

Applications of ETS

ETS is perfect for just about any application including:

- ✓ New construction
- ✓ Retrofit existing heating system
- ✓ Woodstove replacement
- ✓ Weekend home or cabin
- ✓ Manufactured home
- ✓ Replacement or supplement for electric baseboard
- ✓ Back-up for heat pump systems
- ✓ Condominium
- ✓ New addition
- ✓ Fossil fuel system replacement

Energy Efficiency Credits

Installation and use of ETS qualifies for energy efficiency credits from MCREA and Tri-State Generation & Transmission. Ask us about current incentives.

Note: Tri-State pays additional incentives for installation of a heat pump with ETS back-up.

Contact MCREA about ETS models, a current price list, and installation information. You may also visit our lobby to see an ETS room unit on display.

As always, information is available by phone or on our website.

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Electric Thermal Storage

ETS



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What is ETS?

ETS is Electric Thermal Storage heating equipment for residential applications. It is the technology of storing low-cost (off-peak) electricity in the form of heat for use 24 hours a day. The heat is stored in a high-density ceramic brick.

ETS is a clean, safe, comfortable, and reliable method of heating. This heating choice is growing in popularity because it is 100% efficient and provides warm, cozy heat and significant savings.

Time-of-Use Rate

Off-peak 3 ¢ per kWh

On-peak 20 ¢ per kWh

Off-peak Hours

10:00 AM—5:00 PM

10:00 PM—5:00 AM

ETS equipment stores heat during off-peak hours but heats your home 24 hours a day. Off-peak hours are those times during the day and night when MCREA can supply electricity most economically. We call that our time-of-use rate

(TOU). Our TOU rate is effective from 10:00 AM to 5:00 PM and again from 10:00 PM to 5:00 AM.

ETS heating units can be room-size or can heat the whole house through a central duct system. Room units can be purchased with fan forced heat distribution or an electrically controlled damper that allows stored heat to flow naturally into the area. Either unit is controlled by an on-board room temperature thermostat.

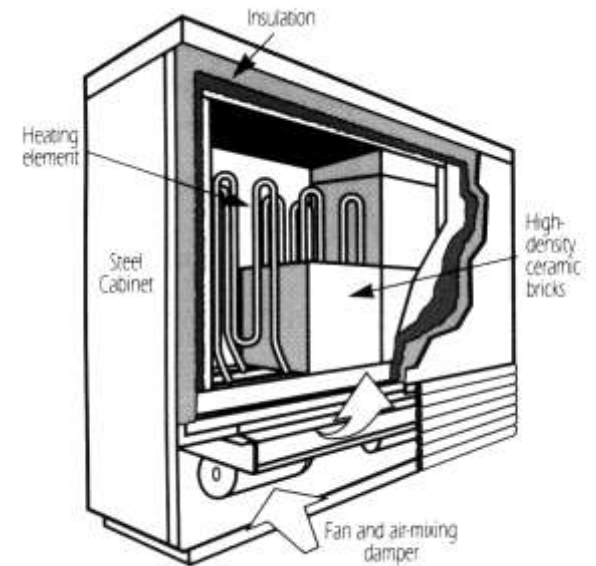
The whole-house ETS unit is designed to be the main heating system for residential application. It is also a versatile appliance that can serve as a back-up for an electric furnace during on-peak times, replace a duct heater, or supplement a fossil fuel system.

Central Furnace + Heat Pump

Heat pump systems are known as one of the most efficient methods of heating and cooling. Utilizing an ETS unit with the addition of a heat pump allows the **heat pump's high efficiency to be combined with off-peak electric rates** making this heating and cooling system one of the lowest operating cost options available.

As outside temperatures decline, the stored heat in the ETS unit is used in conjunction with the **heat pump's heating capacity to satisfy comfort requirements**. During on-peak hours or when the demand for heat is at the point where the heat pump alone cannot satisfy the heating requirements, the stored heat is used to supplement the heat pump.

Since heat pumps generally have an operating efficiency of 150%-300% depending on the outdoor temperature, ETS first utilizes the heating ability the heat pump offers. When comfort needs increase, the ETS system starts to work.



Individual ETS Room Unit

System Design

Inside a well-insulated steel cabinet are electric heating elements surrounded by specially crafted high-density ceramic bricks. The bricks, heated by the elements during off-peak times, provide the heat source for fan-circulated air. When your thermostat **calls for heat, warm air is extracted from the unit's core** and is distributed evenly into the home until the thermostat has been satisfied. The unit has sensing devices that monitor the core, the supply, and the discharge air temperatures to ensure maximum safety while providing optimum comfort.