

Natcore Technology Issues Progress Update

Written by Australian Business

RED BANK, N.J., Oct. 25, 2013 /PRNewswire/ -- Because Natcore Technology Inc. (TSX-V: NXT; NTCXF.PK) has added a meaningful number of new shareholders recently, the company would like to update new and existing shareholders about their progress in bringing their solar energy applications to commercialization.

Focused on the photovoltaic/solar industry, Natcore currently holds 16 granted patents and 21 pending patents. While the company is focused on earth-bound solar applications, their proprietary technology could address applications as mundane as coatings on eyeglasses or the inside of water heaters to sophisticated tandem solar cell technology used on satellites.

Because it is important for a small company to remain focused, Natcore recently convened a meeting of their scientific team, including their advisory board, to their lab in Rochester, NY with one purpose in mind: to review all of their technologies and potential applications, identify which of these applications the solar industry wants and needs, and prioritize that list in terms of applications with the most direct path to commercialization.

Included in this solar brain trust were Dr. David Levy, Director of Research & Technology; Dr. Dennis Flood

, Chief Technology Officer; Professor Andrew Barron

, Charles W. Duncan, Jr.

-Welch Professor, Professor of Materials Science at RICE University

; Dr.

David Carlson

, former Chief Technology of BP Solar and Dr.

Daniele Margadonna

, Chief Technology of MX Solar.

As a result of this meeting, Natcore identified three technologies (Black Silicon, Selective Emitter and Liquid Phase Deposition Passivation) needed by the industry that could reduce manufacturing costs, increase performance, or accomplish both. The company's technology

could be instrumental in delivering these applications to the industry in a relatively short time frame.

- **Black Silicon** is the etching of nano-sized pores into a solar cell surface either through gold or silver nanoparticles. The resulting surface acts as a replacement for the antireflective coating of traditional solar cells. Natcore's scientists have become quite adept in manufacturing traditional solar cells in their lab. They have also been able to manufacture black silicon cells with the same or similar efficiencies. They are now quantifying, both internally and through third-party studies, the cost savings that this application would bring to solar cell manufacturing by using black silicon instead of the traditional anti-reflective coating. They expect to have these numbers shortly.

- **Selective Emitter** is a process whereby varying the thickness of doping on a cell will improve the energy output and/or reduce resistance. This application has the potential to increase efficiencies by 3%-5% relative to current standards. Natcore has demonstrated that their Liquid Phase Deposition films can provide a manufacturing-friendly process needed and wanted by the industry. They have also invented technology that allows us to easily pattern these films, a requirement for using them for a selective emitter.

- **Liquid Phase Deposition Passivation** is Natcore's proprietary process that allows surface passivation without utilization of a CVD furnace. This potentially allows the passivation of some high efficiency solar cell designs in a simpler and more cost effective way than can be done currently.

These three technologies are stand-alone applications, although the common thread that makes them work is Natcore's Liquid Phase Deposition technology. Natcore feels that they will be able to begin the marketing phase with the Black Silicon application shortly.

In addition to these three shorter-term projects, Natcore is pursuing two major long-term applications in a tandem solar cell and a flexible solar cell. These last two technologies, although not as close to commercialization, could truly change the solar industry by nearly doubling the efficiency of today's best cells or cutting manufacturing costs by up to half.

The fact that China is no longer aggressively subsidizing their solar industry has created an opportunity for technology to bring much-needed advantages to an equal playing field. Incremental improvements in power output or incremental reductions in cost will have a great impact to the cell manufacturer, and Natcore's goal is to provide those improvements.

Another critical issue is the fact that manufacturing a solar cell involves highly toxic materials.

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At some point as the industry continues to mature, this issue must be addressed. Natcore's technology is relatively benign compared to current industry standards. Their Liquid Phase Deposition process eliminates the use of vacuum furnaces (offering significant energy savings) and silane gas (which is highly explosive and dangerous). Natcore feels that they are at the leading edge not only in improving efficiencies and reducing costs for the solar industry, but also in addressing the toxic waste issues inherent in current solar cell manufacturing.

Natcore's management hopes this update provides investors with a better understanding of how far their research and development has come, and where they hope to be in the near future. Interested parties are encouraged to contact the company directly for more information.

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