

Expanding Green Power:

A New Business Model



renewable choice
ENERGY

Steelcase®

Overview

A new milestone for the wind power industry was set in March, 2008, when Steelcase Inc., the international office furniture company, announced a long-term financial commitment to support a wind farm to be built in Panhandle, Texas. Never before had one company made a long-term commitment to purchase all the renewable energy credits (essentially the property rights to the environmental, social, and other non-power qualities of renewable electricity generation) and the associated naming and branding rights from a facility.

“Even without the naming rights thrown in, it is unusual for a company other than a utility to buy all of the energy credits of a project before it is built,” reported *The New York Times*.¹

The project was a milestone for Steelcase, too. The wind farm, developed by John Deere Renewables and operational in 2008, features eight turbines and generates up to 35,000 megawatt hours of electricity each year. That’s enough to power 2,925 homes and represents the equivalent of 20% of Steelcase’s electrical usage for its North American operations. The wind farm was named the Wege Wind Energy Farm, provided by Steelcase, after former board member Peter Wege, an environmental pioneer who has long supported Steelcase’s environmental efforts. As sole sponsor of the wind farm, Steelcase is the largest buyer of wind power in the furniture industry.

The organizations involved in this project were brought together by Renewable Choice Energy, a leading retailer of renewable energy credits. This partnership demonstrates an improved way to finance wind power projects, with increased

value to both wind power developers and corporate renewable energy consumers. The project also establishes a new way for companies to accelerate the growth of renewable energy while demonstrating their commitment to sustainability and conserving the world’s non-renewable resources.

In this paper, we review the innovative business partnership developed for this wind energy farm, explain the basics of such a project, and provide a model for other organizations interested in supporting green power generation and realizing its benefits for their business.

Business Embraces Sustainability

Over the years, more companies have incorporated higher standards of environmental responsibility into their business practices. For example:

- + In 1991, the Body Shop stopped sourcing any ingredient for its beauty products subject to animal testing.²
- + In 1999, Ben and Jerry’s introduced the ice cream industry’s first pint container made from unbleached paperboard.³
- + In 2006, Whole Foods Market Inc. announced it would buy 485,000 megawatt hours of wind energy credits annually, an amount equal to its corporate electricity needs.⁴

Businesses have taken these initiatives for many reasons: to respond to consumer demand, to meet new environmental standards and legislation, or from an increased commitment to the environment. But many organizations are taking a more holistic view of sustainability, the triple bottom line, or TBL. This perspective, sometimes called “people, planet, and profit,” addresses more than what an

1 “Corporate Sponsorship for a Wind Farm,” by Claudia H. Deutsch, *The New York Times*, March 18, 2008.

2 “Against Animal Testing”, accessed June 10, 2009: http://www.thebodyshopusa.com/bodyshop/values/against_animal_testing.jsp.

3 “Environmental Action/Company History”, accessed June 10, 2009: <http://www.benjerry.com/company/history/>

4 “Whole Foods Switching To Wind Power,” *CBC News.com*, January 11, 2006

organization can do to protect the environment. It views sustainability as a two-way street, a means to strengthen the organization, create value for society while protecting the environment at the same time. When a company nurtures environmental, social, and economic resources, it in turn helps ensure the future of the organization and all of its stakeholders. Thus, the organization both receives and provides benefits with a triple bottom line approach.

Steelcase embraces the TBL strategy. It is part of its long history of forward-looking environmental action. Over the years the company:

- + pioneered a manufacturing process to curb pollutants in the painting process, which garnered a national award in 1983 from the President's Council on Environmental Quality
- + built the first manufacturing facility in the world to achieve LEED certification, in 2001
- + eliminated the emission of almost all volatile organic compounds (VOCs) from its metal finishing operations in Michigan, in 2003
- + was the first company to receive Cradle to Cradle™ Product Certification in 2005, and continues to take the industry lead in C2C product certification
- + in 2006 committed to reducing its environmental footprint 25% by 2012, the 100-year anniversary of the company's founding

“We are constantly seeking more effective ways to conserve resources, prevent pollution and nurture environmental consciousness in our people every day,” says Nancy

Hickey, Steelcase senior vice president and chief administrative officer. Investing in wind power

seemed a natural evolution of the company's on-going sustainability efforts.

Wind Power

The wind power industry is growing rapidly, but still small. In 2007, the installed wind power capacity in the United States increased by 45%.⁵ Despite this growth, the percentage of overall electricity generation by renewable sources remained just 2% of the nation's supply. Yet many experts say wind power could safely and effectively satisfy more than 20% of the U.S.'s electricity needs,⁶ and of all renewable energy sources, wind power has the greatest near-term potential to generate a substantial amount of carbon-free electricity at prices relatively competitive with existing fossil fuel types.

Record growth in the U.S. wind industry continued in 2008 when wind energy developers installed 8,545 megawatts (MWh) of capacity in the U.S., accounting for 42% of all new power-producing capacity added in the country. Wind farms generated approximately 52 million MWh of electricity in 2008, enough to power seven million average households while helping to avoid nearly 44 million tons of carbon emissions, similar to taking over seven million cars off the road.⁷

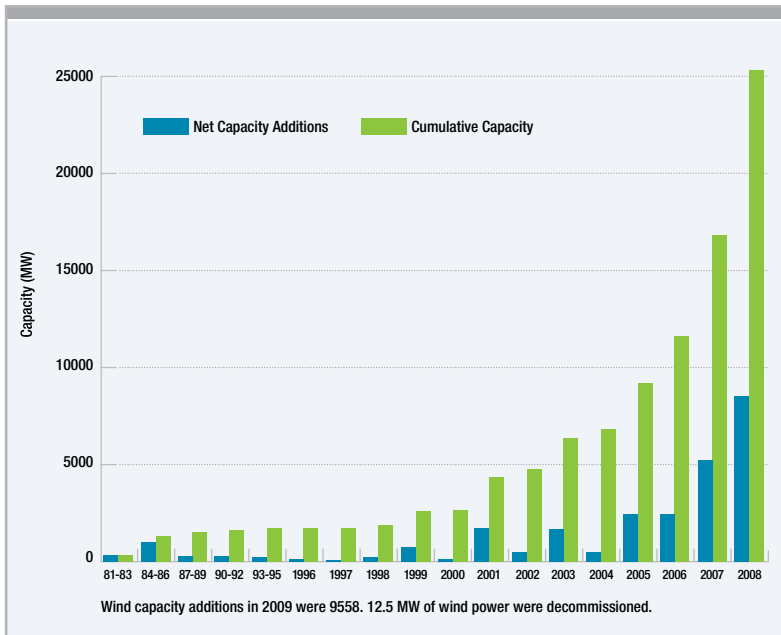
Wind farm development, like other capital-intensive enterprises, has felt the effects of the global financial crisis. Despite the most significant commitment made to renewable energy in U.S. policy history by the American Recovery and Reinvestment Act (also known as the stimulus bill), signed into law by President Obama in February 2009, new wind power installations are expected to fall in 2009 from their record levels of 2008. This is largely due to increased capital expenses and a subsequent reduction in private investment. The industry is sensitive

5 American Wind Energy Association

6 “20% Wind Energy by 2030: Increasing Wind Energy's Contribution to U.S. Electricity Supply,” U.S. Department of Energy, May, 2008

7 American Wind Energy Association Annual Report, 2009

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Huge Growth Yet Still A Small Part of the Nation's Energy Production

Record growth in the U.S. wind power industry continued in 2008, yet all renewable energy sources account for just 2% of the nation's electricity. A tough economy and the lack of a long-term national renewable energy strategy have made renewable energy projects riskier, and caused the industry to seek new revenue streams.

to changes in government policy and economic conditions, and has long sought additional revenue streams that can promote its growth and development. The new sponsorship model is one such revenue opportunity.

Green Power Purchasing

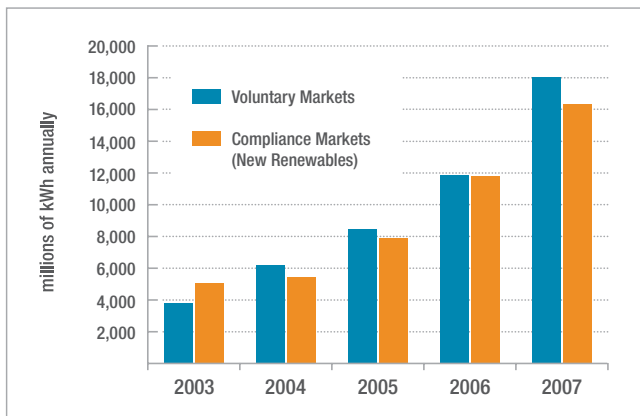
Many companies and utility regulators over the years have been eager to support renewable energy, but often encountered a disconnect between their location and where the best renewable resources are located. Wind power is a good example. The nation's power grid is most extensive in the most populated, urban areas, while the wind tends to be strongest and most consistent in sparsely populated areas far from the grid. As a way to encourage partnerships between renewable energy buyers and renewable energy developers, the renewable energy credit, or REC (pronounced rêk), was developed. Initially created for states to have their utilities comply with mandated renewable energy targets, RECs are the formal accounting mechanism for tracking renewable energy added to the grid.

Here's how it works. Each time a wind or solar energy farm generates 1,000 kilowatt hours (or 1 megawatt hour) of electricity, it also generates a REC. A REC represents the positive benefits of that electricity (the environmental, social, and other non-power qualities of renewable electricity generation). The sale of RECs provides renewable energy project developers with an additional revenue stream that allows them to compete better with fossil fuel producers. For buyers, RECs provide flexibility in both procuring green power across a diverse geographical area, and in applying the renewable attributes to electricity use at a facility of choice.

Some RECs are certified and verified under the Green-e® Energy program run by the nonprofit Center for Resource Solutions, the nation's leading independent consumer protection program for the sale of renewable energy and greenhouse gas reductions in the retail market. This certifies that the energy comes from a project that is developing new renewable energy facilities and meets the Green-e National Standard, and that each REC is used only once.

Thanks to RECs, the adoption of renewable portfolio standards (mandates for alternative energy generation by many states), and production tax credits, the green power market has grown dramatically over the last decade.

Organizations in many industries have purchased RECs, ranging from Intel Corporation and the University of Pennsylvania to the Philadelphia Phillies baseball club.⁸ Steelcase has purchased renewable energy credits since 2001 as part of a comprehensive energy strategy. RECs were a consideration in its commitment to the Wege Wind Energy Farm. But the innovative structure of the business partnership and the opportunity to directly impact the growth of green power generation were the major factors in the decision.



Voluntary purchases are critical to the REC market. These purchases account for over 50% of the demand for RECs, exceeding the demand from the mandated state renewable portfolio standards.⁹

THE IMPORTANCE OF RECs

“Selling of RECs makes the construction of more renewable energy generation plants possible and also makes existing renewable generation more commercially viable.”

*Tim Swanson, Director of Origination
Florida Power & Light*

“There isn’t a single renewable facility that goes online in this country where RECs aren’t considered in the core financing.”

*David Drescher
Vice-President, Wind Energy*

“As wind turbines are becoming more and more expensive, you have to have every revenue stream on the back end to cover your costs. Renewable energy certificates are critical to our projects.”

*Chris Crowley, President
Columbia Energy Partners*

“To any developer doing a wind farm in today’s market, renewable energy credits are critical to the revenue stream in taking a project over the top.”

*David Osborn, Dir. Operations & Engineering
Oklahoma Municipal Power Authority*

8 “2008 Award Winners, Green Power Leadership Awards,” US Environmental Protection Agency, Green Power Partnership, www.epa.gov/greenpower/awards/winners.htm#inte, accessed June 9, 2009

9 Bird, Lori, National Energy Lab presentation to National Renewable Energy Marketing Conference, Denver, October 27, 2008

Green Power Sponsorship

Companies typically obtain green power by purchasing RECs from an energy retailer's portfolio. Retailers such as Renewable Choice Energy pool RECs from wind farms across the country and channel them to buyers. This arrangement provides some efficiency in the REC system, since buyers can support renewable energy generation wherever it is most viable, regardless of their own location. It also allows buyers to purchase as many or as few RECs as they desire, regardless of any individual wind farm's production capacity or REC revenue needs.

Renewable Choice conceived of the sponsorship model for green power purchasing used to form the Wege Wind Energy Farm project, a model that has been called "green power sponsorship."

"A number of customers wanted to make a closer connection to the wind farms they supported," recalls Quayle Hodek, Renewable Choice's CEO. "We also wanted to help wind developers earn additional revenue to ensure not only the completion of this project, but also improve the prospects for future projects. By selling sponsorship rights to the facilities we could help provide additional value to both parties."

John Deere, like most developers in the nascent wind power industry, must overcome significant hurdles to develop projects that are financially attractive. Sponsorship made the wind farm financially feasible. **"Without a doubt, the sponsorship rights played a vital role in that project moving forward and being constructed,"** recalls David Drescher, Vice-President, Wind Energy.

The Story of a Partnership

Renewable energy projects typically involve a landowner, developer, renewable energy marketer, and sponsor. The **landowner** owns the land on which the wind farm will be developed. In this case, the landowner was Glenn Hodges. His father purchased the land in 1952 outside Panhandle, Texas, and used it for growing grain crops. (See the sidebar "A Shared Legacy") It was the landowner's brother who first suggested wind turbines for the 320-acre site.

In most cases, the landowner is contacted by a **developer**, seeking to build a wind farm. The developer is responsible for identifying the site, securing the wind turbines for installation, acquiring necessary permits, and overseeing construction and connection to the local utility grid. The developer sells the project's electricity and its RECs, and monetizes any tax benefits from government programs promoting renewable energy. For this project, the landowner contacted the developer, John Deere, and worked as co-developer.

John Deere arranged to sell the electricity to the local utility company. To sell the RECs, it turned to Renewable Choice Energy, a **renewable energy marketer**, or retailer. As a leading REC and carbon offset marketer in the U.S., Renewable Choice aggregates RECs from wind farms around the country and sells them to corporate, non-profit, governmental, and consumer buyers, such as Whole Foods Market, Vail Resorts, the State of Pennsylvania, and others.

Renewable Choice consulted with John Deere and identified the Texas Panhandle project as ideal for a corporate sponsor partnership.

They developed a specific profile for the right **sponsor:**

- + an organization with a long-term commitment to environmental sustainability
- + past experience in purchasing renewable energy through RECs
- + the vision to innovate through a new model

Steelcase fit this profile, had been actively seeking ways to promote and support renewable energy, and became the project sponsor.

The New Model Takes Shape

This Steelcase green power sponsorship features a number of noteworthy innovations to the standard renewable energy project:

- + *A commitment to an individual wind farm.*
In the traditional model, buyers purchase RECs from a portfolio of credits, and support a portion of a number of farms. In this case, Steelcase established a connection with a single farm and agreed to purchase all of its expected production. That assured the developer and reseller of a long-term commitment, and allowed the sponsor a closer relationship with the project.
- + *A long-term commitment in the financing stage.*
Typically, buyers purchase RECs generated by existing wind farms. In this model, Steelcase made a commitment to purchase five years of RECs from a wind farm before it became operational. Renewable Choice committed to buy an additional three years, with Steelcase having first option to buy RECs in those years. Steelcase also provided credit assurance to back its commitment. These commitments allowed John Deere to reduce its risks and the costs, and made the project more financially attractive.

- + *Sponsorship rights.* Because of its long-term commitment to an individual facility, the green power sponsorship allowed Steelcase to assume all naming, branding, and marketing rights associated with the wind farm. Through naming, the company was able to honor the work of Peter Wege, a longtime environmentalist and former Steelcase board member.

Innovation often presents challenges. A major one in this project was the potential for production shortfalls or overages. For example, conventional REC contracts involve a fixed number of RECs; the facility is already in operation and production is a more known quantity. **In the new sponsorship model, however, the proposal was for the purchase of all of the RECs produced by a facility not yet in operation and with no production track record.**

If the facility under-produced, it might not cover the equivalent of 20% of Steelcase's North American operations power requirements, its stated goal. If the facility over-produced, Steelcase would be committed to purchasing additional RECs that it might not have budgeted for.

Renewable Choice presented the solution. They contracted to cover short-falls at an agreed-upon price in the event of under production. In the event of over-production, they agreed to retain the additional RECs if Steelcase chose not to purchase them.

"Renewable Choice transacts with many wind energy producers and buyers, so we have access to a ready market for RECs. We could offer RECs to Steelcase commensurate with their environmental commitments, regardless of the output of the

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Wege Wind Energy Farm,” explains Justin Segall, director of resource development for Renewable Choice.

The new model contract details:

- + John Deere agreed to sell to Renewable Choice all of the RECs generated in the first eight years.
- + Renewable Choice agreed to sell Steelcase the first 35,000 megawatt hours of RECs each year for five years, with an option to purchase any additional RECs the project produced in any given year, including years 6-8 of the project.
- + To facilitate the transaction, Steelcase provided John Deere a credit guarantee for the amount it committed to purchase from Renewable Choice.
- + Steelcase and John Deere signed a marketing agreement granting Steelcase sponsorship rights for the project; Steelcase named the farm the Wege Wind Energy Farm, provided by Steelcase.
- + John Deere completed the development of the Wege Wind Energy Farm.

Evaluating the Opportunity

Steelcase’s role as the sponsor in this venture is of particular importance. The internal decision-making process that led to their participation is illustrative for others considering a renewable energy project. The wind farm represented an additional expense for Steelcase, and decision makers evaluated it against other energy projects. The key factors in their decision were:

A Corporate Culture Committed To Environmental Action

As noted earlier, Steelcase has made environmental action an integral part of its business practices for many years. Its interest in energy stems from this history. For example, the company has reduced

its electrical usage by over 30% in North America over the past five years through an energy demand management team focused on effectively managing and reducing consumption, and working with supplier partners to initiate energy strategies.

“We take into account the environmental impact of our decisions,” explains Steelcase executive Nancy Hickey. “We look holistically at our operations and their impacts, and have found that **investments in the environment have also positively benefited our bottom line.**”

Related Goals

Steelcase executives did not view the wind farm project in isolation, but rather alongside other corporate goals, such as its commitment to reduce its global carbon footprint by 25%, its work toward environmental product certifications requiring renewable energy purchasing as a criteria for compliance, and other objectives.¹⁰ “Our goals were not to finance a wind farm necessarily, but to support expansion of renewable energy, to continue our environmental stewardship, and to make sure the project made financial sense. We looked at the project just as we would any other, within the large goals and objectives for the company. **It was a good fit within our overall mission,**” says Mark Baker, Steelcase senior vice president, global operations officer.

An Internal Champion

The company’s Global Supply Chain Management Department was the principal contact with Renewable Choice, and presented the wind power project to internal stakeholders, explaining

¹⁰ Steelcase has achieved a number of product certifications and continues to pursue more. These certifications include Cradle to Cradle, BIFMA e3/ Level, and its products’ contributions to LEED building certification.

the proposed sponsorship, costs and benefits, and how it could fit into Steelcase's overall environmental efforts.

Research

The Global Supply Chain team conducted substantial research on renewable energy, wind power, and related topics. Of particular interest were articles and opinions questioning off-site renewable energy projects and RECs. This helped the company step back from this particular project and consider what impact Steelcase's involvement would have on larger environmental trends.

Local Consideration

Steelcase originally sought a wind energy project in its home state of Michigan. It's estimated the state is one of the top 20 states in terms of wind energy potential,¹¹ and it has a small but developing wind power industry. However, the state did not have a renewable portfolio standard (RPS) in place. An RPS typically includes tax credits and sets renewable energy mandates. Consequently, wind projects in Michigan were limited in number and very small in scale; larger projects were located in states that have had RPS legislation in place for some time. (Michigan since passed an RPS in October, 2008.)

Compelling Facts

Steelcase developed a list of compelling facts that supported the wind farm investment. The proposed project would:

- + support the company's carbon reduction goals and product certifications
- + be a high efficiency, distributed generation facility –a renewable energy project the company could be proud to support

- + be located in the same region as two of Steelcase's manufacturing facilities (in Texas and Oklahoma)

- + be brought online quickly

"We weren't as concerned about the economics as much as the viability of the project," recalls Baker.

"We'd studied this industry for some time."

Collective Commitment

The wind farm sponsorship would affect different divisions within Steelcase, and three business units agreed to share the costs of the project and sponsor responsibility: Global Operations, Steelcase North American Product Group, and Global Environmental Sustainability.

"We sat down with the CEO and said we all have to be together on this. The project provides significant benefits across the organization,"

says James Keane, president of Steelcase North America.

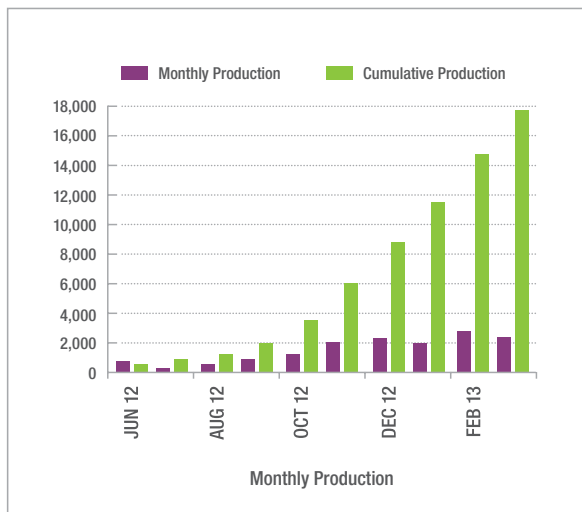
Gathering Momentum

The Wege Wind Energy Farm produced its first energy on April 23, 2008, although it wasn't fully operational until September, 2008. Through the end of the first quarter, 2009, the wind farm had produced 17,881,000 kilowatt hours of clean, renewable energy.

The wind farm electricity output ramped up more slowly than expected due to delays in equipment deliveries and meter issues. Such challenges are not uncommon in the early stages of a wind farm, and were resolved by John Deere and its team. The Wege Wind Energy Farm then began generating at and above its expected level of approximately

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2,500 megawatt hours per month and continues at this pace today. If the wind farm continues to produce at this slightly higher than expected level, it will produce over 40,000 megawatt hours by the end of 2009, well above the 35,000 megawatt hours anticipated.



Monthly and Cumulative Production from the Wege Wind Energy Farm

Sponsor Benefits

Steelcase has realized a number of benefits from the Wege Wind Farm. Among them:

Renewable Energy Credits. By virtue of its commitment to the Wege Wind Energy Farm, Steelcase will receive RECs that it can use for a number of purposes, including reducing its greenhouse gas emission profile, their primary application. The RECs also are used to a small extent to help achieve environmental certification for products.

Positive Media Coverage. The Wege Wind Energy Farm and its innovative sponsorship model were the subject of positive coverage in The New York Times and many other publications and online blogs. A few typical comments:

- + “Today, green office furniture company Steelcase strengthened its case as a green company embracing real green ideals and walking the walk. And they might have just helped to raise the bar for green business in the process.”¹²
- + “The move is part of the company’s plan of reducing its carbon footprint 25% by 2012. Though uncommon now, some expect similar actions in the future.”¹³
- + “Sustainability is finally becoming more than a buzzword, and morphing into a real business imperative.”¹⁴

Enthusiastic Customer Response. While the company has not made a major effort to promote the wind farm, Steelcase customers have made it an icon of the company’s environmental commitment. The reaction to the wind farm from trade show and conference attendees is consistently positive. A typical response: “I love your wind farm.” “If we weren’t doing the other things, people would see right through it,” says Keane. “The wind farm is just one example of our commitment to sustainability.”

Positive Employee Reaction. Pictures of the Wege Wind Energy Farm can be found in many of Steelcase’s facilities around the world, and employees have responded with pride and enthusiasm. “It’s been a huge home run from an employee perspective,” says Nancy Hickey. “Employees just think it’s cool. It creates a story to tell at a dinner table. We’re all raising kids with higher environmental expectations than us. This gives us something they can all relate to.”

¹² “Steelcase Walks the Green Walk, Buys Naming Rights to Wind Farm,” Treehugger, March 18, 2008.

¹³ “Steelcase Makes Five-Year Commitment to Texas Wind Farm,” GreenBiz.com, March 19, 2008.

¹⁴ “Alt-energy grows like a breeze, thanks to corporate purchasers.” Tri-Cities Business Review, March 20, 2008.

Furthering Environmental Goals. “Overall, this is probably our biggest win from this project,” says Steelcase CEO Jim Hackett. **“The wind farm does a lot of great things from a triple bottom line perspective. But most important is that it inspires others to think differently, to see that there are ways to change how we do business. That’s going to be the key to being successful not only as a company, but as an industry and in the overall economy.”**

Ripple Effects

The sponsorship model pioneered by the Wege Wind Energy Farm has made a significant impression on the renewable energy community. The announcement generated considerable interest in the trade press and has been discussed at a number of national renewable energy conferences.

Since the announcement, a second wind farm sponsorship has followed the Steelcase model: the University of Oklahoma has partnered with Oklahoma Gas & Electric to sponsor the Sooner Wind Farm. “They followed closely the new green power sponsorship model,” says Justin Segall of Renewable Choice.

Many customers have expressed interest in the new model, according to Renewable Choice. With the Obama administration’s stimulus package scheduled to pump \$38.7 billion for renewable energy into the Department of Energy¹⁵, the hope is that green power projects, including wind energy, are primed for growth.

One stimulus program offers substantial cash grants to help cover the cost of renewable energy investments. The program, which began July 31, 2009

and is slated to run through the end of 2010, offers a cash rebate for 30% of the cost of building a renewable energy facility. The rebate is awarded 60 days after an application is approved (vs. tax credits over a 10-year period in an earlier program). Investors are also given valuable accelerated depreciation deductions, which help offset taxes. Morgan Stanley and Citigroup Inc., took advantage of the program almost immediately investing \$100 million each to finance separate wind farms in Montana and Pennsylvania, respectively.

There is no spending cap on the renewable energy grants and the government has committed to spending as much as is needed to keep renewable energy investments growing. According to *The Wall Street Journal*¹⁶, most of the stimulus funding is expected to go to wind projects, as the industry is more mature and in a better position to capture limited funds. Additional financing from the grants have the potential to benefit not only wind farm developers but the manufacturers who make the turbines.

Plus, Plus, Plus

The commissioning of the Wege Wind Energy Farm marks the beginning of a new model for renewable energy development. For the first time, a corporation with a core sustainability mission and a triple bottom line perspective provided crucial support in the financing stage to help develop a wind energy farm. Steelcase’s action produced positive benefits for the nation’s electricity mix, its customers and employees, and its business operations.

This suggests the green power sponsorship model will be an important piece of the renewable energy picture for years to come, acting as a way for experienced buyers to invest in a signature project that can provide wide ranging benefits. ■

¹⁵ “2010 Budget Blueprint: Agency by Agency,” *The Washington Post*, www.washingtonpost.com, accessed June 9, 2009

¹⁶ “Wind Farms Set Wall Street Aflutter,” *The Wall Street Journal*, August 31, 2009

Getting Involved with Green Power

As fossil fuel prices rise along with worries about their role in global warming, many companies are considering investments in renewable energy. A wind farm sponsorship, or the purchase of RECs from wind energy farms, are two ways to get involved with green power.

Wind Farm Sponsorship

For companies that can make the required long-term commitment, a green power sponsorship is an exciting way to deepen a commitment to renewable energy development. To see if a sponsorship is right for your organization, consider:

- + **volume**—a sponsorship is best suited to large-scale purchases; while there is no specific minimum, it generally requires a commitment of 15,000 to 50,000 MWh per year
- + **pricing**—sponsorship costs more than nationally sourced RECs
- + **sustainability**—green power sponsorship is best suited to organizations with an overall commitment to environmental sustainability, not as a single initiative
- + **credit**—sponsors get involved at the financing and development stage, which requires a credit-worthy purchase that can be incorporated into the project financing
- + **timing**—wind power projects are found in various development stages, and it can take time to match organizations with the most appropriate projects.

Renewable Energy Credits

Buying RECs is an easy and effective way to improve your organization's environmental performance. The basic steps to purchasing RECs are simple:

- + define your **organizational goals**—how does renewable energy fit with your overall sustainability goals?
- + estimate your annual **electricity use**—use online calculators (see below)
- + locate and **purchase** RECs
- + **communicate** your commitment

Many resources can help organizations understand and purchase RECs:

- + U.S. Environmental Protection Agency offers the **Green Power Partnership**, a voluntary program that supports organizational procurement of green power by offering expert advice, technical support, and other resources.
- + U.S. Department of Energy provides additional resources via the **Green Power Network**, with information on green power providers, product offerings, consumer protection issues, and policies affecting green power markets.
- + Online calculators help organizations organize and estimate their green power needs. **Renewable Choice** has an online calculator for estimating an organization's electricity consumption. ■

Note: The Wege Wind Energy Farm RECs are certified and verified by **Green-e Energy**, the nation's leading voluntary certification program for renewable energy. This assures that the renewable energy meets environmental and consumer protection standards, and requires sellers of certified renewable energy to disclose clear and useful information. Purchasing certified RECs encourages responsible development of electricity products that minimize air pollution and reduce greenhouse gas emissions. For these reasons, always purchase RECs that are Green-e Energy certified.

“REC”koning with the Questions

Renewable energy credits have not been without their critics. Given the intangible nature of energy credits, a concern has been whether the environmental attributes of renewable energy can be claimed by two different parties, or double counted. To avoid this situation, the Center for Resource Solutions, an independent watchdog organization, started the Green-e® program to certify that renewable energy products are not double counted, and that all appropriate regulatory bodies are aware of sales and transfers.

REC tracking systems also have been implemented in every state to monitor the transfer, sale, and retirement of RECs. In the case of the Wege Wind Energy Farm, for example, the RECs are Green-e certified and tracked by the state of Texas.

Some critics question whether RECs are meeting the purpose of encouraging new renewable energy capacity. If a wind turbine operation is built before the RECs are sold, did the RECs really help add new renewable energy capacity? This idea is called “additionality,” and it can be difficult to prove that the purchase of specific RECs provide additionality. Many people take a larger view, and argue that every REC purchased, every financial investment in the development of renewable energy, helps further the industry and the overall market for green power.

An upfront green power sponsorship, such as the Wege Wind Energy Farm model, provides long-term financial support for a project before it's built; it's easy to argue that such a sponsorship does in fact drive additionality.

Perhaps the major criticism of RECs is that they can be a way for companies to buy their way toward achieving environmental goals. While a company may be contributing to global warming in one part of their operation, the purchase of RECs is only intended, critics say, to make up for those environmental “sins.” This criticism is the most difficult to assess. There's no clear cut way to determine a company's intentions in buying RECs, and no doubt some companies purchase RECs for the wrong reasons.

How should a company's environmental intentions be judged? Perhaps the best approach is to consider the company's overall record. Steelcase North America president James Keane puts it simply: **“People recognize ‘green washing.’ They know what's hype and what's for real.”**

Others make similar observations. **“To make real progress, genuine accomplishments will have to be sorted out from feel-good gestures,” suggests BusinessWeek** in a cover story about corporate environmental efforts. (October 29, 2007) The article cites such accomplishments as Wal-Mart's promotion of compact fluorescent light bulbs over more profitable incandescents, and Office Depot's overhaul of its store lighting and energy use, among other examples. Many companies, including Steelcase, make their environmental record public via corporate responsibility or triple bottom line reports. Such companies aren't waiting for more regulation of carbon emissions or renewable energy mandates. They're taking responsible actions now to improve their environmental performance. That can include buying RECs for the right reasons. ■

Financing A Wind Farm

Developers of utility-scale wind power projects have a range of financing structures to consider. At the most fundamental level, all projects generate income from four components: electricity sales, asset depreciation, tax credits, and renewable energy credits.

Wholesale Electricity Sales

Typically, a Power Purchase Agreement (PPA) serves as the legal contract between an electricity generator (wind farm) and a customer (utility). These agreements play a critical role in the financing of electricity generating assets.

Asset Depreciation

Under the federal Modified Accelerated Cost-Recovery System (MACRS), businesses may recover investments in certain property through depreciation deductions. A number of renewable energy technologies are classified as five-year property.

Federal Production Tax Credit

The renewable energy production tax credit (PTC), a credit of 2.1 cents per kilowatt-hour, is the primary federal incentive for the producer of electricity from wind energy. The American Recovery and Reinvestment Act passed in 2009 extended the PTC for three years, and provided an increased level of certainty for project developers.

Renewable Energy Credits

To help facilitate the sale of renewable electricity nationally, a system was established that separates renewable electricity generation into two parts: the electricity or electrical energy produced by a renewable generator and the renewable attributes of that generation. These attributes include the greenhouse gas emissions that were avoided by generating electricity from renewable resources instead of conventional fuels, such as coal, nuclear, oil, or gas. The renewable attributes are sold separately as RECs. ■

A Shared Legacy



Peter Wege

Two key players in the **Wege Wind Energy Farm** story—the original owner of the site of the Wege Wind Energy Farm, and the man the project is named for—share a bit of history.



Glen Hodges

“This is the farm where I grew up,” says Glen Hodges, current owner of the wind farm property. “My mom and dad owned this property for over fifty years.” Glen’s dad, Floyd Mark Hodges, joined the Army Air Corps during World

War II, became a navigator, and served in the South Pacific. In 1952, he and his wife bought a half-section (320 acres) of property near his parents’ farm outside the town of Panhandle, Texas (pop. 2,589). Floyd Mark retired as a lieutenant colonel from the Air Force, settled into the life of a farmer, raised wheat, grain sorghum, and six children.

“I remember when we were kids we used to sit outside with my dad. As a navigator he knew his way around the stars. He would point out the constellations to us.”

About the same time Floyd Mark was navigating planes, another air corpsman, Peter Wege, a pilot from Grand Rapids, MI, was ferrying Army Air Corps planes around the U.S. before being deployed to North Africa. One of his routes changed his life.

Wege was delivering a training plane to West Point on a clear, sunny day as he approached Pittsburgh, PA at a low altitude. But he couldn’t see the city: it was obscured by smog.

“I couldn’t see the ground at three o’clock in the afternoon, even though I knew I had to be flying right over it.”

He got a new heading from the airport tower, they turned on the landing field lights, and he finally found the airport. But his first experience with environmental pollution affected him deeply. It was the start of a lifetime commitment to protect and improve the environment. In time Wege formed and funded a foundation to support environmental work, and wrote a book about the relationship between economics and ecology. Throughout his career he has invested a large share of his time, effort, and fortune in pursuit of a sustainable future for the planet.

The link between two former flyers, both dedicated to using the environment wisely, adds a special touch to the wind farm for landowner Glen Hodges. “My dad would be proud, and pleased by the affiliation with a fellow Air Corpsman.” ■

