

## ■ Previously Committed Capacity Expansions Cause Solar Cell Manufacturing Capacity to Surge 56% in 2009 Despite Falling End-Market Demand

AUSTIN, TEXAS, August 11, 2009—DisplaySearch, the worldwide leader in display market research and consulting and part of the NPD Group, is expanding its business to include [solar market research](#). DisplaySearch has been tracking the solar industry since 2006, covering photovoltaic (PV) solar cells in its newsletters and blogs, providing PV-related custom consulting, and presenting on solar at conferences. The release of the first edition of the [Quarterly PV Cell Capacity Database & Trends Report](#) makes DisplaySearch's proprietary solar cell capacity database and unique analysis available to clients around the world. Using best of class research methodologies and a holistic supply chain approach proven in the display industry, DisplaySearch will expand its solar research offerings and support clients as they evaluate growth opportunities in the long-term solar industry.

According to the Q3'09 *Quarterly PV Cell Capacity Database & Trends Report*, solar cell manufacturing capacity is expected to grow 56% in 2009 to 17 GW. Ramped capacity, which was only 2.3 GW in 2005, is forecast to grow at a compound annual growth rate of 49% to more than 42 GW in 2013.

"Despite PV module demand shrinking 17% in 2009, so much cell manufacturing equipment was ordered and installed over the past year that capacity is still expected to grow 56% this year," said [Charles Annis](#), DisplaySearch Vice President of Manufacturing Research and author of the report. "With demand and capacity moving in different directions, the PV industry is currently experiencing an enormous over-supply that is causing rapid price erosion and potentially setting the stage for the failure of multiple cell manufacturers, particularly companies pursuing a-Si thin film solar cells. The PV industry will begin working through this excess capacity as demand recovers next year and takes off in 2011 and beyond."

Here are just some of the many highlights from the Q3'09 *Quarterly PV Cell Capacity Database & Trends Report*:

- Through 2006, Japan had the largest solar cell production capacity in the world. However, Chinese companies started to ramp up a host of new facilities in 2005 and by 2007 had more solar cell capacity on line than any other country. China has continued to invest heavily in production facilities, about a third of the worldwide cell capacity in 2009 and is forecast to be the main region for cell production well into the future.
- Of the 3.58 GW of thin film capacity available in 2009, more than 30% use 600 × 1200 mm glass substrates, the standard CdTe glass size used by First Solar. Gen 5-equivalent substrates, ranging from 1000 × 1200 to 1100 × 1400 mm, are the second most common glass size, used for 18% of available thin film capacity.
- Between January 2008 and July 2009, approximately 11.4 GW of new solar cell capacity was installed in fabs around the world. These previous investment commitments are the reason that capacity is continuing to grow 56% in 2009 despite falling demand.
- In 2005, 95% of solar cell manufacturing capacity was for crystalline silicon solar cells and 5% for thin film solar cells. In 2009, thin film will account for more than 20% of capacity. By 2013, thin film technologies are forecast to account for as much as 30% of solar cell capacity.
- For a-Si factories, in 2009 the four largest turnkey equipment vendors are AMAT, Oerlikon ULVAC and EPV, representing 946 MW of ramped capacity or more than 50% of a-Si capacity on-line this year.
- In terms of capacity available for production in 2009, First Solar is the largest solar cell manufacturer with more than 1 GW of capacity. Q-Cells and Suntech are not far behind and essentially tied for second place. These and other current leading PV cell manufacturers are forecast to invest at the highest rates over the next four years. By 2013, these three companies plus JA Solar, Motech, REC, SunPower, Yingli, Showa Shell Solar (assuming it moves forward with a planned 1 GW CIGS fab), and Sharp are forecast to be the top 10 makers, with more than 16 GW or 38% of 2013 capacity.

For information on the DisplaySearch Q3'09 [Quarterly PV Cell Capacity Database & Trends Report](#), contact Charles Camaroto at 1.888.436.7673 or 1.516.625.2452, e-mail [contact@displaysearch.com](mailto:contact@displaysearch.com) or contact your regional DisplaySearch office in [China](#), [Japan](#), [Korea](#) or [Taiwan](#).

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