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Green Generation Sources Enter the Mainstream Full Force Reports Frost & Sullivan

SAN ANTONIO--(BUSINESS WIRE)--June 27, 2000--Long considered a novel concept, renewable energy technologies are finally becoming mainstream energy options.

Deregulation of the energy industry has opened the door for competition, and new power generation methods will soon be firmly entrenched in the North American electricity infrastructure.

According to new research by Frost & Sullivan (www.frost.com), "North American Renewable Energy Markets," the total market jumped from \$204 million in 1998 to \$843.4 million in 1999. The dynamic numbers of 1999 are largely attributed to the expected expiration of a federal production tax credit for wind projects, which has since been extended.

This staggering growth rate should slow in the near term and then resume its rapid pace again by 2004. However, the growth achieved in 1999 is unlikely to recur during the forecast period.

Growth across the renewable energy segments will be relatively uneven in the near future. Wind and biopower segments both show promise, with the wind power segment experiencing the most rapid growth. Biopower should also continue to grow steadily on the heels of recent tax incentives.

"Although deregulation and competition have fostered the introduction of renewable energy technologies, the demand for low-cost electricity puts the higher cost of renewable energy at a disadvantage," says Frost & Sullivan analyst Heidi Anderson.

"Currently, coal and natural gas are cheaper than any form of renewable energy. Education about the environmental and social benefits of renewable power must be integrated with information about pollution and other side effects associated with fossil fuel-based power generation."

The renewable energy industry must focus on R&D to actively compete with fossil fuel-based power generation. Moreover, market participants must quickly move promising technologies from the development stage to the marketplace.

At the same time, R&D alone will not guarantee a technology's implementation. Research should be balanced with extensive marketing. A technically sound product is not sufficient. Manufacturers know that product recognition in the marketplace is essential.

This Frost & Sullivan report analyzes the major power segments of the renewable energy markets, including wind, solar, biopower (such as waste-to-energy) and geothermal power. It uncovers market drivers and restraints and highlights emerging trends.

Frost & Sullivan presents 2000 Market Engineering Awards to companies that have worked hard to make a positive contribution to the renewable energy industry. The Business Development Strategy Award is presented to Ogden Energy Group (NYSE:OG - news).

The Merger & Acquisition Strategy Award is given to BP Solarex, a division of BP Amoco (NYSE:BPA - news). The Technology Innovation Award is awarded to AstroPower Inc. (Nasdaq:APWR - news).

Market participants include Altair Energy L.L.C.; American Hydro Corporation; Applied Power Corporation; Ase Americas Inc.; AstroPower Inc.; Atlantic Orient Corporation; Bergey Windpower Co.; Blue Energy Canada; BP Solarex; Calpine; Canyon Industries; Echelon Manufacturing; Energy Photovoltaics Inc.; Energy Systems & Design; Enron Wind Corporation; Entech Inc.; Evergreen Solar; Hurst Boiler and Welding Co. Inc.; Industrial Boiler and Combustion Inc.; Kyocera Solar; McKay Water Power Ltd.; Ogden Energy Group Inc.; Ormat; Powerlight Corporation; Primenergy Inc.; Science Applications International Corporation; Siemens Solar Industries; Southwest Windpower Inc.; Steam & Control Systems Inc.; United Solar Systems Corporation; Vestas-American Wind Technology; and Wind Turbine Industries Corporation.

Frost & Sullivan, which is headquartered in San Jose, Calif., is a global leader in international marketing consulting and training. Frost & Sullivan monitors the energy industry for market trends, market measurements and strategies. This ongoing research is used to complement the Distributed Generation Custom Subscription, which includes studies on the North American Generator Set Markets and the North American Stationary Fuel Cell Markets. Free executive summaries of all reports are available to the press.

Along with publishing in-depth market consulting reports, Frost & Sullivan also provides custom consulting needs to a variety of national and international companies.

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