# Winslow Environmental News

VOLUME 14, NUMBER 4 PUBLISHED BY WINSLOW MANAGEMENT COMPANY, A DIVISION OF ADAMS HARKNESS ASSET MANAGEMENT OCTOBER 2004

## Climate Change: Serious Implications for Investors

**BY ELLEN PFEIFER**

When Hurricanes Charley and Frances roared through Florida in August and September, they left 23 people dead, tens of thousands of homes destroyed, at least $300 million in devastated citrus groves, and a combined insured loss between $8 to $12 billion dollars, according to the *Tallahassee Democrat*. In the wake of these storms, and Ivan and Jeanne on their heels, many insurance companies were feeling the shock of damage claims. Even more individuals were reeling with personal losses not covered by insurance, thanks to tightened coverage policies instituted after Hurricane Andrew in 1992.

**Natural disasters on the rise; Climate change partly to blame**

But it's not just hurricanes that are elevating worldwide insurance

*Please see CLIMATE CHANGE page 4*

*FEATURED COMPANY*

## VESTAS: HARNESSING THE WIND

**BY ELIZABETH LEVY**


THROUGHOUT THIS PAST SUMMER, CRUDE OIL PRICES SEEMED TO HIT NEW HIGHS EVERY DAY, LARGELY DUE TO TURMOIL IN OIL-PRODUCING REGIONS OR COMPANIES. AS ENERGY COSTS SOARED, THE ENVIRONMENTALLY MINDED CONSUMER COULDN'T HELP BUT SEE AN OBVIOUS ALTERNATIVE: EXPLOIT AN ENERGY SOURCE THAT IS READILY AVAILABLE, COST COMPETITIVE, EASY TO HARNESS, AND IMMUNE TO WARTIME tumult: wind power. Vestas Wind Systems A/S (Copenhagen:VWS.CO), the world's leading manufacturer of wind turbines, is helping to make that alternative a reality.

Vestas produced and installed its first wind turbine in 1979 in Denmark. Since then, the company has installed its high-tech windmills in more than 50 countries and now has manufacturing and service capabilities in 20 countries. In March 2004, Vestas completed the acquisition of NEG Micon, another Danish wind turbine company, and recently raised capital that will give the company the

*Please see VESTAS page 7*

**MARKETBEAT** PAGE 2

### Greenhouse Gases Choke Performance

*Companies that ignore the effects of pollution may find bad investment climate*

**PORTFOLIO UPDATE** PAGE 6

### Presstek Acquires Two Companies

*Move strengthens its chemistry-free and process-free market position*

# Climate Change: A Market Perspective

BY JACKSON W. ROBINSON

The first wave of environmental problems attributable to climate change is becoming acutely evident. Ice caps and glaciers are melting, rivers are flooding, forest fires are increasing and heat waves are killing people and crops. As we begin to quantify the long-term consequences of climate change, we at Winslow believe that the costs will be far-reaching and very significant. As in any period of sea change, there will be investment pitfalls and opportunities; a trend we believe is now emerging.

The culprit driving climate change is the emission of greenhouse gases – the most prevalent of which is carbon dioxide (CO2). According to the Energy Information Administration, 82% of greenhouse gas emissions in the U. S. in 2001 came from CO2 produced by the combustion of fossil fuels (coal, gas and oil). The primary offenders are the major fossil fuel producers and consumers, such as coal-burning utilities, airlines, oil and gas producers and automobile manufacturers.

Not every company within these industries blithely ignores the consequences of pollution, however. There are some prescient companies that have anticipated the impending financial liabilities associated with climate change (see the Climate Change article on page one). These companies are redesigning themselves and their products to reduce, if not eliminate, their CO2 emissions and take advantage of the market environment that climate change will bring.

But in addition to forward-looking fossil fuel-dependent companies, there are companies developing alternative technologies such as wind, biomass and solar technologies, and fuel cells that provide energy without impacting the climate. These firms have continued to fine-tune their non-polluting technologies, making their goods more price-competitive with fossil fuel products. Investors are starting to pay attention to this sector, and appreciate its potential.

**A LIST**

| TICKER | COMPANIES | SECTOR |
|---|---|---|
| TM | Toyota | Auto & Truck Manufacturers |
| HMC | Honda | Auto & Truck Manufacturers |
| BP | BP | Oil & Gas - Integrated |
| SC | Shell | Oil & Gas - Integrated |
| GMP | Green Mountain Power | Electric Utilities |
| FPL | Florida Power and Light | Electric Utilities |
| QTWW | Quantum Fuel Systems | Alternative Energy - Transportation |
| BLDP | Ballard Power Systems | Electronic Instruments & Controls |
| FCEL | Fuel Cell Energy | Stationary Fuel Cells |

**B LIST**

| TICKER | COMPANIES | SECTOR |
|---|---|---|
| F | Ford Motor Company | Auto and Truck Manufacturer |
| GM | General Motors | Auto and Truck Manufacturer |
| XOM | Exxon Mobil | Oil and Gas Integrated |
| CVX | ChevronTexaco | Oil and Gas Integrated |
| AEP | American Electrical Power | Electrical Utility |
| SO | Southern Company | Electrical Utility |
| LUV | Southwest Airlines | Airline |
| AMR | AMR | Airline |
| BTU | Peabody Energy | Coal |

## THE PRESIDENTIAL ELECTION AND THE MARKETS

BY MATT PATSKY

We at Winslow are asked almost daily to comment on the likely impact of the current presidential race on the stock market and our portfolio. While it is challenging to answer that question within the current complex market environment, we have looked at both the written policies of the candidates and their historical actions.

Two of the areas of greatest concern from our portfolio's perspective are policies on energy and environmental protection. The hope of tapping domestic energy sources without causing further environmental damage is an alluring but difficult task. Encouraging increased use of alternative energy has been a key part of the Kerry energy plan, underscored by a long history of support as a U.S. Senator. Both the Bush and Kerry energy plans outline steps to encourage the development and use of "clean" coal technologies.

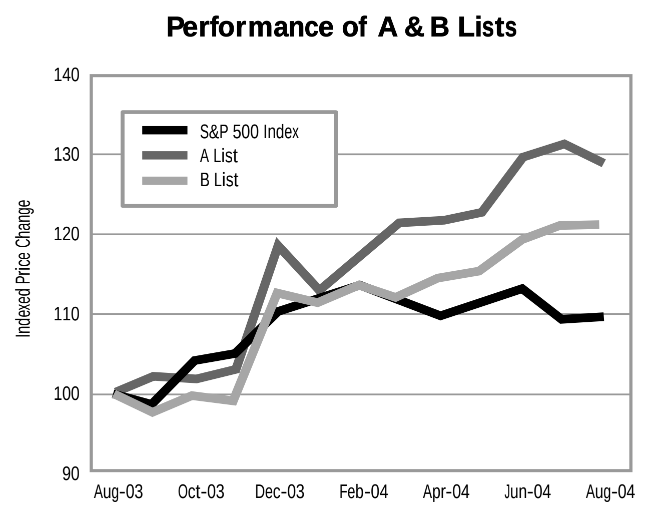
Winslow has long been invested in alternative energy stocks. While we believe this sector would perform better under a Kerry presidency, we believe the long-term trend toward renewable sources of energy is irreversible, and will prove to be a successful area for investment regardless of the outcome of this election. Wind power has already become an economically viable alternative to fossil fuels throughout most of Europe, Japan and North America. The Kerry plan to

*Please see next page*

### An "A" list and a "B" list

To get a sense of how investors are incorporating the financial consequences of climate change into their decision-making process, Winslow compiled two lists of nine publicly traded U. S. companies that produce or consume energy. They include companies in the automobile, airline, oil and gas, coal, electric utilities, and alternative energy industries. On the "A" list, we identified firms that we believe will benefit from the global battle to reduce greenhouse gas emissions, due to either their low $CO_2$-emitting products or proactive actions. On the "B" list, we designated contrasting companies from "similar" industries that we feel will become increasingly vulnerable financially as the global and regulatory climates adapt.

For example, Ford and General Motors were consigned to the "B" list because they have the lowest adjusted fleet mileage averages of the major automobile companies (EPA Fuel Economy Trends report of 2004). Their counterparts on the "A" list are Honda and Toyota with overall fleet efficiency well above the industry average. We applied similar criteria for the balance of each list, and we believe the results represent a mosaic of relative winners and losers in the unfolding confrontation on greenhouse gas emissions.




Data Source: Fact Set * Past performance is not indicative of future results.

### How the lists performed

We then created an equal-weighted index of the stocks on each list and tracked their relative performance over the last one, three, and five years ended July 31, 2004. While the "A" list outperformed the "B" list over each time period, it was not until the most recent year that the performance spreads became statistically significant. Over the twelve months ending August 31, 2004, the "A" list was up +29% versus the "B" list, which rose +21%. Not surprisingly, the average current estimated earnings growth rate for the "A" list is +15% or twice that of the "B" list. Interestingly, both lists outperformed the S&P 500, which rose +10%. (See chart).

While these two lists may change in size, scope, and composition, the underlying investment philosophy behind the lists will not: the companies that are part of the greenhouse gas emissions problem will be penalized while those that are part of the solution will not. We believe that those companies that recognize and prepare for the impacts of climate change and the challenges it will bring will, for the most part, continue to grow. □

*Continued from previous page*

renew and extend the Production Tax Credit (PTC) to include a full array of renewable technologies in addition to wind and biomass would clearly provide the sector an added lift.

One of our newer holdings, Fuel-Tech, should perform well under either of the presidential candidates. While there has been undeniably lax enforcement of environmental regulations at the federal level under the current administration, the states have become increasingly aggressive in seeking redress through the courts to force compliance with federal environmental laws. We believe this course of action will be successful, barring a regulatory change that could hinder the ability of the states to continue to pursue their court cases. Should Kerry win, we would expect a more vigilant EPA. Merely enforcing existing standards would likely provide an added boost to Fuel-Tech's business.

We believe the biggest concern the market has about the presidential election is the uncertainty over its likely outcome. Uncertainty is what the market hates most. As the election approaches, assuming the race remains close, the market is likely to remain volatile. We are likely to see the market rally in the months following the federal election regardless of who wins. Taking a longer view, the history of which party is better for the market is mixed, the Democratic Party having slightly better performance with the strongest bull market in history during the Clinton administration. We believe a Kerry election would improve our portfolio's relative performance.

We encourage all of our readers to vote on November 2. □

---

*CLIMATE CHANGE continued from page 1*

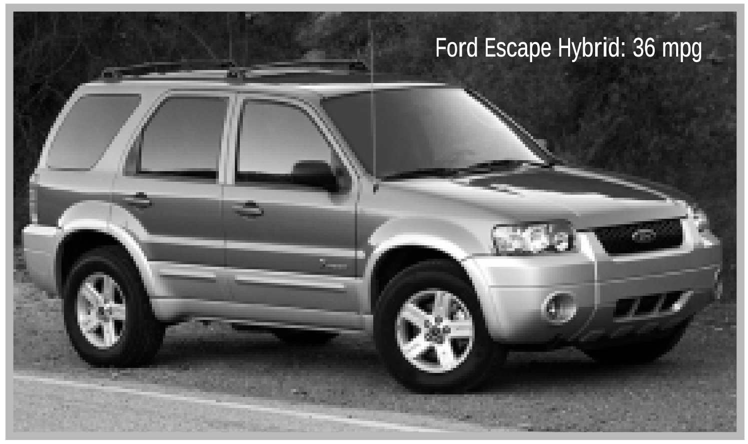
claims. According to Mindy Lubber of the Coalition for Environmentally Responsible Economies (CERES), claims for a variety of natural disasters such as flooding, drought, and forest fires have "jumped tenfold in the last 40 years, hitting $55 billion in 2002." Munich Re, the world's largest reinsurer, points out that of the 34 major catastrophes that have occurred since 1983, all but two were weather-related. Not surprisingly, climate change seems to be fueling many of these disasters, says Dr. Gerhard Berz, head of Munich Re's Geoscience Research Group.

"Despite mounting scientific evidence, most of the world's largest companies have been operating as if global warming is a fiction."

A new report from the European Environment Agency (EEA) underscores the connection between the acceleration in natural disasters and increased global warming caused by human activity. It shows that the average global temperature has increased about 0.7% over the last 100 years, and that the 1990s were the warmest decade in the observational record. At the same time, levels of carbon dioxide ($CO_2$), one of the main climate change culprits, have risen 34% since pre-industrial times and at an accelerated pace since 1950. Ocean temperatures have risen significantly since the late 1950s; sea levels around Europe have risen between 0.8mm and 3.0mm per year in the last century; eight of nine glacier regions in Europe are in retreat; winters are warmer and summers are hotter; precipitation has increased in Northern and Central Europe while decreasing in Southern Europe.

**Investors Take a Stand**

Investors have been taking note of these changes as well as the increasing frequency and magnitude of natural disasters, the insurance companies' losses, and climate change's impact on the economy as a whole. Not only are they concerned about catastrophic events and changes in the environment, they also worry about companies' readiness to meet coming regulatory constraints on emissions of $CO_2$ and other greenhouse gases linked to climate change. Conversely, they're curious about the possible investment opportunities of green innovation (see MarketBeat article for more information).



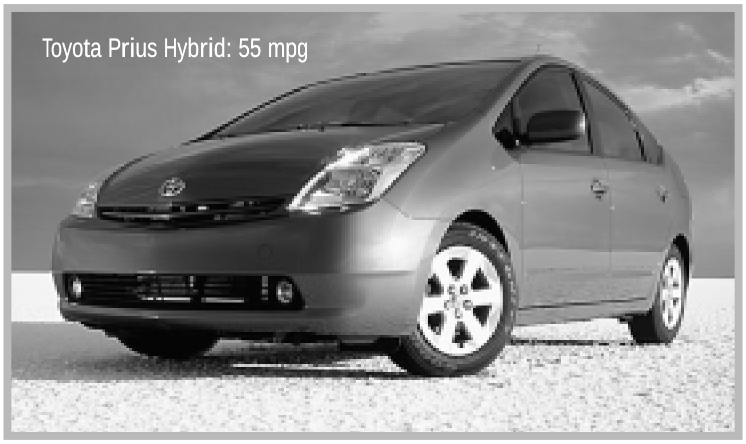
Ford Escape Hybrid: 36 mpg

Source: www.fordvehicles.com/escapehybrid

"Without aggressive action to reduce the financial risks that global warming poses for companies, trillions of dollars of Americans' investments will be jeopardized," CERES's Lubber wrote in a Boston Globe op-ed piece in May. "Despite mounting scientific evidence, most of the world's largest companies have been operating as if global warming is a fiction," she continued. Commenting on a recent report by the Carbon Disclosure Project which found that only 35 to 40 percent of the world's largest companies were taking steps to reduce the financial risks of climate change, Lubber proclaimed, "…The widespread inaction was especially glaring among U.S. companies, including utilities, oil and gas producers, and automakers. For companies in energy-intensive sectors that do not react…their long-term value could drop by up to 40%."

Large institutional investors aren't waiting for companies to do the right thing. Many are banding together to exert pressure. According to the Investor Responsibility Research Center, the 2004 proxy season has seen a dramatic surge in the number of resolutions filed by investor groups requesting information on companies' plans to address climate change. Altogether, 28 global warming proposals were filed at 22 companies (including three filings at two Canadian companies) in 2004, and several of them garnered over 25% of votes.

The Investor Network on Climate Change, launched at the United Nations late last year by 10 investor leaders, recently published the Investor Guide to Climate Risk, to help investors understand the risks and opportunities of climate change. Similarly, thirteen major pension leaders in the U.S., controlling nearly $800 billion in assets, called on the Securities and Exchange Commission this spring to require company disclosure on global warming preparedness. Meanwhile in Europe, the London-based Institutional Investors Group on Climate Change (IIGCC) is preparing studies on the climate change challenges facing various economic sectors, the investment implications, and how companies are responding.



Source: www.toyota.com/prius

**American automakers, international airlines particularly vulnerable**

Financial analysts are also weighing in on the subject. In July, for example, John A. Casesa, an analyst at Merrill Lynch, organized a teleconference to air his views on Detroit automakers' laggard attitude toward emissions. He contends that with the coming of worldwide regulations on fuel economy and pollution, companies like GM and Ford will be left in the dust by other automakers who have taken proactive steps to make cleaner cars. Casesa quoted a study by Washington's World Resources Institute and Sustainable Asset Management of Zurich, which estimates that Ford would have to spend $403 more on each vehicle to meet new standards (Ford's entry into the hybrid market, the 2005 Escape, for example, is a hybrid SUV that gets approximately 36 mpg, about as efficient as a conventional Honda Civic.). GM would have to spend $377. By contrast, Honda would spend only $24 per vehicle and Toyota would actually gain because it already has met such targets with fuel-efficient cars like its Prius hybrid.

Airlines, too, face considerable financial risks due to new regulations. According to the IIGCC's report "Climate Change and Aviation," airlines are the fastest-growing source of greenhouse gas emissions and they will probably not be able to meet new standards through technological and operational improvements alone. As a result, companies will probably face stiff new taxes, charges, or fines.

**Getting in on the cutting edge**

Just as investors don't want to be vulnerable to steep earnings declines, they don't want to miss out on the rewards to be had from proactive companies. "There are opportunities for investors," says the IIGCC, "…through investments in product development (possibly using low carbon-related technologies), greater energy efficiency (which would reduce costs) or improved corporate reputation."

Michael Northrop, co-creator of the Climate Group, a coalition of companies and governments that encourages green enterprise, agrees. Quoted in Business Week, he observed, "Many companies that have cut emissions have discovered, often to their surprise, that it saves money and spurs development of innovative technologies. It's impossible to find a company that has acted and has not found benefits." □

The 2005 Ford Escape, for example, is a hybrid SUV that gets approximately 36 mpg, about as efficient as a conventional Honda Civic.


## Distributed Energy Systems Corp.

*(NASDAQ:DESC)*

WALLINGFORD, CT – Proton Energy Systems, Inc., a subsidiary of Distributed Energy Systems Corp. and a manufacturer of HOGEN® on-site hydrogen generator systems, announced the termination of its distribution agreement by General Electric Company (GE), effective August 24, 2004. GE has given Proton no reason for terminating the pact, which was reported in July's *Winslow Environmental News*. The agreement had established GE as the nonexclusive distributor of Proton's hydrogen systems, which are used for cooling electric generators in power plants.

Proton Energy Systems President Walter "Chip" Schroeder stated, "We are seeking an explanation of GE's rationale for terminating the agreement. We do not believe their termination was motivated by any actions on our part. In fact, the units that we have placed with GE, including a system delivered more than two years ago, are performing well. Proton will continue its good faith effort to address and resolve this matter, but we cannot be confident of a fair and satisfactory outcome."

## Fuel-Tech N.V.

*(NASDAQ: FTEK)*

STAMFORD, CT – Over the summer, Fuel-Tech announced a series of new orders of its NOxOUT systems, totaling $4.9 million. These orders include: two solid waste incinerator facilities in Spain; a cement kiln in Korea; an industrial plant in the U.S.; a municipal solid waste incinerator in the U.K.; and the completion of a NOxOUT system on a large coal-fired utility boiler that was put on hold a year ago. There is also an order for a NOxOUT ULTRA™ system for two municipal solid waste incinerators in France, representing the first of these systems installation in Europe. Two additional orders are for design engineering services, one on a utility boiler and one on an industrial unit. Finally, the company was asked to present a demonstration at a cement kiln for a company in the Southeastern U.S.

In addition, Fuel-Tech reported in August that Douglas G. Bailey will assume the position of Chief Executive Officer of Atlantis Components, Inc., a supplier of patient-specific components for the dental industry. Mr. Bailey will remain on the Board of Directors of Fuel-Tech and retain the title of Deputy Chairman, and will continue to allocate a portion of his time to Fuel-Tech activities, but at a reduced level of participation.

## Presstek, Inc.

*(NASDAQ: PRST)*

HUDSON, NH – Presstek announced two acquisitions over the summer. In July, Presstek closed the acquisition of Precision Lithograining Corporation and announced in June an agreement to acquire the business and assets of privately held A.B. Dick Company through a U.S. Bankruptcy Code Section 363 sale.

Prior to Presstek's acquisition, Precision was one of the largest independent plate manufacturers in North America and Presstek's manufacturing partner for its Anthem and Freedom printing plates. The companies will maintain their respective operations, with Precision operating as a wholly owned subsidiary of Presstek. Presstek's President and CEO, Edward J. Marino, said, "We believe this acquisition will provide Presstek with the capability to grow our chemistry-free and process-free market position, as well as leverage Precision's strong conventional plate business."

A.B. Dick filed for bankruptcy this June. Commenting on the strategy behind the acquisition, Marino stated, "We view this potential acquisition as a strategic move to expand the long term business opportunities for both Presstek and A.B. Dick. The acquisition is designed to extend the distribution capability and channel support for Presstek and to drive an increased level of digital technology and service."

## Quantum Technologies, Inc. *(NASDAQ: QTWW)*

IRVINE, CA – For the first quarter of fiscal 2005, ended July 31, 2004, Quantum reported revenues of $6.4 million and a net loss of $2.4 million or $0.08 per share. This compared with revenues of $7.9 million and a net loss of $1.8 million or $0.08 per share for the same period of fiscal 2004.

The decline in revenues is attributable primarily to delays in shipments caused by tightened availability of the high-strength carbon fiber used in the production of Quantum's hydrogen fuel tanks and the discovery of a potential hydrogen incompatibility issue with a hydrogen pressure sensor provided to Quantum by a supplier for fuel regulation systems. Resolutions for both issues have since been developed by establishing an acceptable delivery schedule of carbon fiber with the Company's primary supplier and securing an alternative material for the sensor.

Alan P. Niedzwiecki, President and CEO, stated, "Although our financial performance this quarter was primarily impacted by temporary and now resolved issues…we are confident that these shortfalls will be restored during the next two fiscal quarters as we fulfill the delayed orders. Our outlook for the full fiscal year remains positive as we move forward on several new and expanding programs."

*VESTAS continued from page 1*

ability to build more projects. Vestas announced in August that its first post-merger product would be available late next year, a 3-megawatt (MW) turbine that will synergistically combine the best technologies from Vestas and NEG Micon.

Vestas is comprised of six regional sales and service divisions and four production divisions for blades, towers, control systems, and nacelles, the mechanical and electrical components of a turbine. The combined group commands approximately one third of the wind power market, leading competition in the amount of MW installed in 2003, accumulated MW installed between 2001-2003 and the total of all installed MW at the end of 2003.

The company has a strong presence both in established wind power markets such as Germany, Spain, the U.S. and Denmark, as well as in emerging ones such as Canada, Australia, U.K., Italy, Portugal and India. Torben Bjerre-Madsen, Vestas's Executive Vice President and Deputy CEO, explains the importance of this strength, noting that while "most competitors are dependent on their home market, Vestas has already expanded" throughout a variety of geographical regions. This allows the company to demonstrate its success to governments interested in exploring wind power by pointing to nearby wind projects.

**Challenges and Opportunities**

Vestas does face some strong competition, however. Industrial giant General Electric's Wind Energy division is a strong competitor in the turbine market, especially in the U.S. While Vestas installed the largest number of MW in 2003, a total of 2,667 compared to GE's 1,503, Maurice Miller of Pazza Verde Ventures, a U.S.-based renewable energy investment and development organization, expects GE to pressure Vestas's sales and profits in the future. On the other hand, with worldwide projections of wind power's compound average annual growth estimated at 25%, there appears to be room enough for both giants. As Miller puts it, "In the long term, GE and Vestas are the two most prominent players in an industry that is continuing to grow."

Vestas is confident that the trends that have spurred the growth of wind power will continue to grow. Bjerre-Madsen commented, "The underlying drivers of the wind power market are the increase in the cost of electricity and growing acceptance that we can't just use oil and gas for energy. Furthermore, the cost of wind-generated electricity continues to decrease."

While wind power continues to grow worldwide (from 1998 to 2003, the total accumulated installed wind power capacity grew from 10,153 MW to 40,301 MW), the immediate prospects for wind energy projects in the U.S. were mired in Congress as of September 20. The Production Tax Credit (PTC), which expired at the end of 2003, provided a 1.8-cent per kilowatt-hour (kWh) credit for electricity produced from a wind farm during

*Please see VESTAS page 8*

Winslow Environmental News

Published by
Winslow Management Co.
99 High St.
Boston, MA 02110
866-804-5414

WEB ADDRESS:
www.winslowgreen.com
as a service to our clients and other interested persons

EDITOR-IN-CHIEF
Jackson W. Robinson

MANAGING EDITOR
Elizabeth R. Levy

CONTRIBUTORS
Diane Daly
David Kowal
Catherine Levy
Elizabeth R. Levy
Matt Patsky
Ellen Pfeifer
Jackson W. Robinson

DESIGNED AND PRODUCED BY
N. J. de Sherbinin Adv. and Design

Printed on 100% Post-Consumer Recycled Paper from Monadnock Paper Mills

*VESTAS continued from page 7*

the first 10 years of its operation. While both the House and the Senate have passed bills including the PTC, renewal has not yet been approved by the full Congress. Renewal of the legislation would offer a leg up in financing more wind projects, according to the American Wind Energy Association. But because of Congress's delay in approving the PTC, wind project developers have held off on planned new projects. Miller predicts that passage of the PTC will help the wind industry pick up in 2005. "I can't believe next year won't be better for wind in the U.S.," he said.

Bjerre-Madsen agrees, but cautions that wind farms need both political and public support to be located in a community, in addition to solid financing. Some communities have rejected wind farms as too noisy, too dangerous to birds, or too out of place in the natural setting. But Bjerre-Madsen counters that they are safe and quiet, and that "a modern wind park in a landscape looks beautiful while producing clean energy and creating jobs."

One community that embraced the idea of wind power is Hull, Massachusetts, which has operated a 660-kilowatt (kW) Vestas turbine since December 2001 and is considering adding a second turbine. John Macleod, operations manager for the Hull Municipal Light Plant, notes that wind generation has "offset the higher market price of power and we are receiving the federal government REPIs (payments of 1.5 cents per kWh of energy produced from eligible renewable energy sources)." Macleod stated that Vestas was chosen to supply the wind turbine not only because of its competitive bid, but also for its strong qualifications and technical support services.

The wind power market is a complex and growing one. Vestas appears well positioned to take advantage of its growth and, well, run like the wind. □



"A modern wind park in a landscape looks beautiful while producing clean energy and creating jobs."


Winslow Environmental News

99 High St., Boston, MA 02110