

**Form 51-102F3**  
**Material Change Report**

**PART 1        GENERAL INSTRUCTIONS AND INTERPRETATION**

**(a)        Confidentiality**

If this Report is filed on a confidential basis, state in block capitals "CONFIDENTIAL" at the beginning of the Report.

**(b)        Use of "Company"**

Wherever this Form uses the word "company" the term includes other types of business organizations such as partnerships, trusts and other unincorporated business entities.

**(c)        Numbering and Headings**

The numbering, headings and ordering of the items included in this Form are guidelines only. You do not need to include the headings or numbering or follow the order of items in this Form. Disclosure provided in response to any item need not be repeated elsewhere.

**(d)        Defined Terms**

If a term is used but not defined in this Form, refer to Part 1 of National Instrument 51-102 and to National Instrument 14-101 *Definitions*. If a term is used in this Form and is defined in both the securities statute of a local jurisdiction and in National Instrument 51-102, refer to section 1.4 of Companion Policy 51-102CP.

**(e)        Plain Language**

Write the Report so that readers are able to understand it. Consider both the level of detail provided and the language used in the document. Refer to the plain language principles listed in section 1.5 of Companion Policy 51-102CP. If you use technical terms, explain them in a clear and concise manner.

**PART 2        CONTENT OF MATERIAL CHANGE REPORT**

**Item 1        Name and Address of Company**

Natcore Technology Inc.  
47 Club Way  
Red Bank, New Jersey  
07701

**Item 2        Date of Material Change**

May 5, 2011

**Item 3        News Release**

A news release was disseminated on May 5, 2011 through the facilities of Marketwire.

**Item 4            Summary of Material Change**

Natcore scientists were able to demonstrate Natcore's liquid phase deposition (LPD) process can be used to apply an antireflective (AR) coating to textured solar cells as well as standard planar cells.

**Item 5            Full Description of Material Change**

Please see attached news release.

**Item 6            Reliance on subsection 7.1(2) or (3) of National Instrument 51-102**

This Report is not being filed on a confidential basis in reliance on subsection 7.1(2) or (3) of National Instrument 51-102.

**Item 7            Omitted Information**

No information has been omitted on the basis that it is confidential information.

**Item 8            Executive Officer**

Charles Provini is knowledgeable about the material change and the Report and may be contacted (732) 576-8800.

**Item 9            Date of Report**

May 5, 2011



**NEWS RELEASE**

Contact: Chuck Provini  
732-576-8800

## **Natcore Technology Successfully Uses LPD Process on Textured Solar Cells**

### ***Advance Enables Cost Savings by Allowing Use of Thinner Silicon Wafers***

Red Bank, NJ — (May 5, 2011) — Scientists of Natcore Technology Inc. (TSX-V: NXT; NTCXF.PK) have shown that Natcore's liquid phase deposition (LPD) process can be used to apply an antireflective (AR) coating to textured solar cells as well as standard planar cells, thus opening the door for the industry to achieve even further wafer thickness reductions by eliminating the thermal vacuum AR coating process altogether. The work was conducted by Natcore researchers at the Ohio State University in Columbus, Ohio.

One of the primary ways solar cell manufacturers are striving to reduce the cost of manufacturing silicon solar cells is to reduce the thickness of the wafers from which the cells are made. As the wafers get thinner, however, they lose the ability to fully absorb the light that strikes their front surface; consequently, the efficiency falls. A technique commonly employed to overcome this fundamental limitation is to isotropically etch the front surface of the wafer in order to form a regular pattern of small pyramids on it. The shape and angles of the pyramidal faces are such that more light is refracted into the crystal over a range of angles that prevent the light from travelling straight through the solar cell and being incompletely absorbed. The process, known as texturizing the wafer surface, has gained widespread acceptance in the solar cell industry.

Once texturized, the cells are put through the remaining standard cell processing steps, which include adding the AR coating and the contacts. A growing problem, however, is that the conventional AR coating process requires the cells to travel through a vacuum furnace. As the wafers get thinner and thinner, the conventional AR coating process causes them to warp, reducing the yield from the production process.

Reflectance is the proportion of light striking a surface that is reflected from it. For solar cells, the optimum reflectance is zero; a typical industry reflectance is about six percent. Measurements made at NASA Glenn Research Center in Cleveland, Ohio, show that the reflectance from texturized wafers coated with Natcore's LPD antireflective coating is reduced to well below two percent over the entire absorption band of silicon solar cells. This represents a two-thirds reduction from the typical reflectance achieved by standard industry practices today, and would be accompanied by an increase in cell efficiency.

"The processing steps for achieving this outstanding result will be implemented in the intelligent processing tool we're building in Silicon Valley," says Natcore Chairman Brien Lundin. "We've had strong interest in this technology from several solar cell companies in China. We'll send a number of coated wafers for each of them to process into finished solar cells before we take orders for the industrial version of our intelligent processing tool."

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*Statements in this press release other than purely historical factual information, including statements relating to revenues or profits, or Natcore's future plans and objectives, or expected sales, cash flows, and capital expenditures constitute forward-looking statements. Forward-looking statements are based on numerous assumptions and are subject to all of the risks and uncertainties inherent in Natcore's business, including risks inherent in the technology history. There can be no assurance that such forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on such statements. Except in accordance with applicable securities laws, Natcore expressly disclaims any obligation to update any forward-looking statements or forward-looking statements that are incorporated by reference herein.*

*Neither TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.*