

Residential Sustainability Grant Energy Efficiency Requirements

Windows/doors/fenestration

Skylights

Air conditioners

Furnaces

Windows/doors/fenestration:

- Fixed windows/fenestration must have a maximum U -factor of 0.38
- Operable windows/fenestration must have a maximum U -factor of 0.45
- Entrance doors must have a maximum U -factor of 0.77
- Must have a minimum SHGC (solar heat gain coefficient) of 0.40

Skylights:

- Must have a maximum U -factor of 0.50
- Must have a maximum SHGC (solar heat gain coefficient) of 0.40

Air conditioners:

- Room air conditioner casement only must have a minimum efficiency of 9.5 CEER
- Room air conditioner casement – slider must have a minimum efficiency of 10.4 CEER
- All air conditioners must comply with ANSI/AHAM RAC-1
- Heat pump

Furnaces:

- Warm-air furnaces (gas fired) must have a minimum efficiency of 80% AFUE or 80% E^c
- Warm-air furnaces (gas fired) must comply with DOE 10 CFR Part 430 or ANSI Z21.47
- Heat pump

Residential Sustainability Grant Energy Efficiency Requirements

Water- heating equipment

Water-heating equipment:

- Water heaters (electric, ≤ 12 kW) must have a required performance of $0.93 - 0.00132V$, EF (tabletop ≥ 20 gallons and ≤ 120 gallons), $0.960 - 0.0003V$, EF (resistance ≥ 20 gallons and ≤ 55 gallons), or $1.061 - 0.00168V$, EF (grid-enabled > 75 gallons and ≤ 120 gallons)
- Water heaters (electric, ≤ 12 kW) must comply with DOE 10 CFR Part 430
- Water heaters (electric, > 12 kW) must comply with ANSI Z21.10.3
- Water heaters (electric, ≤ 24 amps and ≤ 250 volts) must have a required performance of $2.057 - 0.00113V$, EF (heat pump > 55 gallons and ≤ 120 gallons)
- Water heaters (electric, ≤ 24 amps and ≤ 250 volts) must comply with DOE 10 CFR Part 430
- Storage water heaters (gas, $\leq 75,000$ Btu/h) must have a required performance of $0.675 - 0.0015V$, EF (≥ 20 gallons and < 55 gallons), or $0.8012 - 0.00078V$, EF (> 55 gallons and ≤ 100 gallons)
- Storage water heaters (gas, $\leq 75,000$ Btu/h) must comply with DOE 10 CFR Part 430
- Storage water heaters (gas, $> 75,000$ Btu/h and $\leq 155,000$ Btu/h, $< 4,000$ Btu/h/gal) must have a required performance of 80%.
- Storage water heaters (gas, $> 75,000$ Btu/h and $\leq 155,000$ Btu/h, $< 4,000$ Btu/h/gal) must comply with ANSI Z21.10.3
- Instantaneous water heaters (gas, $> 50,000$ Btu/h and $< 200,000$ Btu/h) must have a required performance of $0.82 - 0.0019V$, EF ($\geq 4,000$ (Btu/h)/gal and < 2 gal)
- Instantaneous water heaters (gas, $> 50,000$ Btu/h and $< 200,000$ Btu/h) must comply with DOE 10 CFR Part 430
- Instantaneous water heaters (gas, $\geq 200,000$ Btu/h) must have a required performance of 80%
- Instantaneous water heaters (gas, $\geq 200,000$ Btu/h) must comply with ANSI Z21.10.3

Residential Sustainability Grant Energy Efficiency Requirements

Solar

Solar:

- Solar collection systems require a building permit and must be constructed in accordance with Merriam Code
- Solar collection systems must comply with setback and location requirements
- Solar collection systems shall not exceed the greater of 150 square feet or a gross area equal to three percent of the area of the lot located behind the rear building line of the principal structure, up to a gross area of 250 square feet
- The visual impact of the solar collection system must be minimized through screening/buffering via vegetation and a neutral color scheme
- No artificial lighting may be utilized to permanently illuminate the solar collection system