EPSOM & EWELL TIMES
For the community, by the community. A not-for-profit service

5th November 2026

ISSN 2753-2771

EPSOM & EWELL TIMES

Up to £1 where sold

Surrey solar study shows cheapest energy source

10 October 2025



Solar energy is now so cost-effective that, in some of the sunniest parts of the world, it costs as little as two pence to produce one unit of electricity – cheaper than power generated from coal, gas or wind. That is the finding of a new study by researchers at the University of Surrey's Advanced Technology Institute (ATI), who say solar photovoltaic (PV) technology has become the key driver of the world's shift to clean, renewable energy.

Publishing their work in *Energy and Environment Materials*, the Surrey team point out that the global capacity of installed solar power passed 1.5 terawatts in 2024 – double the figure in 2020 and now enough to supply hundreds of millions of homes.

Professor Ravi Silva, Director of the ATI and co-author of the study, said: "Even here in the UK, a country that sits 50 degrees north of the equator, solar is the cheapest option for large-scale energy generation. Simply put, this technology is no longer a moonshot prospect but a foundational part of the resilient, low-carbon energy future that we all want to bring to reality."

The study notes that the price of lithium-ion batteries has fallen by almost 90 per cent since 2010, making combined solar-plus-storage systems as cost-effective as gas power plants. Such hybrid installations allow solar energy to be stored and released when required, turning an intermittent source into a dispatchable one that helps balance grid demand.

However, the researchers warn that the next major challenge lies in connecting vast amounts of solar generation to existing electricity networks. In regions such as California and China, high solar output has already caused congestion on power lines and wasted energy when supply outstrips demand. Co-author Dr Ehsan Rezaee said: "Connecting growing levels of solar power to electricity networks is now one of the biggest challenges. Smart grids, artificial-intelligence forecasting and stronger links between regions will be vital to keep power systems stable as renewable energy use rises."

© 2021-2026. No content may be copied without the permission of Epsom and Ewell Times Ltd. Registered office: Upper Chambers, 7 Waterloo Road, Epsom KT19 8AY

ISSN 2753-2771

Professor Silva added that advances in materials such as perovskite solar cells could raise energy output by up to 50 per cent without using additional land. “With the integration of energy storage and smart grid technologies, solar is now capable of delivering reliable, affordable and clean power at scale,” he said. “But progress depends on consistent, long-term policy support. The US Inflation Reduction Act, the EU’s REPowerEU plan and India’s Production Linked Incentive scheme show how clear direction can drive investment and innovation. Sustained commitment and international collaboration will be essential if we are to accelerate the world’s transition to a clean and reliable energy system.”

Across the UK, renewable sources supplied just over half of all electricity in 2024 – the first time that clean generation surpassed fossil fuels. Wind power dominated with nearly 30 per cent of total generation, while solar contributed about 5 per cent, equivalent to one unit in every ten generated from renewables. Biomass, biogas and hydro made up most of the rest. When nuclear is included, low-carbon sources together delivered around two-thirds of the UK’s electricity.

Globally, renewables produced about 30 per cent of electricity in 2024, with wind and solar together accounting for roughly 15 per cent and expanding faster than any other energy source. The International Energy Agency expects global renewable capacity to rise by almost half again before 2030, with most new investment in solar.

While Britain’s relatively low sunshine hours limit its solar potential compared with southern Europe or Asia, domestic generation costs have plunged, making rooftop and community-scale arrays increasingly popular. Planning delays and grid connection backlogs remain obstacles, but the UK Government has set a target to increase installed solar capacity fivefold by 2035.

As Professor Silva observed, solar power has crossed the threshold from promise to practicality. The next test, he said, is building the smart, interconnected systems and political consensus needed to make affordable solar energy work everywhere – even in less sunny countries like the UK.

Sam Jones – Reporter



Parabel GmbH – Solarpark Jännersdorf. CC BY-SA 3.0

© 2021-2026. No content may be copied without the permission of Epsom and Ewell Times Ltd. Registered office: Upper Chambers, 7 Waterloo Road, Epsom KT19 8AY