

# Solar Thermal Measures

- Using electricity via pump or fan to move heat from outside the building to inside the building.
  - The addition of this heat to the building allows one or more building systems to achieve an end use more efficiently **through reduced run time**.
- Solar water heater pumps a heat transfer fluid through a solar heat collector and a heat transfer tank. This “preheats” the water before it enters the water heater, which then runs less to heat the water to the prescribed temperature.
- Solar air heater heats blows indoor air through a solar heat collector and back into the building. This causes the existing space heating system to run less often to maintain the desired indoor air temperature.
- Similar in concept to other energy efficiency measures that use heat or light energy from outside the system.

# Existing TRM Measures Using Solar Energy for Efficiency

- 5.3.1 Air Source Heat Pumps
  - Example: A ductless heat pump is installed to supplement heat provided by an electric resistance baseboard heating system. The heat pump uses a refrigeration cycle to move heat from the outside air (solar thermal energy, ultimately) to the indoor air. As a result, the existing electric heating system runs less and uses less electricity.
- 4.5.10 Lighting Controls - Daylight Sensor
  - Example: A daylight sensor detects when the combination of LED lighting and natural sunlight exceeds the brightness needed in a space. The brightness of the LED lighting is reduced to achieve the prescribed brightness level, which reduces the total electricity needed to illuminate the space.