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# As more players eye polysilicon production, tight supply of crucibles becomes a concern

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While the growing number of polysilicon makers are expected to help eventually ease worries about a materials shortage in the photovoltaic (PV) industry, the rush to build more polysilicon plants is leading to a possible shortage of some key manufacturing components, namely crucibles, which are used for silicon ingot production, according to industry players.

Buoyant demand for PV products has pushed quotes for a 240-270kg-volume crucible from a certain supplier to NT\$30,000 (US \$986.7), up from NT\$14,000-15,000 in early 2007, said industry sources, while declining to reveal the supplier's name. As more firms join in the production of polysilicon, there will be a corresponding run on demand for related fabrication components/materials, with the players noting that crucibles, whose market is dominated by a limited number of suppliers, being a component where there are supply concerns.

Other industry players, however, believe that even if a shortage arises, it would not last long. Some vendors in China are already capable of producing crucibles with proven quality. And these vendors are expected to increase their market penetration over the coming years.

Players from the PV industry in Taiwan, countered that crucibles from China currently are not able to deliver stable quality. Therefore, few PV companies in Taiwan are sourcing crucibles from China. They stressed that they would not risk sourcing such a key component from unfamiliar vendors, citing the furnace explosion at Green Energy Technology's plant a few years ago as an example of the dangers faced by industry players.

A crucible is mainly made of quartz or graphite, and is a container-like component that is used in the crystal pulling process. Chunks of polysilicon will be loaded into the crucible in the furnace to grow silicon wafers. After the solar ingot is grown, the crucible has to be replaced with a new one. Currently Belgium-based Vesuvius and US-based Ceradyne are two major crucible suppliers worldwide.

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