

MATERIAL CHANGE REPORT

This material change report is being filed with the appropriate securities regulatory authorities to comply with the requirements of:

Section 85(1) of the Securities Act (British Columbia)
Section 118(1) of the Securities Act (Alberta)
Section 84(1) of the Securities Act (Saskatchewan)
Section 75(2) of the Securities Act (Ontario)
Section 73 of the Securities Act (Quebec)
Section 112 of the Securities Act (Manitoba)

NOTE: This form is intended as a guideline. A letter or other document may be used if the substantive requirements of this form are complied with.

ITEM 1 Reporting Issuer:

Global Thermoelectric Inc.
4908 52nd Street S.E.
Calgary, Alberta T2B 3R2

ITEM 2 Date of Material Change:

June 27, 2003

ITEM 3 News Release:

News release, attached as Schedule "A" hereto, released through Canada Newswire on June 27, 2003.

ITEM 4 Summary of Material Change:

Global Thermoelectric Inc. ("Global") announced that Global and Quantum Fuel Systems Technologies Worldwide, Inc. ("Quantum") have settled legal action commenced by Enbridge Inc. (the owner of all outstanding Global Series 2 Preferred Shares) challenging the combination between Quantum and Global. In addition, the parties have re-affirmed their commitment to commercializing Global's solid oxide fuel cell ("SOFC") technology.

ITEM 5 Full Description of Material Change:

See News Release, attached as Schedule "A" hereto.

ITEM 6 Reliance on Section 118(2) of the *Securities Act* (Alberta):

N/A

ITEM 7 Omitted Information:

N/A

ITEM 8 Senior Officer:

The name and telephone number of the senior officer of Global Thermoelectric Inc. who is knowledgeable about the material change and this report is:

Paul Crilly
Vice President, Finance and Chief Financial Officer
Telephone: (403) 204-6100

ITEM 9 Statement of Senior Officer:

The foregoing accurately discloses the material change referred to herein.

DATED this 7th day of July 2003, at the City of Calgary, in the Province of Alberta.

GLOBAL THERMOELECTRIC INC.

Per "Donelda Bester"
Donelda Bester
Assistant Corporate Secretary

IT IS AN OFFENCE UNDER THE *SECURITIES ACT* AND THE *SECURITIES REGULATION* FOR A PERSON OR COMPANY TO MAKE A STATEMENT IN A DOCUMENT REQUIRED TO BE FILED OR FURNISHED UNDER THE ACT OR THE REGULATION THAT, AT THE TIME AND IN THE LIGHT OF THE CIRCUMSTANCES UNDER WHICH IT IS MADE, IS A MISREPRESENTATION.

Schedule "A" to the Material Change Report

Attention Business Editors:

Global and Quantum Settle Dispute with Enbridge Inc.

CALGARY, AB, IRVINE, CA June 27 /CNW/ - Global Thermoelectric Inc. (TSX: GLE) and Quantum Fuel Systems Technologies Worldwide, Inc. (Nasdaq: QTWW) today announced that they have settled legal action commenced by Enbridge Inc. (the owner of all outstanding Global Series 2 Preferred Shares) challenging the combination between Quantum and Global. In addition, the parties have re-affirmed their commitment to commercializing Global's solid oxide fuel cell ("SOFC") technology.

In connection with the settlement, Enbridge agreed to discontinue its legal action challenging the Combination and agreed not to oppose the Combination, and the parties agreed to the following matters, effective upon completion of the Combination:

- Quantum will guarantee Global's dividend obligations under the terms of the Global Series 2 Preferred Shares and will cause Global to pay the minimum CDN\$500,000 of annual dividends in cash to the holder of the Series 2 Preferred Shares.
- While Enbridge holds the Global Series 2 Preferred Shares, Enbridge will have the contractual right to one director to each of the Quantum board and the Global board following completion of the Combination. The Combination Agreement, which provided Global with two nominees on the Quantum board immediately following completion of the transaction, was amended to provide one of those two board seats to Enbridge.
- Quantum granted Enbridge the right to require Quantum to purchase all of the Global Series 2 Preferred Shares from Enbridge at a price of CDN\$15 million, plus any accrued and unpaid dividends on the shares. Enbridge may exercise this "put" right as follows: (1) during the first three years subsequent to the Combination in the event of a change of control of Quantum or the bankruptcy or insolvency of Quantum or Global; (2) between the first and third anniversary of the closing of the Combination in the event Quantum's unrestricted consolidated cash position falls below CDN\$25 million; or (3) anytime between the third and fourth anniversary of the closing of the Combination.
- Quantum will assume Global's obligations under Global's existing joint development agreement with Enbridge.
- For the two year period following completion of the Combination, Quantum committed to spend a minimum of CDN\$6 million annually on the development and commercialization of SOFC technology. Quantum believes that this financial commitment is within Global's historical expenditures on SOFC development.
- Quantum agreed to use reasonable commercial efforts to fund the commercialization of SOFC systems and technology and to secure additional outside funding to be used for SOFC commercialization.

The Combination will be submitted to the shareholders of both Quantum and Global for approval. The transaction is expected to close in the third calendar quarter of 2003 subject to court approval, regulatory approvals and other customary closing conditions and subject to the timing of all such approvals.

Forward-looking statements:

Statements in this document regarding the proposed transaction between Quantum and Global and any other statements about the future expectations, beliefs, goals, plans, or prospects expressed by the management of either Quantum or Global constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Any statements that are not statements of historical fact (including statements containing the words "believes," "plans," "anticipates," "expects," "estimates," and similar expressions) should also be considered to be forward-looking statements. There are a number of important factors that could cause actual results or events to differ materially from those indicated by such forward-looking statements, including: the ability of the parties to consummate the combination; the impact of Quantum's dividend guarantee, share put and research and development funding obligations on Quantum's financial condition; the absence of any right of K2 to terminate the voting agreement; the ability of parties to obtain all requisite approvals; the satisfaction of certain conditions to closing of the combination, including the risk that shareholder and court approval might not be obtained in a timely manner or at all; the ability of the parties to successfully integrate Quantum's and Global's operations and employees; the ability to realize anticipated synergies and cost savings; and the other factors and risks described in Quantum's Preliminary Proxy Statement filed with the SEC on May 7, 2003, its Form 10-K for fiscal year ended April 30, 2002, and other documents filed with the Securities and Exchange Commission by Quantum. Forward-looking statements are based on the beliefs, opinions, and expectations of the Company's management at the time they are made, and the Company does not assume any obligation to update its forward-looking statements if those beliefs, opinions, expectations, or other circumstances should change.

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The foregoing may be deemed to be offering materials of Quantum Fuel Systems Technologies Worldwide, Inc. in connection with Quantum's proposed acquisition of the outstanding common shares of Global Thermoelectric Inc. on the terms and subject to the conditions in the Combination Agreement, dated as of April 8, 2003, between Quantum and Global. The Combination Agreement was previously filed by Quantum under cover of Form 8-K.

In connection with their proposed combination, Quantum and Global intend to file a joint proxy statement/management information circular (the "Joint Proxy Statement") with the Securities and Exchange Commission (the "SEC"). STOCKHOLDERS OF QUANTUM AND GLOBAL AND OTHER INVESTORS ARE URGED TO READ THE JOINT PROXY STATEMENT THAT WILL BE FILED WITH THE SEC IN CONNECTION WITH THE PROPOSED TRANSACTION BECAUSE IT WILL CONTAIN IMPORTANT INFORMATION ABOUT QUANTUM, GLOBAL, THE TRANSACTION, THE PERSONS SOLICITING PROXIES IN THE TRANSACTION AND THEIR INTERESTS IN THE TRANSACTION AND RELATED MATTERS.

After it is filed with the SEC, the joint proxy statement will be available for free, both on the SEC's web site at www.sec.gov and from Quantum by directing a written or oral request for copies to Cathy Johnston, Quantum Fuel Systems Technologies Worldwide, Inc., 17872 Cartwright Road, Irvine CA, 92614, telephone: (949) 399-4500.

In addition to the proposed registration statement and joint proxy statement, Quantum files annual, quarterly and special reports, proxy statements and other information with the SEC. You may read and copy any reports, statements or other information filed by Quantum at the SEC's public reference rooms at 450 Fifth Street, N.W., Washington, D.C. 20549 or at the SEC's other public reference rooms in New York, New York and Chicago,

Illinois. Please call the SEC at 1-800-SEC-0330 for further information on the public reference rooms. Quantum's filings with the SEC are also available to the public from commercial document-retrieval services and on the SEC's web site at <http://www.sec.gov>.

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For further information: Global: Peter Garrett, President and CEO, Paul Crilly, Vice President, Finance and CFO, Mark Kryzan, Director, Corporate Affairs, (403) 204-6100; Quantum: please contact: Dale Rasmussen, Investor Relations, (206) 315-8242, Andy Abele, Director of Business Development, (949) 399-4527, Cathy Johnston, Director Communications, (949) 399-4548; To request a free copy of this organization's annual report, please go to <http://www.newswire.ca> and click on reports@cnw.