kWh Savings	Dollar Savings	Energy Use Savings
Lighting Replacement in Tenant Units (Average of 13 bulbs, operating 2.3 hours per day)	600 (for CFL bulbs, per apartment)	\$84 (for CFL bulbs, per apartment)	65 - 75%
Lighting Replacement in Common Areas (Replacement of 4 2-lamp T12 fixtures with 4 HPT8 fixtures, operating 24 hours per day)	1,200	\$130	40 - 50%

Proper Disposal of Fluorescent Lighting

All fluorescent lamps contain mercury, and pre-1979 ballasts contain PCBs. Vermont state law requires the proper disposal of products containing mercury and PCBs. For a list of licensed lamp recycling and ballast disposal companies, contact Efficiency Vermont or visit www.mercvt.org.



Comprehensive Apartment Renovation

Making comprehensive improvements to your rental property increases occupant comfort and reduces operating costs. Comprehensive renovation projects include energy audits, recommendations, and improvements.

- Energy audits and recommendations include:
 - A comprehensive evaluation of your building's airtightness, insulation effectiveness, and windows.
 - Identification of energy efficiency opportunities involving mechanical systems, lighting, and appliances.
 - Installation of energy-saving products such as efficient CFL bulbs and water conservation devices.
 - An audit report and scope of work for recommended energy efficiency improvements.
- Improvements typically include:
 - Reducing drafts with comprehensive air sealing.
 - Adding or improving insulation in the attic, walls, knee walls, and basement.
 - Improving indoor air quality through ventilation.
 - Ensuring that carbon monoxide detectors and other basic health and safety measures are installed.

There are two programs that offer comprehensive energy efficiency audits, improvements, and rebates for apartment buildings:

- Income-qualifying **Weatherization Services**
 - For property owners with income-qualifying tenants, the building may qualify for energy efficiency improvements from Vermont's network of weatherization agencies and the Vermont Fuel Efficiency Partnership.
 - These programs work together to provide comprehensive energy improvements, including energy efficiency audits and recommendations. Weatherization agencies may also install insulation, reduce air leaks, and even replace older refrigerators, washing machines, and incandescent lighting at reduced costs to property owners.
 - To enroll in the income-qualifying weatherization program, contact the provider in your county (see box).
- Non-income-based **Building Performance**
 - Efficiency Vermont provides up to \$2,500 in incentives for energy efficiency improvements to qualifying rental properties and up to \$7,500 for larger qualifying rental properties. The energy audit and recommended energy efficiency improvements must be completed by participating Building Performance Institute contractors.
 - These independent contractors perform energy audits; diagnose building problems such as moisture, mold, and ice dams; and install the recommended energy efficiency improvements.
 - Building Performance contractors will charge for their audit work. If the energy efficiency improvements are completed, the audit fee is typically recovered through Efficiency Vermont's rebates.
 - To enroll in the Building Performance program, contact a Building Performance contractor directly. Find qualified contractors at www.encyvermont.com or by calling Customer Support at 888-921-5990.

Weatherization Providers in Vermont

Franklin, Grand Isle, Chittenden, and Addison Counties:
[Champlain Valley Weatherization Service](#)
800-545-1084

Orleans, Essex, and Caledonia Counties:
[Northeast Employment and Training Organization, Inc.](#)
802-748-8935

Lamoille, Orange, and Washington Counties:
[Central Vermont Community Action Agency](#)
877-919-2299

Windham and Windsor Counties:
[Southeastern Vermont Community Action](#)
800-464-9951

Bennington and Rutland Counties:
[Bennington Rutland Opportunity Council](#)
800-717-2762



Comprehensive Apartment New Construction

Energy improvements are most cost-effective when owners are building a new apartment or doing major renovation of an existing apartment. High-performance ENERGY STAR qualified apartment buildings don't need to be expensive; rather, they combine the quality installation of common materials and techniques, such as effective insulation, well-sealed construction, and energy-efficient windows, appliances, lighting, and heating and cooling equipment. Independent on-site testing and inspections are used to verify the energy efficiency measures. For more details, visit:

www.encyvermont.com/rental.

The benefits of ENERGY STAR include:

- **At least 15% lower energy bills** than buildings built to minimum state energy code requirements.
- **Lower maintenance costs.** Your building will be more airtight and better ventilated than typical apartments. That means you'll avoid potential moisture problems, like sweating windows, paint failure, mold growth, structural damage, and ice dams.
- **Healthier indoor air.** Proper ventilation means less risk of mold, mildew, dust mites, or backdrafting from combustion appliances, as well as reductions in apartment-to-apartment odors.
- **Greater comfort.** You'll eliminate drafts and have greater control of indoor temperature at lower energy costs for you and your tenants.
- **Assurance.** Your property will be approved by the U.S. Environmental Protection Agency as ENERGY STAR qualified.

Efficiency Vermont provides FREE assistance to rental property owners and developers to meet ENERGY STAR standards through:

- Partnership with the property owner and design team to set energy efficiency goals for the project, including meeting standards for ENERGY STAR certification.
- Plan review based on project goals and ENERGY STAR requirements.
- On-site contractor support for meeting insulation and air-sealing specifications, including ENERGY STAR inspections.
- Blower door performance testing for airtightness at project completion.
- ENERGY STAR certification.
- *Rebates are available from Efficiency Vermont to help property owners successfully design and construct ENERGY STAR compliant buildings.*

Need-to-Know Info

Energy Codes and Apartment Buildings: New construction, as well as additions, alterations, or repairs to existing apartment buildings may need to comply with Vermont energy codes.

- The Residential Building Energy Code covers all residential buildings three stories high or less. For more information, call the Energy Code Assistance Center at 888-887-0673.
- The Commercial Building Energy Code covers all commercial and residential buildings four or more stories high. For more information, call the Vermont Department of Public Service at 802-828-4020.

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