Applied Materials Announces Breakthrough System to Drive the Next Wave of Solar Manufacturing

August 31, 2011

- New Applied Baccini® Pegaso™ modular platform enables the production of tomorrow's higher-efficiency solar cell designs at reduced cost through smart manufacturing
- System delivers high yield and output at the industry's lowest overall cost per watt
- Video briefing available at www.appliedmaterials.com/pegaso

SANTA CLARA, Calif., August 31, 2011 - Applied Materials, Inc. today announced its new Applied Baccini®Pegaso™ solar photovoltaic (PV) cell manufacturing platform that enables customers to bring their novel, high-efficiency cell designs into mass production. The Pegaso platform fabricates electrical circuits on both sides of a solar cell - a process that includes multiple screen-printed metallization steps, metrology and sorting. Advancing the state-of-the-art in cell manufacturing, the breakthrough Pegaso system delivers high yield and cell output - over 20 million solar cells per year - at the lowest overall cost-per-watt of any cell manufacturing system available.

“We are very impressed with Applied’s Baccini Pegaso technology. With the combination of Gintech’s high-caliber colleagues’s effort, the tests have shown that the system is producing the higher efficiency cells with lower breaking ratio in our facility, with reasonably good throughput and with yield,” said Dr. Wen-Whe Pan, president of Gintech Energy Corporation. “We’re looking forward to continuing our partnership with Applied into the future.”*

Key to the Pegaso platform's groundbreaking performance are its proprietary "smart" technologies that bring a new level of precision and control to the cell manufacturing process. The system's adaptive wafer-handling mechanism, based on planar motor technology, shuttles wafers between two independent tracks to optimize wafer output and enable continued operation during maintenance. The revolutionary Pegaso-XP™ dual print head incorporates a sophisticated closed-loop metrology system that adjusts printing parameters "on-the-fly" from wafer to wafer to achieve near micron-level accuracy and repeatability for fully optimized cell performance.

"The next wave of cost-per-watt reduction in the solar PV industry will be achieved through major changes in cell technology and manufacturing sophistication to simultaneously improve efficiency and factory output," said Dr. Mark Pinto, executive vice president and general manager of Applied's Energy and Environmental Solutions Group. "We're honored that a technology leader such as Gintech Energy has chosen Applied's Baccini Pegaso technology to accelerate its cell efficiency roadmap."

Importantly, the Pegaso platform features "future-proof" modular architecture that enables customers to rapidly add modules for additional processing capability. This can reduce the time, cost and risk of implementing emerging cell technologies, such as advanced back contact and selective emitter schemes. The Pegaso system is also backed by Applied Global Services, the largest and most comprehensive support capability to the crystalline silicon solar industry.

Applied Materials is the market leader in PV cell screen printing systems. An estimated three-quarters of the crystalline silicon solar cells in use today were manufactured using an Applied Baccini system. Applied Materials will showcase its Baccini Pegaso technology at the European Photovoltaic Solar Energy Conference and Exhibition (EU PVSEC) in Hamburg, Germany from September 5-8. For more information, visit www.appliedmaterials.com/pvsec.

*Paragraph has been modified

Applied Materials, Inc. (Nasdaq:AMAT) is the global leader in providing innovative equipment, services and software to enable the manufacture of advanced semiconductor, flat panel display and solar photovoltaic products. Our technologies help make innovations like smartphones, flat screen TVs and solar panels more affordable and accessible to consumers and businesses around the world. At Applied Materials, we turn today's innovations into the industries of tomorrow. Learn more at http://www.appliedmaterials.com/.

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