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# Thin-film solar cell makers look to First Solar as a benchmark

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While more new thin-film solar cell players from Asia are entering into polysilicon volume production in 2009, many of them have noted that their capacity has already been fully booked. However, their claimed success does hide potential risks as compared to the achievements made by leading players. Given that leading player First Solar has already introduced its cadmium telluride (CdTe) thin-film solar modules into volume production, smaller-scale players have looked into the segment more closely.

US-based First Solar has most of its thin-film solar modules fabricated based on CdTe. The company plans to see its capacity hit 1GWp in 2009. Of the top-ten solar cell makers (in terms of capacity) worldwide in 2007, First Solar is the only one that produces solar cells on thin-film materials.

Industry players highlighted First Solar is one of the thin-film solar cell makers that has been able to have production follow schedule, implying that its future influence should not be underestimated. They remarked that many thin-film solar module makers are trying to replicate First Solar's successful business model.

The thin-film solar cell market is expected to be a battle between amorphous silicon (a-Si) and CdTe in 2009, the industry players said. Since First Solar currently has a power conversion rate from its CdTe-based thin-film solar modules averaging at 8-8.5% with a higher rate expected in 2009, the company is a challenge but also an inspiration for its rivals. They estimated that most thin-film solar cell makers still have power conversion rates averaging at 5-7%.

A review of thin-film solar cell makers in Taiwan and China shows that China-based players such as Suntech Power and LDK Solar have capacity plans on much a larger scale than Taiwan players. Some of these companies have already moved production to volume with shipments already started.

## Thin-film solar cell segments and related share of total solar cell market, 2008-21015 (%)

Materials	2008	2015
a-Si	8.8	7.1
CdTe	2.5	8.1
CIGS	2.8	13.2
Other	0.3	2.1
Total proportion of thin-film	14.4	30.5

Source: The Information Network, compiled by Digitimes, September 2008

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