

Polysilicon Industry Faces Third Shakeout Wave

Bernreuter Research: Oversupply will push new entrants out of the market in 2024

Würzburg (Germany), November 28, 2023 – Chinese polysilicon market leader Tongwei will usher in a phase of fierce cut-throat competition in 2024. “Tongwei is planning to bring 575,000 tons of new production capacity on stream next year, whereas we expect a market growth of 200,000 tons at most,” says Johannes Bernreuter, head of Bernreuter Research and author of the *Polysilicon Market Outlook 2027*, which was released today.

The polysilicon shortage in 2021 and 2022, which drove the spot price up to almost US\$40/kg, has lured many Chinese aspirants into the industry. The new report from polysilicon market expert Bernreuter Research screens 36 companies; among them, 14 have started to construct or already to ramp up a new polysilicon plant. Besides Tongwei, however, other leading manufacturers have also expanded production. “If all new capacities were ramped up in 2024, oversupply would swell to 1.4 million tons,” says Bernreuter. “With its low manufacturing costs and proven product quality, Tongwei will push most, if not all, new entrants out of the market.”

In total, the third shakeout wave in the polysilicon industry will eliminate a capacity of up to 2,400,000 metric tons (MT), compared to 275,000 MT during the second wave – from 2018 through 2020 – and 135,000 MT during the first – between late 2010 and early 2013. For 2024, Bernreuter expects the polysilicon price to undercut the all-time low of US\$6.75/kg reached in June 2020.

While China’s share in the global polysilicon output will further increase to 90% in 2023 (to even 92.5% in solar-grade material), the non-Chinese manufacturers Wacker, OCI, Hemlock Semiconductor and REC Silicon will remain exempt from the shakeout. The reason for that is the Uyghur Forced Labor Prevention Act in the United States, which bans products from the Xinjiang Uyghur Autonomous Region in northwestern China. The legislation has created a separate, higher-price market for non-Chinese polysilicon manufacturers, which do not use silicon metal from Xinjiang as feedstock.

The shakeout in China is coming even though the polysilicon industry’s largest customer, the solar sector, is growing rapidly. In contrast to other market researchers, Bernreuter assumes that annual PV installations will rise from 425 GW in 2023 to 1,100 GW in 2027, which is equivalent to an average annual growth rate of 26.8%. “Traditional forecast models have mostly underestimated PV growth. Therefore, we have adopted a more aggressive approach,” explains the analyst. The rapid growth will fuel strong demand for silicon metal, which is made of quartz (SiO₂). “The consequence is inevitable: Quartz for silicon metal will run short in the second half of this decade,” predicts Bernreuter.

More details on the polysilicon, solar and semiconductor markets are provided in *The Polysilicon Market Outlook 2027*. The 102-page report contains sophisticated scenarios of supply and demand, detailed forecasts of polysilicon prices through 2027, the latest purity and cost data on the dominant Siemens process and fluidized bed reactor technology, as well as many other market trends. For more information on the report, please go to:

<https://www.bernreuter.com/polysilicon/industry-reports/polysilicon-market-outlook-2027/>



The Polysilicon Market Outlook 2027 provides in-depth analysis and detailed forecasts on polysilicon supply, demand and prices through 2027.

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Top Ten PV Markets in 2023

Rank	Country	GW _{DC}
1	China	235
2	USA	34
3	India	16
4	Spain	13.5
5	Germany	13
6	Brazil	12.5
7	Australia	8
8	Japan	7
9	Poland	6.5
10	Italy	5.5
-	Rest of World	74
Total		425



Bernreuter Research predicts new global PV installations of 425 gigawatts-direct current (GW_{DC}) in 2023.
Source: Bernreuter Research

About Bernreuter Research

Bernreuter Research was founded in 2008 by Johannes Bernreuter, one of the most reputable photovoltaic journalists in Germany, to publish global polysilicon market reports. As early as 2001, Bernreuter authored his first analysis of an upcoming polysilicon bottleneck and new production processes. Since publishing its first report in 2010, Bernreuter Research has gained a reputation for providing the most comprehensive and accurate polysilicon reports on the market.

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