SPVI has been monitoring progress in the solar industry, including the drive toward higher conversion and efficiency. In general terms, Chinese companies have been labelled in the past as the "followers" enabled by high-end equipment to reach best-cost commercial results, but the records belonged to mostly European companies like **Schott Solar** or **Q-Cells**. This situation has rapidly changed in the last six months. We have heard from
Suntech Power Holdings Co., Ltd. (NYSE: STP)
about their multicrystalline p-type
"Pluto"
cell reaching 20.3% conversion. Early in June
Canadian Solar
(NASDAQ: CSIQ)
delivered a 21.1% p-type mono cell. Yet just a few days ago we reported Q-Cells' "Q.antum" module produced 301W of peak output, using 20.9% n-type mono cells, which gave another mono module performance record to Germany.

However, the somewhat unnoticed **Trina Solar (NYSE: TSL)** holds a world record in multicrystalline module performance. Using the company's latest
Ultra Honey
cells, the module built with 60 cells recorded a 287.4W output, beating its prior 274W achieved in October 2011. This is a 17.6% module conversion, the highest recorded for any multicrystalline module to date. We have been privileged to have an opportunity to discuss this with
Mr.
Mike Grunow, Vice-President of Marketing for Trina Solar
, based in the San Francisco Bay-area.

SPVI: *Thank you very much Mr. Grunow. Honey cell is based on the multicrystalline wafer; can you tell us if there is a different process in use to produce the wafer, or is this a basic multicrystalline process? Some assumed that quasi-mono technology may have been involved; can you clarify? Can current multicrystalline cell lines be converted, or does Honey require a*

different technology and layout?

MG: The silicon used for the Honey cells is different. The ingots are mono-seeded, meaning you can't just convert an existing cell line using standard wafers. It needs to be a complete process from ingots through the panels.

SPVI: *Datasheets describe the Honey cell as having selective emitter technology, thinner bus bars and advanced texturing. Selective emitter is not a new concept; the double printing is also available through* **Applied Materials (NASDAQ: AMAT)** *Baccini's lines. Is the texturing the factor that makes Honey so unique and capable of producing such high-conversion modules?*

MG: The higher efficiencies are a combination of all of these elements. A 60 cell Honey panel has a 15.9% efficiency rating and an output of 255-260 watts. Our champion Honey series has an output of 290-305 watts.

SPVI: *Most companies speak volumes on high conversion, but they have kept the high costs away from the public eye. In general terms, high conversion equals high cost. Can you tell us about the cost per watt producing Honey cell-based modules with first generation technology, and how this will look with Honey Ultra? Are there any other cost improvements, for example in module assembly?*

MG: Our Honey product line is so named because it hits the "sweet spot" between performance and cost. The marginal value our customers receive from the Honey panel through its higher performance meets or exceeds the marginal value they receive from our existing product lines.

Trina Solar is seeking to maximize value to our customers in addition to just the price of the panels. We've developed a design services offering that can provide an initial project cost estimate, essentially acting as a developer's in-house design team. We've also partnered with leading solar component makers to develop all-in-one racking, inverter and monitoring solutions that lower the cost of panel installation.

SPVI: *Trina has strong ties with a number of Universities and Research Institutes. R&D spent for the company was around $44M in 2011. We understand that Trina has an n-type mono cell project with ANU (The Australian National University) for cells to reach more than 20% conversion. There is also a program with Solar Energy Research Institute of Singapore (SERIS) to achieve high efficiency, up to 23% conversion, back-contact cells. Can you tell us about some of those initiatives?*

MG: Trina Solar is a strategic company that has looked to partner with leading third parties from around the world to develop technologies that help lower the cost of panels and improve their performance and will continue to do so. That is evidenced by the company's technological leadership in the industry.

SPVI: *Trina has high objectives for the US market. Under current conditions, cells like Honey would draw duty. It appears that Honey and Honey Ultra are destined for the US market nevertheless, as part of the Trinasmart package, including the Trinamount system; therefore, how is Trina managing the objective to reach the market while eliminating extra cost?*

MG: As a result of the countervailing duties decision, Europe and Asia are getting the best technology before the United States does. Think of it as the United States still using 3G phones while the rest of the world gets 4G. Honey will be brought to the American market as we develop the manufacturing capabilities to do so.

SPVI: *Lastly, based on your experience, how do you see the next couple of years in the area of conversion? Critics believe that high conversion is not necessary as long as cost per watt is low enough. Others argue separation from the concept of commoditization, and crave unique characteristics; which would differentiate companies? According to a recent ENF report for May, there are 608 Chinese companies listed under module assembly in the Mainland alone. Particularly in China, does Honey offer a meaningful value and place ahead of those 608 entities?*

MG: We view panel performance as part of a three-legged stool that includes value added services and technical solutions for downstream solar customers. By providing all three, manufacturers can differentiate themselves as our industry matures. We feel that Trina Solar's conservative balance sheet and steady growth leaves us uniquely positioned to excel in these three areas.

As I mentioned above, we have developed our design services offering to provide a value-added service to Trina Solar customers. On the technical side we've developed racking, inversion and monitoring tools that lower the overall price of solar for our customers, improving their profit margins.

SPVI: *Thank you very much for your time, Mr. Grunow.*