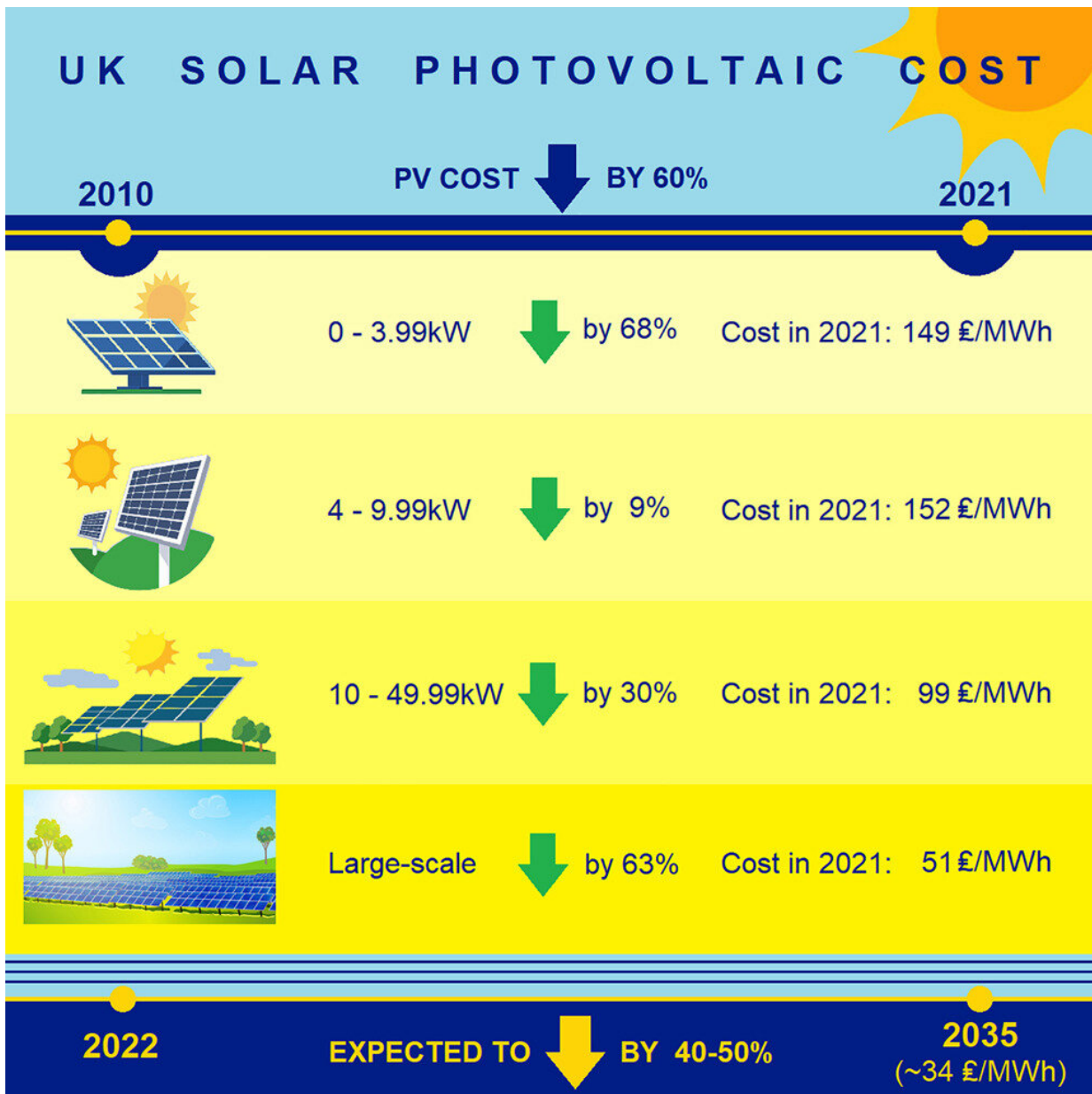


# Households investing in solar panels could reach break-even point sooner than expected

May 10 2023



Graphical abstract. Credit: *Patterns* (2023). DOI: 10.1016/j.patter.2023.100735

New research suggests that many households could break even on their solar panels investments as early as 2027, as solar electricity becomes a more competitive electricity source, according to scientists at the University of Surrey, who have published their findings in the journal *Patterns*.

Surrey scientists have found that there has been a steady decline over the last decade in the cost outlay and return on investment of solar panel systems, regardless of the size of the system, which includes individual homeowners. In 2021 large-scale photovoltaic systems were cheaper than wholesale electricity with prices at £51 / MWH, versus £149 / MWH for smaller systems.

Professor Ravi Silva, director of the Advanced Technology Institute, University of Surrey said, "The findings of this study will aid the U.K.'s focus on reaching its net-zero targets by 2050 for many parties including homeowners, solar developers, the [construction industry](#) and Government offices. The promise of these investments breaking even or making electricity 40%–50% cheaper by 2035 is something that can't be ignored."

"With these findings the research encourages Government support for solar energy developers with preferential benefits to include low-interest rate loans on land or simpler suitable land purchases."

Despite an abundance of solar resources available, a figure from 2019 suggests [solar electricity](#) only accounts for 3% of the market globally due to high installation costs.

Dr. Filip Mandys, Research Institute for Labor and Social Affairs (RILSA), commented, "As the cost-of-living increases and the world focus is on [climate change](#) and decarbonization, it is great news for many to hear a once costly investment will not only help deliver greener energy, but also at a lower cost."

"By offering more supportive initiatives, [solar energy](#) can grow more competitively and address the U.K.'s energy needs while providing a promising sustainable and affordable electricity solution."

**More information:** Filip Mandys et al, Levelized cost estimates of solar photovoltaic electricity in the United Kingdom until 2035, *Patterns* (2023). [DOI: 10.1016/j.patter.2023.100735](https://doi.org/10.1016/j.patter.2023.100735)

Provided by University of Surrey

Citation: Households investing in solar panels could reach break-even point sooner than expected (2023, May 10) retrieved 27 April 2024 from <https://techxplore.com/news/2023-05-households-investing-solar-panels-break-even.html>

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