



# Photovoltaic panels with water heating



## Overview

PV + heat-pump systems pair solar panels with a solar heat pump water heater unit. The photovoltaic array generates electricity (typically 18–22% panel efficiency), which powers a heat-pump compressor that moves ambient heat into water with a COP (Coefficient of Performance) of 2–4. Choosing between solar thermal collectors and a solar powered electric water heater setup with a heat pump is one of the most consequential decisions for homeowners pursuing renewable hot water in 2025. Both paths slash utility bills and carbon emissions, but they differ sharply in cost structure. Solar electric panels (also called solar cells or photovoltaic cells) that convert sunlight to electricity are only just becoming really popular; solar thermal panels, which use sunlight to produce hot water, have been commonplace for decades. It produces 6-8 times more energy than a standard PV panel, maximizing energy output while minimizing your carbon footprint. Help protect the environment and save money by using free solar energy. At Viessmann, we are committed to developing innovative technology with the future in mind. Lower water bills, clean energy and heating water by the power of the sun are a few great reasons why more people are warming up to solar water heaters. In fact, the Solar Energy Industries Association (SEIA), a national solar trade association, predicts the use of solar energy will increase by 42%. Photovoltaic systems are true all-rounders, as the solar power generated can be used flexibly anywhere in the household.



## Article Content

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