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## **ENERGY EFFICIENCY**

### **Glass Technology Co. Research Frontiers Raises \$1.6M**

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#### **PUBLIC COMPANY**

3/4/2010 – Energy-efficient glass technology company Research Frontiers Inc. said Wednesday it raised \$1.6 million in capital in an equity and warrant offering.

The Woodbury, N.Y.-based company will use the money to expand marketing efforts for its technology, which acts as an electrically-controlled tinting film for glass, said Gregory Sottile, Research Frontiers director of market development, said in an interview with Clean Technology Insight.

The company will also use the money to expand marketing for its licensees, and for working capital and general corporate purposes.

The investors received 588,602 shares of Research Frontiers common stock for \$2.75 per share, which was the closing stock price on Feb. 25, and 117,719 five-year warrants to purchase Research Frontiers common stock at a price of \$5.00 per share.

Research Frontiers created a light-control technology called Suspended Particle Device, or SPD. Sottile said the film-based technology includes microscopic particles. When the electrical voltage of the film is adjusted either manually or through a timer or sensor, the particles go from a random scattered state to one that is aligned to let more or less light pass through.

This can optimize the amount of light and heat let into a room to adjust to time of day and year. The tinting can be changed from clear to almost completely shaded using a remote control or an automated system.

"In the very dark state you can reject a lot of incoming heat, so if you want to keep your cooling bills lower you would go to more of a shaded state," Sottile said. "In the wintertime, you would keep the window in a clearer state to harvest some of the heat. Normally tinted buildings wouldn't offer enough lighting at times. That is inefficient."

The film can be used in windows, skylights, curtain walls, partitions, sunroofs and other glass products. The company's 37 licensees worldwide serve the architectural, automotive, aerospace and marine markets, Sottile said.

"Everybody has a need for light, but no one wants to be overwhelmed by it, you have a desire to control it," Sottile said. "You have a need for energy efficiency control systems that empower you to control the environment."

One of Research's licensees is Dublin-based SmartGlass International Ltd., which said last June that it signed a distribution deal with the Schott Group, a mid-sized German glass company.

Research Frontiers has been developing this glass technology since the company's inception in 1965 and the company saw its first significant sales last year, it said at the time. The company reported \$1.68 million in revenue for 2008.

In the nine months of 2009 that ended Sept. 30, the company saw a net loss of \$3.3 million, compared with a loss of \$1.7 million in the same period of the year prior.

Joe Harary, president and chief executive of Research Frontiers, said in an interview in June 2009 that the advantage of this shading technology is that it allows building occupants to see through the windows, unlike traditional shades. It blocks 43% of the sun's heat when the tint is at near zero and 94% when the tint is turned all the way up, Harary said. He said traditional insulated glass used commonly on commercial buildings blocks about 40% of the sun's heat.

When the tint is down, it allows daylight in to reduce the amount of lighting needed in a building and when the tint is up high, it lowers the demand on a building's cooling system.

Lighting, heating and cooling combined make up most of a building's energy use, according to industry experts.

A variety of systems exist among clean technology companies to maximize day lighting use and to prevent heat from the sun seeping into a building and increasing the load on cooling systems. The technologies range from films to super-insulated windows to automated vinyl shading systems.

Shares of Research Frontiers dropped 2 cents, or 0.7%, to \$2.98 in Wednesday trading on the Nasdaq.

<http://www.SmartGlass.com>