

Depth and detail impress

Bernreuter Research has published a new study on silicon production with probably the greatest amount of information on the subject so far.

The polysilicon debate seems to have emerged in 2001, when the topic made it onto the agenda of the 17th EU PVSEC in Munich with a clear message: the shortage is imminent! Not everybody in the PV industry wanted to hear it then, but in the end the supply gap had to be dealt with. Ten-year supply contracts, spot market prices of up to 400 US\$/kg and shady middlemen dominated the landscape.

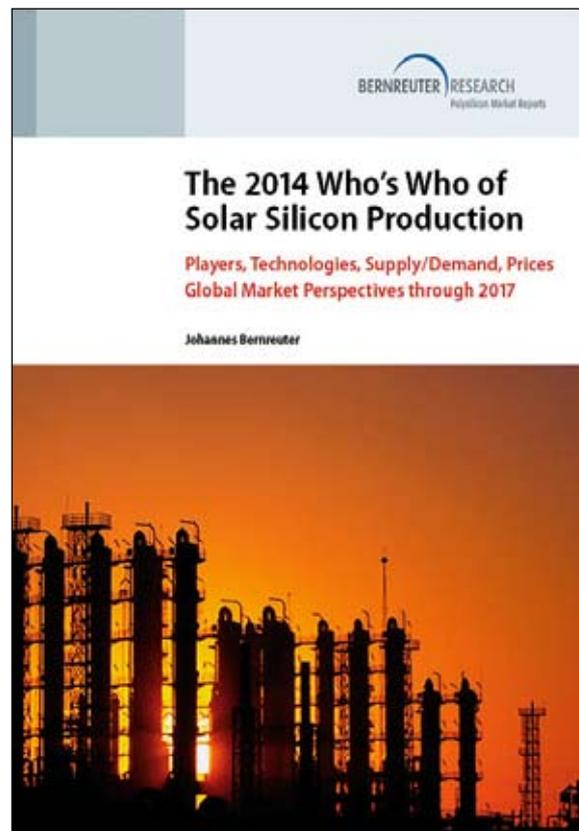
By contrast, the present will secure a place in the industry's history as the age of shutdowns. Many manufacturers of polysilicon are also fighting for survival. In 2011 and 2012, more than 50 companies, mostly small and medium-sized, shut down production indefinitely or for good. The situation changed in 2013, when demand rose at a double-digit rate while production dropped by about 4%. "As a result, warehouse stock could be cut," says Johannes Bernreuter, head of Bernreuter Research.

This latest polysilicon study from the 48-year-old from Würzburg is his third since 2010. Under the title "The 2014 Who's Who of Solar Silicon Production", Bernreuter paints a picture of the industry that is as extensive as it is detailed. Whoever has read the previous studies will be well prepared for one thing: Bernreuter is incredibly meticulous. Readers of the current study may wonder how this plenitude of information can be gathered in just one year. The study is also valuable because, unlike many of his fellow analysts, Bernreuter goes beyond just reporting the status quo, although the title of his report may not make this clear.

Forecast until 2017

Indeed, the scale of Bernreuter's analysis is quite impressive. In the study's key section, he outlines four scenarios with estimated production figures through 2017 to analyse each manufacturer individually. Just to give an idea of the sheer size of his work, Bernreuter researched some 1,200 statistics from about 80 companies worldwide for each scenario. To name just one finding, each of the four scenarios shows a dropping spot price that should then pick up again moderately about 2015 once inventories have declined.

The study starts off with a comprehensive technology section that includes a well-founded overview of standard practices, most of which are based on



Source: Bernreuter Research

what is known as the Siemens process. This technology may already have seen its heyday, Bernreuter conjectures, suggesting that when it comes to an alternative to the established Siemens process, the focus will be on the fluidised bed combustion reactor. The technology section also features both a ranking list and an extra "best in class" list. It is followed by information on the companies, the scenarios mentioned, demand forecasts and remarks on the supply chain and price developments.

A reviewer is obliged, of course, to point out the weaknesses of a publication – not quite easy for the present study. It is possible that the very abundance of information and attention to detail that make this work stand out positively from others are also what may slow down readers unnecessarily. Do we really need to know how many tonnes of polysilicon Jiangsu Tehua New Material Technology produced, especially since the company has since ceased production?

Although it may be hard to believe with this level of technical expertise, Bernreuter originally studied theology. He should therefore not be unfamiliar with the medieval conception of work shaped by religious convictions, which led the sculptors, architects and master craftsmen of 800 years ago to shrink back from achieving utmost perfection in their work. This idea is still alive today, with a quote from Nam June Paik hanging on perhaps every third office door: "When too perfect, lieber Gott böse." The good Lord may not look kindly on too much perfection.

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Further information:

The study can be ordered for € 1,199 at: info@bernreuter.com