

Polysilicon Market on the Brink of Dynamic Growth

New report from Bernreuter Research: Risk of oversupply looms in 2022/2023

Würzburg (Germany), December 10, 2020 – After three years of nearly stagnant demand, the polysilicon industry is entering a new phase of dynamic growth. “As photovoltaic power plants have become the cheapest source of energy, global PV installations will increase in the coming years more rapidly than many think today. This will drive the demand for polysilicon,” says Johannes Bernreuter, head of Bernreuter Research and author of the *Polysilicon Market Outlook 2024*, the new report from the polysilicon market expert.

While supply constraints are almost certain in 2021, Bernreuter sees a risk of upcoming oversupply in 2022, which will intensify in 2023. “In order for the market to remain balanced, global PV installations would have to grow by 30% annually both in 2022 and 2023 to reach 270 GW in 2023. That is not impossible, but would require the PV market to speed up enormously,” says the analyst, who expects an installation volume of 127 GW in 2020.

The huge polysilicon volumes will come from the massive capacity expansion of the big Chinese polysilicon manufacturers – led by Tongwei, which has superseded German incumbent Wacker as the world’s largest producer in 2020. This expansion is fueled by the strongly rising demand for mono-grade polysilicon in general and the rapid growth of Longi and Zhonghuan Semiconductor, the two largest makers of monocrystalline solar wafers, in particular.

As a result, 14 small and medium-sized Chinese polysilicon companies, which mainly produced lower grade for multicrystalline wafers, were pushed out of the market between 2017 and 2019; in addition, all three South Korean polysilicon manufacturers have abandoned production of solar-grade material; U.S.-based REC Silicon has mothballed its plant and Hemlock Semiconductor has halved its production capacity. In total, the second shakeout wave in the polysilicon industry has eliminated a capacity of around 275,000 metric tons (MT), compared to 135,000 MT during the first wave between late 2010 and early 2013. Consequently, China’s share in global polysilicon production – including electronic grade for semiconductors – has increased from little more than 50% in 2017 to nearly 75% in 2020.

Among the big Chinese players, GCL-Poly is boldly betting on fluidized bed reactor (FBR) technology to produce polysilicon granules in two new, large plants. “It still remains to be seen if GCL can smoothly ramp up its new capacities. But no matter which scenario ultimately comes true, all the new Chinese low-cost plants will drive the polysilicon spot price down to values below US\$8 or even US\$7 per kilogram in 2022,” predicts Bernreuter.

More details on the polysilicon, solar and semiconductor markets are provided in *The Polysilicon Market Outlook 2024*. The 76-page report contains sophisticated scenarios of supply and demand, detailed forecasts of polysilicon prices and cash production costs through 2024 as well as the latest developments of the dominant Siemens process, FBR technology and upgraded metallurgical-grade (UMG) silicon. For more information on the report, please go to: <https://www.bernreuter.com/polysilicon/industry-reports/polysilicon-market-outlook-2024/>



The Polysilicon Market Outlook 2024 provides in-depth analysis and detailed forecasts on polysilicon supply, demand and prices through 2024.
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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 of providing the most comprehensive and accurate polysilicon reports on the market.

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