Aurora Provides Update on Market and Strategic Product Initiatives

written by Raj Shah | January 25, 2018

January 25, 2018 (Source) – Following recent commercial wins in the explosively growing market for advanced PV cells and modules, Aurora Solar Technologies Inc. (“**Aurora**”)(“**Company**”)(TSX.V:ACU) (OTCBB:AACTF) (FSE:A82) provides an update on further initiatives to consolidate and expand the company’s position in the industry.

Global Market Expansion

With the price of solar energy dropping from $6 per watt to less than $1 per watt in the past 8 years, the outlook for solar energy as an alternative to dirty fossil fuels has never looked brighter. Driving this cost reduction is the launch of new, innovative solar cell designs and processes which could see the market size triple by 2020 (greentechmedia.com). This growth is being driven by investments in clean energy from emerging markets such as China and India where heavy air pollution in major cities is a key strategic problem as well as from leading Western countries such as the U.S., Japan, UK and Canada, and the European Union.

The new solar cell designs such as Monocrystalline PERC, Bifacial and Heterojunction technology are leading the way in improving margins and productivity for cell producers. With significant investments in these three areas by the leading

global producers of solar cells, more than 80% of installed solar cell capacity are expected to reflect these designs within the next 7 years (thequartzcorp.com).

Addressing new high-efficiency solar cell markets.

Over the past two years, Aurora has successfully launched Decima and Gemini quality measurement platforms to support Monocrystalline PERC and Bifacial applications. The company has delivered more than 50 of these systems to leaders in the market and continues to expand its customer base and order book by establishing infrared quality measurement as a standard in all new production lines.

As part of the company's leadership strategy in production measurement and control for high-efficiency PV cell manufacturing, Aurora has recently made excellent progress in developing its infrared measurement technology to support Heterojunction Technology (HJT) PV cell manufacturing quality control. (HJT is an ultra high-efficiency solar cell design pioneered by Japan's Panasonic Corp., who is now also partnered with Tesla Inc. for solar products). According to Solar Media Ltd., HJT production capacity is expected to increase by 20 percent this year.

To accelerate this work, Aurora is collaborating with the Solar Energy Research Institute of Singapore (SERIS). SERIS, located at the National University of Singapore, is Singapore's national institute for applied solar energy research, and has strong expertise in HJT R&D.

"SERIS places great value on working with innovative industry partners such as Aurora," said Dr. Armin Aberle, SERIS' CEO. "With our scientific expertise in PV cell design and performance, and our advanced fabrication and analysis facilities, we can assist Aurora in the sophisticated technology

development necessary to quickly and effectively address high-growth market segments such as HJT.”

Dr. Thomas MUELLER, Head of SERIS’ Heterojunction R&D activities, added “We appreciate the opportunity to work with Aurora on developing rapid inline metrology tools to analyse solar cell doped layer carrier concentrations using infrared technology. The ability to gather this information at a large sampling rate in a non-destructive way will lead to much faster process optimization, tighter process control, and higher yield in PV production than is possible with today’s probing techniques.”

Alignment with Industry 4.0.

Aurora has also aligned its Veritas™ visualization, operations and administration system with the emerging Industry 4.0 initiatives in the PV industry. “Industry 4.0” refers to “smart factories” that will ultimately incorporate sensors at every stage of the manufacturing process, cloud computing and cognitive computing for fine-grained process and quality control. According to Dr. Gisela Lanza, Director of the Global Advanced Manufacturing Institute in Suzhou, China, “In China, particularly, there is enormous receptiveness for Industry 4.0. The predominant attitude there is, if I’m investing, then I’m going to spend my money on the very latest technology.” This is exemplified by Tongwei Group’s recent launch of their 2 Gigawatt “S2” production facility, which they claim to include the world’s first Industry 4.0 solar cell production line. In Veritas, Aurora provides facility-wide connectivity to multiple sensors, intelligent display and analysis of process performance and open communication with factory control and resource management systems. The company is also conducting work with leading PV manufacturers to further develop high-value features in Veritas that support Industry 4.0.

Increased capital spending focused on high efficiency solar cell upgrades.

Overall, the Company is observing and benefiting from an unprecedented increase in capital spending focused on the adoption of advanced solar cell structures including Monocrystalline PERC, Bifacial and HJT PV cells.

Finlay Colville, Head of Solar Intelligence for Solar Media, says “The focus on new technology, both due to upgrades and when incorporated in new fab builds, since 2015 looks very different to the technologies that drove PV equipment spending above $10 billion during 2010 and 2011. At the c-Si stage, the most obvious change has come from PERC, and by 2019, most of the capacity for both p-type mono and multi will have shifted to include rear passivation deposition (PERC), with many of the companies having a clear roadmap to bifaciality. Moving into 2020, this will become mainstream for the industry. Indeed, anyone making c-Si cells with efficiencies below 20% is likely to be left with low-cost selling options then.”

“Monocrystalline PERC and Bifacial cell applications drove our business last year and with the addition of Heterojunction optimization solutions to our portfolio, we are well positioned as the solution provider for advanced cell measurement and efficiency optimization,” said Michael Heaven, Aurora’s CEO. “The company is discussing new orders for plant expansions with existing customers and conducting testing activities under NDA’s with several new prospective clients and expects additions to the order pipeline disclosed in the November 20, 2017 release in the next several weeks and months.”

About Aurora Solar Technologies:

Aurora’s mission is to deliver exceptional results to the photovoltaic industry through measurement and control of

critical processes during solar cell manufacturing.

We measure and map the results of critical cell fabrication processes, providing real-time visualization of material properties and true production tool performance. Our products provide process engineers and production-line operators with the means to rapidly detect and correct process excursions, material faults, limit variations, and optimize processes, thereby eliminating yield-reducing and profit-killing product variation.

We are creating the standard for quality control systems for the global photovoltaic industry.

Headquartered in North Vancouver, Canada, and founded by experienced leaders in process measurement, semiconductor manufacturing and industrial automation, the Company's shares are listed on the TSX Venture Exchange and trade under the symbol "ACU". The Company was formerly "ACT Aurora Control Technologies". For more information, Aurora's website is located at www.aurorasolartech.com.

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