

China's world-beating solar industry is in turmoil

The Gulf war won't save it The Economist May 26, 2026

AS AMERICA'S WAR on Iran roils energy markets, China's clean-energy companies would be expected to be cashing in. The country makes over 80% of the world's solar panels, churning them out in vast quantities. Thanks to such efforts, renewable sources generated more electricity than coal last year around the world. Yet China's solar industry, though world-beating, is in trouble. And the boost from the war has not been enough to steady it.

China's solar exports have enjoyed a surge since the bombing began. But that will be small cheer to its companies, as they face three daunting problems. Domestic demand for their products is falling for the first time in decades because the country's power grids—far and away the biggest market for solar panels—have become overloaded with the things. Solar-panel supply, meanwhile, is overabundant because of years of splashy investment in factories. And even while the war is helping solar sales in South-East Asia and Africa, protectionism has been on the rise in the bigger Western markets.

These problems converge at an ugly time. Most companies have been running at a loss since 2024 because of brutal price wars; bankruptcies are mounting. After experiencing blistering growth, the world's solar factory now faces a reckoning.

Globally, the solar industry has not always been kind to investors. One solar panel is much like another, and when improvements are made by one producer, they are rapidly copied by competitors. So companies typically try to scale up production as quickly as possible in order to seize market share. That means production can race far ahead of demand, causing margins to collapse. This tendency led to a lurching downturn in revenues in 2018, for instance, followed by a rebound after demand caught up.

Solar wastes

But the current slump is of a different order. The main market for solar panels has always been within China, and roll-out has been so fast in recent years that it is outpacing the ability of the power grids to absorb it. All across the country, roofs, hills and deserts are carpeted with dark grey silicon. To keep the lights on, China has in the past relied on coal-fired power, which can be turned on and off as needed. Solar panels work only in daylight, which can lead to power shortages at night and excesses during the day. As a result, in January and February about 9% of China's solar generation was wasted, up from 6% in the same period last year.

That all makes it hard to justify adding much more. Installations this year could fall by between 24% and 43% from 2025, according to an industry group (see chart page 3). That would be enough to cause global demand for solar panels to fall in 2026 for the first time in two decades, says BloombergNEF, a consultancy. For China's grids to cope, it needs to be able to store excess solar power or move it long distances to where it might be needed. That requires big investments in batteries and power lines, as well as figuring out flexible market mechanisms to co-ordinate

everything (in some regions long-term contracts for coal-fired power lock out renewables even though they are cheaper). All this is happening, helped by the fact that batteries, like solar panels, are becoming much cheaper as production of them increases. But it takes time. That means that even if solar installations start rising again next year, growth will probably be much slower than before.

Meanwhile [China's solar companies](#) are struggling with a glut of supply. Frenzied investment has left them able to produce over 1,000 gigawatts (GW) of solar panels in a year. That is far more than the already whopping 600GW that were installed worldwide in 2025 and probably more than the global market will ever be able to soak up, reckons Jenny Chase of BloombergNEF, who notes: "We're running out of big countries that don't already have a lot of solar at this point."

Floors and flaws

Solar manufacturers have been calling for "self-discipline" to ease overcapacity. Last year some tried to co-ordinate production quotas and set floors for the price of panels. It has proved hard, however, for them to work together. Only weeks after the agreement was in place one firm was publicly castigated for breaking it. Then in January officials said they were concerned that the group could become a cartel.

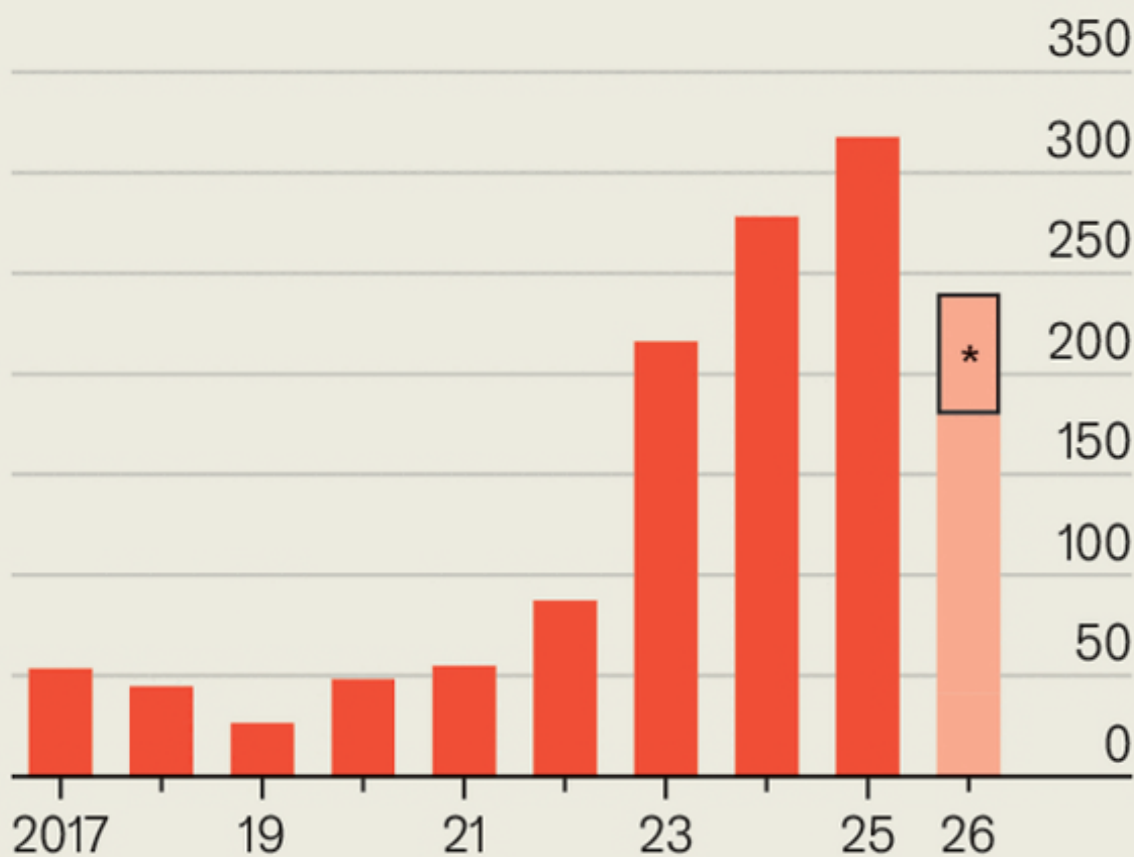
Officials are also keen to trim the bloat, however, which is also a problem in China's other clean-energy industries. The government once lavished support on solar manufacturers in all sorts of ways, from access to cheap land to interest-free loans. Now it has largely stepped back. Since June last year new solar projects have had to sell power at market prices rather than enjoying guaranteed feed-in tariffs. And a big reason for the export surge in March was that companies were cramming in shipments before April 1st, when they would stop enjoying a tax refund on exports. In recent months some Chinese local governments have even started demanding that solar companies return millions of yuan in subsidies, preferring to see them go bankrupt rather than continue to prop up failing companies.

Geopolitics, meanwhile, could bring more clouds over the horizon. Cheap Chinese solar panels have been a victim of their own success, sparking protectionist backlashes both in Western countries and in China's neighbours, including India. Since 2022 America has imposed tight restrictions on imports, as well as hefty tariffs on the shipments that it does allow to get through. Some also worry that Chinese-made equipment in their power infrastructure could pose a security risk. In May the European Union said it would phase out Chinese suppliers of inverters, a vital piece of solar equipment, in EU-funded projects. Some Chinese companies are trying to outsource production abroad to avoid such political headaches.

It all makes for a gloomy outlook. Already, more than 40 Chinese solar firms have gone bankrupt, been acquired or delisted from stock exchanges since 2024. One-third of the workforce of the country's five biggest solar-industry firms has been laid off, according to Reuters, a news agency. But the biggest wave of consolidation has yet to break, says Jessica Jin of S&P Global, a research firm. Solar-panel prices have nudged up in recent months, but the panels still sell at less than their average production costs. The share prices of LONGi Green Energy Technology,

In the shade

China, solar-capacity additions, GW



*Forecast range

Sources: Wind; China Photovoltaic Industry Association

Tongwei, Jingko Solar and Trina Solar, the biggest producers, are all hovering well below half their peaks of a few years ago.

Could anything bring back solar's brightest days? It would certainly help if countries lifted their trade barriers to Chinese goods. And another lifeline for China's industry might be the commercialisation of technologies that dramatically increase solar panels' efficiency. These days most convert 22-24% of the light that falls on them into electricity; more advanced kinds of solar cells called perovskites could push that rate above 30% as well as, in theory, being cheaper to produce. The question is just how many of China's solar firms will survive to witness such advances. ■