

Solar Thermal Position Statement
Ameren Illinois
July 11, 2025

In response to Policy Issue #2, Question 2:

Ameren Illinois supports the inclusion of solar thermal measures in the TRM. The first and third sentences of the “energy efficiency” definition below are both generally applicable to solar thermal measures, which offset the energy needed to achieve the prescribed end use by capturing and using “free” thermal energy, thereby reducing the amount of heat energy needed from electricity, natural gas, or other fuels.

Specifically relating to the proposed Residential Solar Water Heater measure, this measure is an advancement in water heating technology that reduces the amount of electricity required to heat water for domestic use. The baseline electric unit uses electric resistance elements to heat the water directly with a Coefficient of Performance (COP) near 1.0. A solar water heater uses electricity to pump a heat transfer fluid (i.e., anti-freeze) through a solar heat collector and then through a heat exchange tank to transfer the collected heat to the domestic hot water. The process is similar to how ground source and air source heat pumps provide space heating by moving heat energy from outside a home (from the ground or the outside air) to the indoor air of the home, except the solar water heater does not rely on a refrigeration cycle, just a pump to move the heat transfer fluid. It is a direct transfer of heat energy from outside the system to inside the system, achieving a COP of 3.0 or greater.

See the statutory definition of “energy efficiency”- excerpted from Illinois Power Agency Act (20 ILCS 3855/1-10) and Public Utilities Act (220 ILCS 5/8-104(b)):

“Energy efficiency” means measures that reduce the amount of electricity or natural gas consumed in order to achieve a given end use. “Energy efficiency” includes voltage optimization measures that optimize the voltage at points on the electric distribution voltage system and thereby reduce electricity consumption by electric customers’ end use devices. “Energy efficiency” also includes measures that reduce the total Btus of electricity, natural gas, and other fuels needed to meet the end use or uses.