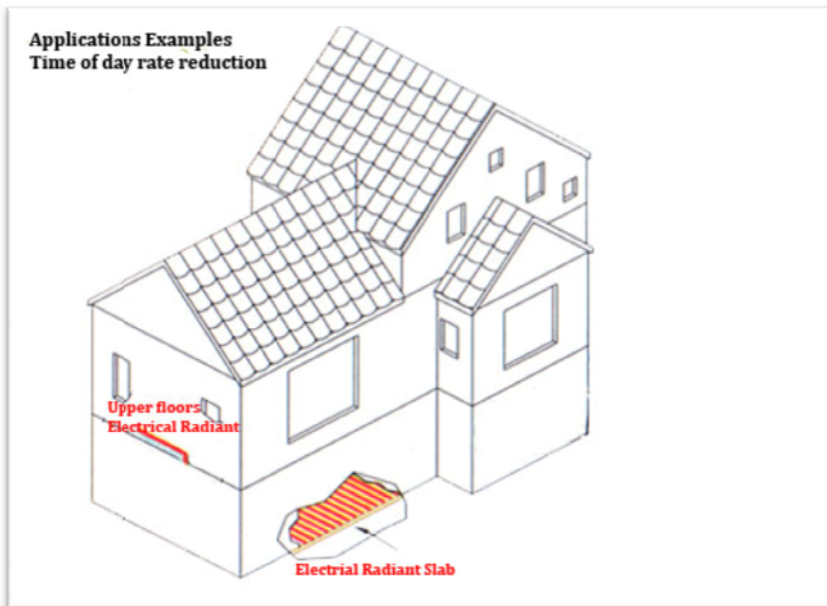


POWER PLANT SUPPLY CO

<mailto:sales@powerplantsupplyco.com>

Electrical Thermal Storage (ETS) Radiant Floor Heat Systems



Electric radiant floor heat systems are similar to other radiant floor heat systems, up to the point of heating the floor. Other systems produce heat on demand like furnace boilers and hot air circulation systems. Electrical radiant floor heat may be integrated into an electric thermal storage system (ETS). Using electric energy to heat a thermal storage mass like a concrete floor slab, electrical radiant floor heat qualifies for reduced time of day rates.

There are considerations when designing an electrical thermal storage system utilizing a concrete floor slab. Power companies do not provide specific design and/or installation instructions beyond installing the equipment used to control the time of day records.

There are some basics to follow for a slab ETS that result in significant energy savings, which do not add building cosy. Lower energy cost with all the benefits of electrical radiant floor heat are an attractive benefit. For more information on radiant floor systems, contact Power Plant Supply Co; <mailto:sales@powerplantsupplyco.com>

Suggestions for Electrical Thermal Slab Storage Design



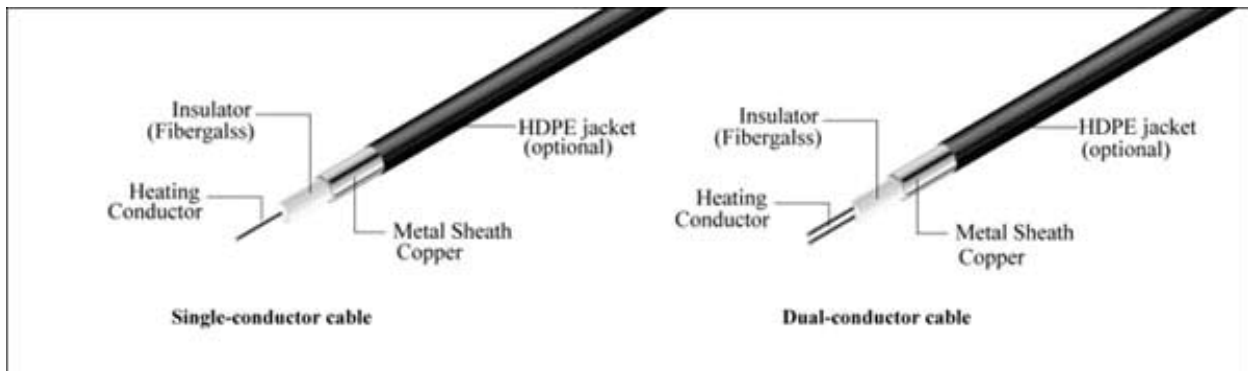
A four inch slab-on-ground inside the insulated building envelope, with a minimum of two inch of rigid insulation underneath, offers substantial concrete thermal mass retention qualities. Cost for a thermal storage four inch slab is normally absorbed in the basic design of the building with no extra outlays. For ETS time of day consideration, the basement or slab must be thermally heated with electrical energy. Consult a qualified industry source for more detailed

information: contact <mailto:sales@powerplantsupplyco.com>

<http://www.powerradiantfloorheat.com/index.html>

When considering the type of heating cable to use: low voltage heat systems or high voltage heat cables may be utilized. Of special note if high voltage cables are desired for your slab heat; **by code high voltage 120/240v etc. cables must be isolated by covering them with a minimum*

of two inches of concrete in the slab. When using high voltage heat cable, a more durable 120/240v cable with better jacket and moisture protection qualities should be selected. Also consideration must be given to upper floor levels where high voltage floor heat can only be used when concrete over pours are possible.



The more durable high voltage cables are available at Power Plant Supply Co.



Less restricted low voltage systems: Low voltage floor heat systems convert line voltage in the control unit to between 8-30 volts of electricity and this low current is then sent through the heating elements. Resistance in the elements heat the floor at controlled temperatures. The low-voltage heating elements available are ZMesh or Tuff Cable, depending on the installation. The heat created radiates from the element

through the floor and continues to warm other objects in the room. None of the heat produced is wasted before being fully utilized. Low voltage radiant heat systems may be installed on upper floors instead of high voltage cable.

The added cost and support required for concrete floors in the upper levels are eliminated using low voltage heating systems.



Floor covers like tiles for example are installed in the grout as per normal installation. Efficient low voltage cables may be imbedded just below the slab surface as well. Low voltage ZMesh element screen may be laid directly on the slab and flooring installed over the ZMesh. Low voltage radiant floor heat radiate heat like the sun shining through a window; warming floors and the room, while storing thermal energy in the concrete for greater energy efficiency.



Low voltage cable does not require a deep burial in concrete for protection from high voltage effects. Low voltage floor heating cable may be imbedded in a tile grout thin set, on a slab or wood sub floor. Upper Floors may also be heated with low Voltage ZMesh element, which is placed on the sub floor and hardwood flooring or other floor coverings installed over the mesh.

<http://www.powerradiantfloorheat.com/index.html>

Upper concrete floors with all the associated cost and support structures are not necessary when utilizing low voltage systems.

In general, heat loss should be calculated for each project; the better insulated the home the more efficient a floor radiant heating system will be. Efficient heating and energy storage with electric power provides comfort and savings superior to other forms of heating. Appropriate capacity selected guidance and total installation systems are available from Power Plant Supply Co. sales@powerplantsupplyco.com.

Time of day electrical rates utilizing; Electrical Thermal Storage (ETS)

For greater detail and assistance contact Power Plant Supply.

Time of day rate is an optional rate available to customers utilizing floor electrical radiant heat. Customers who qualify for the rate can take advantage of low-cost electricity by focusing on the "time-of-day" the energy is used. To qualify for use with the TOD rate, Electrical thermal storage system must be utilized, for example a concrete slab thermal storage system.

MOST POWER COMPANIES OFFER OFF PEAK RATES

To encourage customers to use the majority of their electricity during "off-peak" times, In Nova Scotia for example, Nova Scotia Power offers the TOD rate during low cost "off-peak" times for thermal storage customers. Thermal storage may be utilized by using various storage methods; an insulated basement slab or insulated slab-on-ground is recognized as an available thermal storage mass.

Time-of-day (TOD) schedules are easy to follow and consumption is automatically recorded for the customer. In some cases power used on all weekends or holidays for example and during night time hours, 11:00 p.m. to 7:00 a.m., is charged at the "off peak" rate; approximately half of the regular rate.

A home with electrical radiant floor heat and a ETS concrete slabs qualify for "off-peak" time charges: power drawn/stored for heat, or for water heaters, dryers, washers, snow melt systems etc. are charged at the TOD rates.

SOLID STATE SYSTEMS - LOWER ENERGY COST – LOW MAINTENANCE – NO FURNACE

NO VALVES – NO MOTORS - NO RADIATORS TAKING UP SPACE IN A ROOM

– 100 % EFFICIENT USE ALL THE ENERGY DRAWN FOR HEAT

AUTOMATIC CONTROLS



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Shipping to all Canadian Points

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In Canada for all in-floor heating, floor heating, heated floors, electric floor heating, floor warming, room heating, warm floor, radiant floor, radiant heating, electric radiant heating, heated ramps, roof de-icing, gutter dicing, snow melting, snow melting, snow-melting, heated driveway, pipe tracing, heat trace, heat tracing, snow removal, automatic snow removal, tank heating Power Plant Supply Co has convenient shipping warehouse locations in Canada, to serve customers in Ontario, ON, Quebec, QC, Atlantic Canada, including New Brunswick, NB, PEI, Nova Scotia, NS, Newfoundland & Labrador, NL, British Columbia, BC, Alberta, AB, Manitoba, Man, Saskatchewan, SK, Nunavut, Northwest Territories, NWT, Yukon. Next day Air or convenient ground to major cities including Vancouver, Calgary, Edmonton, Fort McMurray, Winnipeg, Yellowknife, Thunder Bay, Hamilton, Toronto, Ottawa, Montreal, Quebec City, Saint John, Moncton, Fredericton, Charlottetown, Halifax, Sydney, Corner Brook, St John's.