

Supply chain scrutiny may upend EU solar ambitions

By Lisa Jucca

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Employees work on photovoltaic solar panels at a factory of Risen Energy in Ningbo, Zhejiang province, China February 21, 2019. Picture taken February 21, 2019. Zhejiang Daily via REUTERS



MILAN, May 23 (Reuters Breakingviews) - Making the world a greener place through clean energy is hard enough. Doing so while also avoiding human rights violations looks even harder.

Western nations are rushing to install more solar panels to reduce their dependency on polluting fossil fuels like gas and oil. That's in principle a boon for China, which dominates each step of photovoltaic manufacturing. Yet a rising legislative tide aimed at ensuring companies' supply chains are free from forced labour and other abuses presents a mounting challenge for Western utilities.

At the heart of the problem is Xinjiang. The province is a major producer of silicon metal, the quartz-based feedstock for ultra-pure silicon – known as polysilicon – which is the key raw material in solar panels. Last year Xinjiang accounted for some 35% of global solar-grade polysilicon output, says market specialist [Bernreuter](#). The United States, which has accused Beijing of repressing minorities in the province, banned the import of Xinjiang polysilicon and other products in June last year, triggering delays in the delivering of solar panels for German utility RWE ([RWE.G](#)) and other players.

Now things could also get trickier in Europe. Germany has introduced from this year [legislation](#) requesting that companies with more than 3,000 employees police their supply chains or risk a fine of up to 2% of turnover. A parallel EU-wide proposal on [value chain](#) due diligence and a plan to eradicate forced labour from all [products](#) entering the 27-nation bloc are under discussion.

Reaching for the sun

Projected photovoltaic capacity of the EU's top markets by 2026, in gigawatts (GW)

Country	Estimated total capacity by 2026 (GW)
Germany	131.0
Spain	77.7
Poland	34.4
Italy	45.5
Netherlands	37.2
France	34.6
Greece	15.9
Portugal	14.5
Sweden	14.5
Austria	10.4
Romania	8.0
Ireland	6.5
Denmark	9.5
Belgium	13.1
Hungary	9.0
Total (2026)	461.8
EU Solar Energy Strategy 2030 target	600

Source: European Commission, SolarPower Europe | A.F. Alias | May 17, 2023

Reuters Graphics

For energy players, ensuring that Chinese panels are completely free from the banned basic mineral is tricky. Moreover, a [crackdown](#) this month on consulting firms that often help non-Chinese investors with their due diligence is complicating things.

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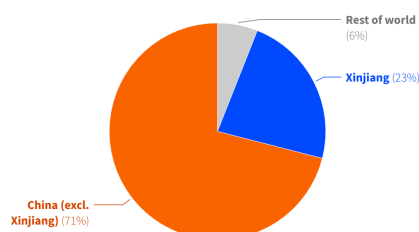
Avoiding Chinese solar components altogether, as some U.S. players are starting to do, is probably the safest bet. But there's not yet enough raw material outside China. Bernreuter estimates that non-Chinese solar-grade polysilicon is enough to produce 40 gigawatts of solar panels per year. That may suffice to satisfy annual U.S. photovoltaic installation, which rose to 19 gigawatts last year, according to [IEA data](#). But it won't supply Europe's needs: under its bold REPowerEU plan, the 27-nation bloc may need to install **60 GW** of solar power per year, EU Energy Commissioner Kadri Simson said in December.

The industry has identified the potential bottleneck. Chinese producers like [Trina\(688599.SS\)](#) and [Jinko Solar\(688223.SS\)](#) are trying to move production away from the contentious region, even though costs may rise. And Germany's Wacker ([WCHG.DE](#)) and U.S. group Hemlock Semiconductor plan to boost capacity outside China. Xinjiang's polysilicon market share of total capacity could fall towards 23% this year, while the rest of China would still account for 71% of forecast global capacity, research firm Rystad Energy estimates.

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The Silicon Road

China's estimated market share of polysilicon capacity in 2023



Source: Rystad Energy | L. Jucca | Breakingviews | May 23, 2023

Reuters Graphics

That may still not suffice. With China likely to dominate the photovoltaic industry in the near term, Europe may need to choose between tough due diligence checks and realising its green ambitions.

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(The author is a Reuters Breakingviews columnist. The opinions expressed are her own.)

CONTEXT NEWS

The Uyghur Forced Labor Prevention Act, which came into force on June 21, 2022, dictates that goods and articles produced in China's Xinjiang region are banned from entering the United States. Banned materials include polysilicon, an ultra-pure form of silicon, that is the key raw material used to make solar panels. Last year Xinjiang accounted for 35% of total solar-grade polysilicon output, according to preliminary estimates from market specialist Bernreuter.

Under Germany's supply chain act, which came into force in January, companies with more than 3,000 employees must ensure their supply chains are free of human rights and environmental abuses or risk a fine of up to 2% of their turnover. From 2024, the law will apply to companies with more than 1,000 staff.

The European Commission published in February 2022 a draft proposal aimed at forcing companies to better police their global supply chains. The proposal is being negotiated by EU states and the European Parliament. A second European Commission proposal, unveiled in September 2022, seeks to eradicate forced labour from supply chains of all products entering the 27-nation market.