

South Carolina Energy Office pre-approved Energy Efficiency Products and Measures

South Carolina Code of Laws Sec. 48-52-640 requires state agencies to submit a disclaimer statement to the State Energy Office with its annual report stating that it did not purchase an energy conservation product that had not been certified by the State Energy Office. We are simplifying the legislative requirement for you by providing the following list of measures. If a product, project or service is not on this approved list contact the South Carolina Office of Regulatory Staff- Energy Office at 803-737-8030 regarding acceptance as an approved energy measure.

South Carolina Code of Laws Sec. 48-52-640 (B) states that the State Energy Office may only certify a product that meets or exceeds Federal Energy Star standards designed by the USEPA and USDOE. Because EnergyStar doesn't certify some efficiency measures known to save energy (such as back-end control systems) we have also listed those items here.

The following list of Energy Conservation Measures (ECMs) is not vendor specific but the ECMs are known to reduce energy consumption independently or as part of a system with efficiency optimized.

All purchases of appliances and commercial equipment must meet or exceed the minimum federal standards for energy efficiency, which can be found on the US Department of Energy website here: http://energy.gov/node/773531/about_standards.html and at www.energystar.gov.

Be sure that all products and projects meet or exceed the provisions of 2009 IECC.

Building Envelope

- Additional Ceiling, Attic or Roof Insulation
- Additional Wall Insulation
- Additional Floor Insulation
- Addition of Storm Windows & Doors
- Addition of Vestibules
- Efficient Windows (Solar Heat Gain Coefficient (SHGC) < 0.30, Fenestration U-factor < 0.50 commercial .9)
- Solar Film
- Radiant Barriers
- Cool Roofs
- Green Roofs
- Light Shelves
- Passive Solar Heating

Lighting

- Lighting Retrofits- Electronic Ballasts with T-8 or T-5 Lamps, or LED
- Occupancy Sensors
- Reflectors
- Lighting Timers
- Exit Lights with LED Lamps
- Compact Fluorescent Lamps (CFL)
- Motion Detector Lighting Controls
- Outdoor Lighting Controls
- Integration with Building Automation (BAS) or Energy Management System (EMS)
- Daylighting

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Cooling

- Higher Efficiency Chillers
- Higher Efficiency Cooling Towers
- Free Cooling (heat exchangers)
- Variable Frequency Drives (VFDs) or Variable Speed Drives (VSDs)
- Integration with BAS/EMS
- Other CHW Loop Optimization
- Solar Cooling
- Evaporative Pre-cooling (misting) of Condenser Coils
- High Efficiency DX Equipment

Heating

- Improved Boiler Controls
- Modular Boilers
- Insulate Exposed Ductwork
- Fan Coil Unit/Radiator Control Valves
- High Efficiency Furnaces
- Heating Controls (timers, clock thermostats)
- Hot Water Reset
- Boiler Economizer
- Waste Heat Recovery
- Dual-Fuel Capability
- VFDs/VSDs
- Cogeneration: Combined Heat and Power or Cooling Heating and Power (CHP)
- Integration with BAS/EMS
- Active Solar Heating
- Biomass-to-Energy systems
- High Efficiency DX Equipment

Electrical

- High Efficiency Motors (above 7.5 HP)
- Two-Speed Motors
- BAS/EMS Load Control
- Other Controls (timers, photo sensors)
- Motion sensors for Vending Machines
- VFDs/VSDs

HVAC general

- Variable Air Volume (VAV) Retrofit
- EMS
- Control upgrades (e.g. Analog to DDC controls)
- Outside Air Economizer
- VSD/VFD Retrofits
- Air-to-Air Heat Recovery
- Smart Thermostats
- Programmable Thermostats
- Geothermal Heat Pumps
- Evaporative Pre-cooling (misting) of Condenser Coils
- High Efficiency DX Equipment

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Domestic Hot Water (DHW)

- Domestic Hot Water System Time Clock
- Integration with EMS/BAS
- Tank Insulation
- High Efficiency Water Heaters
- Instantaneous Water Heaters
- Solar Thermal Water Heaters
- Low Flow Showerheads
- Water faucet aerators

Plug Loads

- Energy Star Appliances
- Server Virtualization

Electricity Production via Renewable Energy

- Solar Photovoltaic (PV) Generation
- Wind Turbine Generation
- Biomass-to-Energy

Vehicle Conversions and Onboard Equipment

- Propane (LPG)
- Natural gas (CNG)
- Ethanol (E85)
- Biodiesel
- Hydrogen
- Idle Reduction Equipment

Please contact the South Carolina Office of Regulatory Staff – Energy Office for inclusion of specific products or projects being used as energy conservation measures. Be prepared to provide measured savings as well as cost estimates.