

Solar electricity prices reduce component prices





Overview

What causes photovoltaics cost decline?

We model technology improvement to identify causes of photovoltaics (PV) cost decline. Improvements to module efficiency and materials costs were important. Since 2001, increasing plant size enabled economies of scale to reduce costs. Market-stimulating policies were responsible for a large share of PV's cost decline.

Does a globalized solar photovoltaic module supply chain save money?

Modelling shows that a globalized solar photovoltaic module supply chain has resulted in photovoltaic installation cost savings of billions of dollars.

Can new research help reduce energy costs?

New research can identify opportunities to drive down the cost of renewable energy systems, batteries, and many other technologies. "Our results show just how intricate the process of cost improvement is, and how much scientific and engineering advances, often at a very basic level, are at the heart of these cost reductions," says Jessika Trancik.

Do engineering technologies affect the cost of photovoltaic systems?

This work builds on mathematical models that the researchers previously developed that tease out the effects of engineering technologies on the cost of photovoltaic (PV) modules and systems. In this study, the researchers aimed to dig even deeper into the scientific advances that drove those cost declines.



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