



**EFFICIENCY VERMONT MULTIFAMILY NEW CONSTRUCTION AND MAJOR REHABILITATION PROGRAM**

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Your Energy Consultant is: \_\_\_\_\_

Phone: \_\_\_\_\_

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*Don't have an Energy Consultant? Call us to have one assigned to your project.*

**MINIMUM PROGRAM REQUIREMENTS**

Must meet or exceed applicable Vermont Residential or Commercial Building Energy Codes. Less comprehensive Major Rehabilitation projects will be analyzed on a custom basis.

Category			Electric Only Track	EFFICIENCY VERMONT CERTIFIED TRACK	HIGH-PERFORMANCE TRACK
Compliance with Multifamily Mechanical Design Protocol					
Heating System	Air Source Heat Pump	single zone	N/A	≥ 10.3 HSPF, ≥ 20.0 SEER, ≥ 12.0 EER	≥ 10.3 HSPF, ≥ 20.0 SEER, ≥ 12.0 EER
		multi zone	N/A	≥ 10.0 HSPF, ≥ 17.0 SEER, ≥ 12.0 EER	≥ 10.0 HSPF, ≥ 17.0 SEER, ≥ 12.0 EER
	Boiler <i>(Multiple staged Boilers required when building load &gt; 200,000 Btu/hr)</i>	oil	N/A	85%	Building load < 200,000 Btu: 91% AFUE Building load > 200,000 Btu: 86% AFUE
		gas	N/A	94% AFUE	95% AFUE
		pellet	N/A	85% AFUE	85% AFUE
	Boiler Control		N/A	Modulate boiler water temp. based on outdoor temp. (Outdoor Reset Control), programmable thermostats or boiler based setback controls.	Modulate boiler water temp. based on outdoor temp. (Outdoor Reset Control), programmable thermostats or boiler based setback controls.
	Circulator		Brushless Permanent Magnet Pump (BLPM) Circulator Pump with integral variable frequency drive (VFD)	Brushless Permanent Magnet Pump (BLPM) Circulator Pump with integral variable frequency drive (VFD)	Brushless Permanent Magnet Pump (BLPM) Circulator Pump with integral variable frequency drive (VFD)
	Pump Control		N/A	VFD installed on pumps over 3hp, and controlled by an automatic signal (differential pressure, flow, or temp.)	VFD installed on pumps over 3hp, and controlled by an automatic signal (differential pressure, flow, or temp.)
	Pipe Insulation		N/A	1.5" Wall thickness	1.5" Wall thickness
	Furnace	oil	N/A	87% AFUE	87% AFUE
gas		N/A	94% AFUE	94% AFUE	
Domestic Hot Water	Must be included in design				
	Showerheads & Aerators	Showerhead	N/A	1.5 gpm	1.5 gpm
		Kitchen	N/A	1.5 gpm	1.5 gpm
		Bathroom	N/A	1.0 gpm	1.0 gpm
	Tanks		Indirect storage off of efficient boiler or 96% TE natural gas stand-alone water heater	Indirect storage off of efficient boiler or 96% TE natural gas stand-alone water heater	Indirect storage off of efficient boiler or 96% TE natural gas stand-alone water heater
	Heat Recovery		N/A	Drain Water Heat Recovery serving showers from at least 2 apartments and 4 bedrooms	Drain Water Heat Recovery serving showers from at least 2 apartments and 4 bedrooms
not intended to drive building design and layout. However, when vertical plumbing drains and a common water heater serve showers in 2 or more apartments with a total of at least 4 bedrooms, drain water heat recovery shall be included in project plans as Add/Alternate and included in project when cost is less than \$1,500 per 2 apartments. Seasonal occupancy dwelling units are exempt.					
Air Conditioning <i>(applies if installed)</i>	Packaged		N/A	14.5 SEER, 12 EER	15 SEER, 12.5 EER
	Mini-Splits (cooling only)		N/A	20 SEER, 12 EER	20 SEER, 12 EER
Thermal Shell	Attic, loose blown		N/A	R - 60	R - 60
	Flat Roof		N/A	R - 44	R - 44
	Wall		N/A	R-25 (2x6 flash & batt or cavity/continuous combination paired with smart interior vapor barrier. Call for consultation.)	R-11.25 Continuous, R-20 Cavity (International Residential Code (IRC) recommends minimum R-11.25 for continuous exterior insulation. VT RBES does not require an interior vapor barrier with this level of exterior continuous insulation.)
	Floor (over unconditioned space, not basement spaces)		N/A	R-38 or R-5 Continuous and R-30 Cavity (excludes structural or finish materials)	R-38 or R-5 Continuous and R-30 Cavity (excludes structural or finish materials)
	Foundation		N/A	R-15 Continuous or R-20 Cavity	R-28
	Slab Edge		N/A	R - 15 (per RBES code)	R - 15 (per RBES code)
	Windows		N/A	U ≤ 0.28	U ≤ 0.28

Category		Electric Only Track	EFFICIENCY VERMONT CERTIFIED TRACK	HIGH-PERFORMANCE TRACK
Compliance with VT Multifamily Air Sealing Protocol				
Air Leakage	Maximum Allowed	N/A	0.35 cfm50/ft <sup>2</sup> of total thermal boundary surface area (above and below grade and slab)	0.30 cfm50/ft <sup>2</sup> of total thermal boundary surface area (above and below grade and slab)
Lighting	In-unit Fixtures	ENERGY STAR qualified, hard-wired compact fluorescent or LED fixtures. If screw-based fixtures are installed, must install ENERGY STAR qualified LED lamps. Per-unit incentive will be adjusted accordingly.	ENERGY STAR qualified, hard-wired compact fluorescent or LED fixtures. If screw-based fixtures are installed, must install ENERGY STAR qualified LED lamps. Per-unit incentive will be adjusted accordingly.	ENERGY STAR qualified, hard-wired compact fluorescent or LED fixtures. If screw-based fixtures are installed, must install ENERGY STAR qualified LED lamps. Per-unit incentive will be adjusted accordingly.
	Interior common area fixtures	ENERGY STAR or Design Lights Consortium qualified, hard-wired LED fixtures. If screw-based fixtures are installed, must install ENERGY STAR qualified LED lamps. Per-unit incentive will be adjusted accordingly.	ENERGY STAR or Design Lights Consortium qualified, hard-wired LED fixtures. If screw-based fixtures are installed, must install ENERGY STAR qualified LED lamps. Per-unit incentive will be adjusted accordingly.	ENERGY STAR or Design Lights Consortium qualified, hard-wired LED fixtures. If screw-based fixtures are installed, must install ENERGY STAR qualified LED lamps. Per-unit incentive will be adjusted accordingly.
	Interior common area controls	Occupancy controls included in all hallways, stairways, laundry rooms, etc. Day lighting control included in common areas with glazing.	Occupancy controls included in all hallways, stairways, laundry rooms, etc. Day lighting control included in common areas with glazing.	Occupancy controls included in all hallways, stairways, laundry rooms, etc. Day lighting control included in common areas with glazing.
	Parking lot / Site	Lighting power density 20% better than 2015 CBES requirements. LED fixtures listed on Design Lights Consortium qualified products list.	Lighting power density 20% better than 2015 CBES requirements. LED fixtures listed on Design Lights Consortium qualified products list.	Lighting power density 20% better than 2015 CBES requirements. LED fixtures listed on Design Lights Consortium qualified products list.
Appliances (Common Area or In-Unit)	Refrigerator	ENERGY STAR	ENERGY STAR	ENERGY STAR
	Clothes Washer	ENERGY STAR	ENERGY STAR	ENERGY STAR
	Electric Dryers	In-Unit, Air Source Heat Pump Dryers - custom incentive	In-Unit, Air Source Heat Pump Dryers - custom incentive	In-Unit, Air Source Heat Pump Dryers - custom incentive
Ventilation	Exhaust Only	ENERGY STAR Labeled fan with continuous duty motor. Operate continuously OR install automatic control such as time switch. Humidistats, twist-style, and pin-timers do not qualify. Ducted with smooth walled rigid pipe.	ENERGY STAR Labeled fan with continuous duty motor. Operate continuously OR install automatic control such as time switch. Humidistats, twist-style, and pin-timers do not qualify. Ducted with smooth walled rigid pipe.	ENERGY STAR Labeled fan with continuous duty motor. Operate continuously OR install automatic control such as time switch. Humidistats, twist-style, and pin-timers do not qualify. Ducted with smooth walled rigid pipe.
	Balanced	Custom savings and incentives for heat recovery ventilation	Custom savings and incentives for heat recovery ventilation	Custom savings and incentives for heat recovery ventilation
Rebate	Per apartment	\$500	\$1,650	\$2,400