March 18, 2008, 1:31 pm

Sand Pebbles: Solar Power's Silicon Dreams in China

Posted by Keith Johnson

China's enormous appetite for raw materials clearly has a big impact on the rest of the world, as we've noted. But it's not just a one-way street: One of the world's biggest solar companies, China's Suntech Power, is still struggling to find a way around the shortage of pure silicon it needs for its solar panels.



Zhengrong Shi, CEO of Suntech (Suntech)

Now there's light at the end of the tunnel, says Suntech's billionaire founder Zhengrong Shi. Speaking at The Wall Street Journal's "ECO:nomics" conference last week in California, he said Suntech is seeing signs that the explosion of new silicon producers—like Nitol Solar in Russia—is finally putting some slack back in the system. That would be great news for Suntech, whose share price was poleaxed after pricey silicon dented profits.

"Before there were only eight manufacturers globally to produce silicon, but now it's 100. We do believe in the next two or three years the [silicon] price will come back again and the market will be even expanded more rapidly," Dr. Shi said. He said he expects new supplies of silicon to start hitting the market from 2009.

And not a moment too soon for companies like Suntech. This year it aims to make 1 gigawatt of panels, twice as much as in 2007. But it only has long-term silicon supply contracts in place for about half of this year's production. That leaves it on the hook to pay spot prices for the other half, which seriously dents profits and could crimp production.

The silicon shortage is ironic, since it's one of the most abundant elements on earth. But purified silicon suitable for solar panels isn't. That shortage has been one of solar's biggest hurdles.

And Dr. Shi says it is precisely that full-scale development which will make solar power a viable rival to traditional power sources. Repeating what is fast-becoming an industry mantra, Dr. Shi said that solar could "reach grid parity in three to five years," even without subsidies.

What's the key? More efficient panels, of course. But more than anything else, Dr. Shi says solar power can compete with other renewable energy sources—and traditional power—only when it starts producing serious amounts of the stuff. And for that, like for other California valleys, silicon is key.

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