

# Yingli Green Energy, Energy Research Centre of the Netherlands and Amtech Systems Announce Research Collaboration to Develop Next Generation High Efficiency Solar Cells

# Patented Method for Improved Solar Cell Efficiency Expected to Lower Solar Energy Costs

BAODING, China & TEMPE, Ariz.--(BUSINESS WIRE)-- Yingli Green Energy Holding Company Limited (NYSE: YGE) ("Yingli Green Energy"), one of the world's leading vertically integrated photovoltaic ("PV") product manufacturers, the Energy Research Centre of the Netherlands ("ECN"), a leading solar research center in Europe, and Amtech Systems, Inc. (NASDAQ: ASYS) ("Amtech"), a global supplier of production and automation systems and related supplies for the manufacture of solar cells, today announced a three-party research collaboration agreement to develop next generation high efficiency solar cells.

The joint project under the agreement endeavors to develop and implement high efficiency N-type silicon solar cells, named PANDA, at Yingli Green Energy's pilot production line in Baoding, China. The high efficiency cells will utilize the cell design of ECN, the solar diffusion technology and dry PSG removal expertise of Tempress Systems, Inc., Amtech's solar subsidiary ("Tempress"), and Yingli Green Energy's leading cell process technology. The construction of the pilot production line does not require significant capital expense, as it only makes moderate changes on the current production lines.

"Yingli Green Energy always strives to be at the forefront of the latest technological developments in the PV industry," said Mr. Liansheng Miao, Chairman and Chief Executive Officer of Yingli Green Energy. "To that end, we are very pleased to be entering into a cooperation that combines our strong commercialization capabilities with the strengths of a global research institution and a leading equipment supplier. We look forward to playing a crucial role in the introduction of the next generation of high efficiency solar cells. PANDA aims at significantly raising the efficiency of crystalline silicon solar cells and at commercializing the new technology quickly on our production lines."

"We are very happy that ECN's technology for N-type crystalline silicon solar cells is going to be industrialized in cooperation with these ambitious partners with a long operating history in the PV industry," said Ton Hoff, Chairman of the Board of ECN.

J.S. Whang, President and Chief Executive Officer of Amtech, commented, "We are excited about this joint agreement with leaders in the industry and its potential to contribute to significant improvements in solar cell efficiency and bring solar energy closer to achieving

grid parity. PANDA is true validation for our Tempress' in-depth diffusion expertise and our capability for supplying reliable diffusion and automation equipment to the solar industry."

## About Yingli Green Energy

Yingli Green Energy Holding Company Limited (NYSE: YGE) is one of the world's leading vertically integrated PV product manufacturers. Yingli Green Energy designs, manufactures and sells PV modules and designs, assembles, sells and installs PV systems that are connected to an electricity transmission grid or operate on a stand-alone basis. Based in Baoding, China, Yingli Green Energy sells its PV modules to system integrators and distributors located in various markets around the world, including Germany, Spain, Italy, South Korea, Belgium, France, China and the United States. For more information, please visit <a href="https://www.yinglisolar.com">www.yinglisolar.com</a>.

### About The Energy Research Centre of the Netherlands

The Energy Research Centre of the Netherlands is the largest research center in the field of energy in the Netherlands. ECN's technology is used in the production of solar cells, as well as other alternative energy sources. In cooperation with universities, ECN develops high-quality knowledge and technology for a sustainable energy system, and transfers these to the market. ECN is located near Petten, the Netherlands, and employs approximately 630 people. The ECN website is <a href="https://www.ecn.nl">www.ecn.nl</a>.

#### About Amtech

Amtech Systems, Inc. (NASDAQ: ASYS) manufactures capital equipment, including silicon wafer handling automation, thermal processing equipment and related consumables used in fabricating solar cells and semiconductor devices. Semiconductors, or semiconductor chips, are fabricated on silicon wafer substrates, sliced from ingots, and are part of the circuitry, or electronic components, of many products including solar cells, computers, telecommunications devices, automotive products, consumer goods, and industrial automation and control systems. The Company's wafer handling, thermal processing and consumable products currently address the diffusion, oxidation and deposition steps used in the fabrication of solar cells, semiconductors, MEMS and the polishing of newly sliced silicon wafers.

#### Safe Harbor Statement

This press release contains forward-looking statements. These statements constitute "forward-looking" statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, and as defined in the U.S. Private Securities Litigation Reform Act of 1995. These forward-looking statements can be identified by terminology such as "will," "expects," "anticipates," "future," "intends," "plans," "believes," "estimates" and similar statements. Such statements are based upon management's current expectations and current market and operating conditions, and relate to events that involve known or unknown risks, uncertainties and other factors, all of which are difficult to predict and many of which are beyond Yingli Green Energy's and Amtech Systems' control, which may cause Yingli Green Energy's and Amtech Systems' actual results, performance or achievements to differ materially from those in the forward-looking statements. Further information regarding these and other risks, uncertainties or factors is included in Yingli Green Energy's and Amtech

Systems' filings with the U.S. Securities and Exchange Commission. Yingli Green Energy and Amtech Systems do not undertake any obligation to update any forward-looking statement as a result of new information, future events or otherwise, except as required under applicable law.

Source: Amtech Systems, Inc.