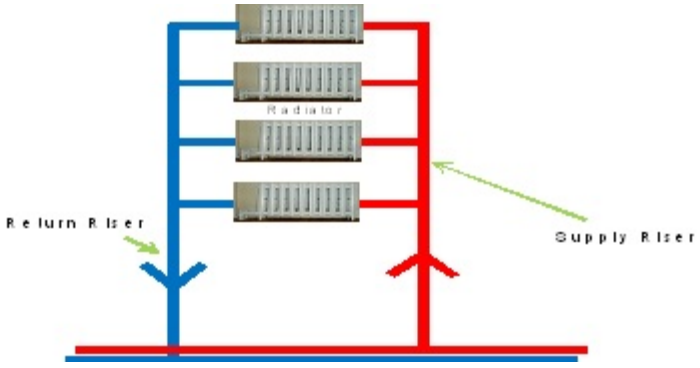
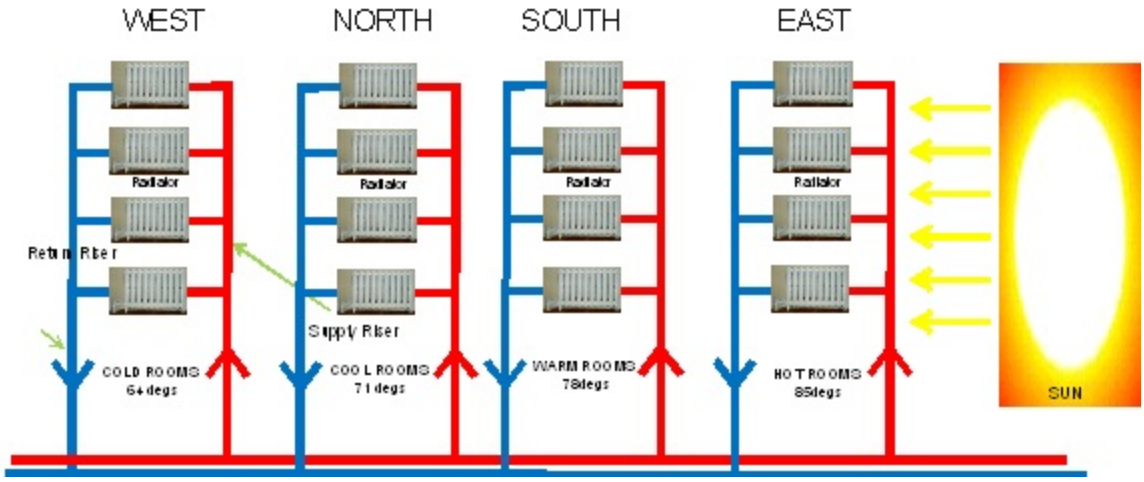
HOW RISER ZONE VALVES WORK

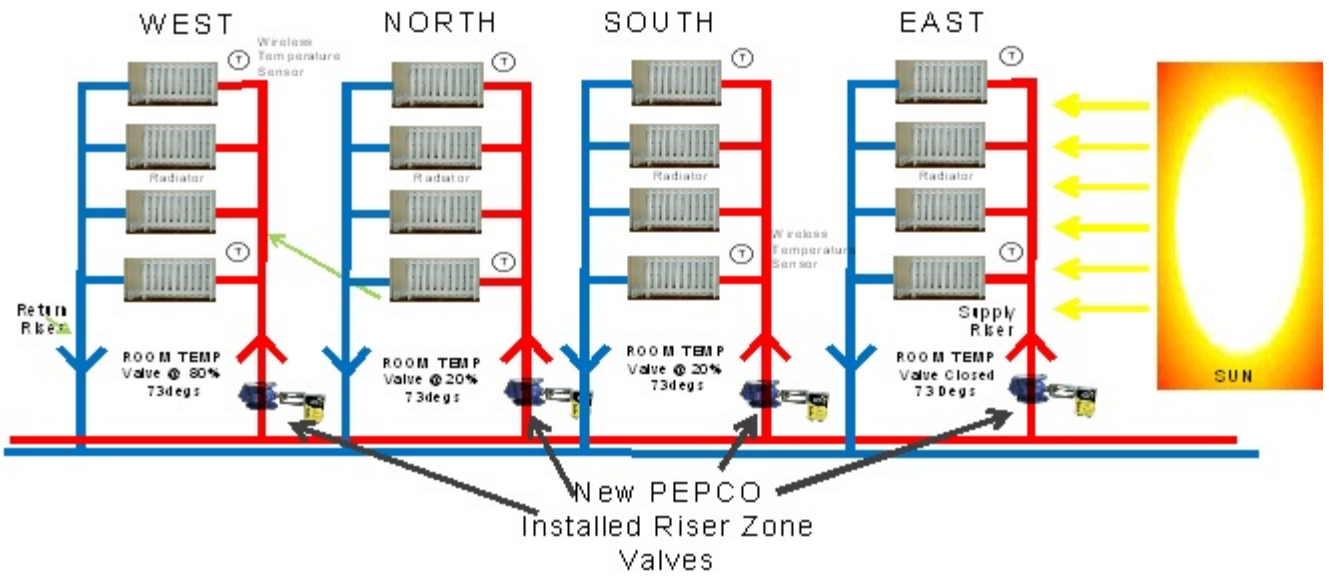
The riser is the pipe that steam or hot water travels thru typically from the basement to the roof. One side of the riser is the supply side and the other is the return side. Connected between the supply and return risers are the individual apartment radiators.



The steam or hot water pass from the supply side of the riser to the radiators that transfer heat to the room. The supply temperature is the hot side and the return is the cool side.



The risers are located around the perimeter of the building and extend from basement to roof and back to the basement with 1 riser typically located approximately every 25'. Without the PEPCO system Steam or Hot Water is supplied to the entire building. Steam or hot water fills all the risers to deliver heat to the building radiators. The rooms on the sunny side become very hot due to solar heat gain while the rooms on the back side remain cold. When the sun rotates around the building the rooms with sunlight overheat while rooms on the back side are cold.



With the PEPCO System, installation of a new electronic riser valves at the base of each riser line prevent the flow of steam or hot water to the risers on the sunny side and force the maximum heat to be delivered to the cold rooms thereby making the cold rooms warm.

Wireless temperature sensors installed inside the rooms vertically up each riser line report the temperature to a microprocessor.

With the PEPCO system, when the room temperatures, heated by its riser reach 73 degs the riser valve closes and opens when the temperature drops to 72 degs. The results is a balanced heat distribution. When half the valves on the sunny side are “closed” the energy usage is cut in half. The amount of fuel or steam needed to heat the building is slashed in half.

Additional Fuel Savings

Night Setback: From 10pm to 5am the room temperatures in each zone is reduced 3 degrees each night and provides additional savings.