



Vansycle, Oregon:
FPL Energy has been operating 38 Vestas V47/660-kW wind turbines near Pendleton since 1998.



“Simply a smart business decision”

The Pacific Northwest region of the USA discovers wind power

By Robert Kahn

In spite of robust wind resources and an environmentally-minded citizenry, the Pacific Northwest region has been slow to adopt wind energy. But while the north-western corner of continental United States ranks among America’s “late bloomers,” it has finally emerged as a vibrant market.

The new year opened with the announcement that FPL Energy, the Florida-based developer Florida Power & Light, will sell the output from its planned 300-MW Stateline Wind Generating Project at the Oregon-Washington boundary to PacifiCorp subsidiary PacifiCorp Power Marketing, Inc. News releases touted Stateline as the largest single wind farm in the world and the announcement was hailed around the region. Washington State’s Governor Gary Locke called it “...exactly the sort of innovation we need in the Pacific Northwest today.” The dramatic announcement was a long time

coming but its origins can be traced back to the earliest days of wind power.

The Northwest played host to some of America’s earliest wind energy developments. In the 1970s, when the federal government launched its aggressive wind energy research and development program, the Boeing Company secured funding to build megawatt-scale turbines. Several of Boeing’s MOD series machines were erected near the Columbia River outside Goldendale, Washington. But despite great expectations and millions of dollars spent, Boeing’s venture ended in failure.

Knowing where the wind blows

Far less noticeable was the tiny investment the Bonneville Power Administration (BPA) made in wind power. BPA installed anemometer sta-

tions at various locations throughout the four state region. The federal power agency maintained these stations for nearly 20 years. Since the information the agency collected was publicly-funded, it was, by law, publicly available. And when wind energy developers began scouting the Northwest in the late 1980s, BPA’s data was there to point them in the right directions.

Kenetech Windpower pioneered the Northwest market. It hired local meteorologists, fielded marketing staff, and aggressively pursued leases. Before long, Kenetech had anemometers on the windiest properties in Montana, Oregon, Washington and eventually, south-western Wyoming. With a virtual lock on the Northwest market, the company signed up utility customers and began permitting three promising projects in the mid-1990s. With government, utility and environmentalists’ backing, Kenetech was poised to make the Northwest wind energy market, the “next California.” When Kenetech went bankrupt before erecting a single wind turbine in the Northwest, it looked as if the region would slip back into the shadows. But Kenetech’s failure prepared the ground work for its successors; other developers acquired its assets and picked up where Kenetech left off.

FPL Energy secured the rights to the Vansycle Ridge Wind Project; a site

The author
Robert Kahn works as a journalist in Seattle, USA.



Photos: Hall

tion of a local Audubon chapter and the Yakima Indian Tribe. Enron has kept its Columbia Hills properties in reserve, and it may be years before the once-promising project is ever developed.

The successful transition from Kenetech to its successors would have been meaningless without the persistent efforts of a coalition of environmentalists, consumer advocates and developers. The Renewable Northwest Project (RNP) pushed its agenda through the press, the region's state capitals and utility board rooms throughout the region.

The group followed a two-pronged strategy which it described as "policy push and market pull." On the one hand, RNP lobbied for government to intervene on behalf of renewables while it simultaneously welcomed de-

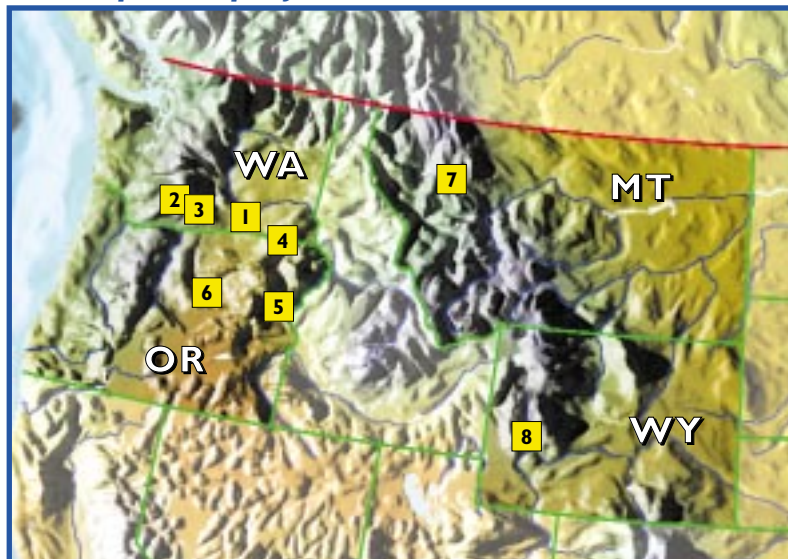
regulated markets where consumer demand for green power could be expressed. As Conweb, a regional online energy newsletter recently reported, it was "a convergence of circumstances... advocacy, on-the-ground projects [e.g. Vansycle], a looming power shortage, rising market prices, BPA investments and green power marketing" that finally opened the door. "All of those things are just starting to come together," Rachel Shimshak, RNP's director, explained. "Peoples' demand for clean power," Shimshak says, "influences the policies, which in turn influences the projects."

RNP was in the thick of the action when two north-western states – Montana and Oregon – deregulated their power markets. RNP secured transitional policies and funding that will help leverage investments in both

WIND POWER 2001

June 3-7, 2001
Grand Hyatt
Washington,
Washington, D.C.
More information:
www.awea.org

Wind power projects in the Northwest



No	Project/Area	capacity	turbines	Developer	Status
1	Nine Canyon Wind (Eastern WA)	15 MW	30 x 500 kW	Energy NW	online in 2001
2	Columbia Wind Farm (Goldendale, WA)	25 MW			on hold
3	Columbia Hills (Goldendale, WA)			Enron	on hold
4	Stateline Project (Walla, WA / Umatilla, OR)	300 MW	450	FPL Energy	in permit process
5	Vansycle (Pendleton, OR)	25 MW	38 x Vestas V47/660 kW	FPL Energy	operating since 1998
6	Condon Wind Project (Gilliam County, OR)	24.6 MW		SeaWest	in permit process (online by late 2001)
7	Blackfeet I Wind Project (Blackfeet Reservation, MT)	22 MW		SeaWest	in permit process (online by Oct. 2001)
8	Simpson Ridge, Medicine Bow, Foote Creek Rim (Carbon County, WY)	100 MW		SeaWest, others	85 MW operating since 1999

Kenetech had developed for Portland General Electric. The Florida-based company installed 38 Vestas V47/660-kW turbines totalling around 25 MW on the Oregon side of the Oregon-Washington border near Pendleton. Vansycle was commissioned in 1998 and has consistently outpaced projections.

Successful successors in the Northwest

SeaWest picked up Kenetech's Wyoming Wind Energy Project. The wind farm is located along the Foote Creek Rim, a remote, treeless plateau between Laramie and Rawlins with winds averaging 24 miles per hour (around 10.7 m/s). SeaWest has expanded the project three times since its launch in 1999, and now boasts 84.8 MW of capacity. The project's first 40 MW phase is owned by PacificCorp and the Eugene Water & Electric Board while SeaWest sells power from the subsequent phases to BPA which in turn retails it to public utility customers throughout the Northwest.

Enron Wind Corp. bought the rights to a third Kenetech site, the proposed 50-MW Columbia Hills Wind Project, near Goldendale, Washington. Columbia Hills was ground zero in a nasty permitting fight that pit Kenetech and 17 supportive environmental groups against the stiff opposi-

Source: National Renewable Energy Lab, November 2000
MT: Montana; OR: Oregon; WA: Washington, WY: Wyoming



power

states. When Oregon's power market is fully deregulated this autumn, \$7 million (€7.5 mil.) a year for 10 years will be available to buy down the cost of new renewables. Montana will make annually \$1.3 million (€1.4 mil.) available.

RNP reports that as of today, roughly two million Northwest residential customers can buy green power from public and privately owned utilities. While only two percent have so far signed up, the mood is upbeat. PacifiCorp executive Barrett Stambler describes consumer interest in his company's "Blue Sky" product as "surprisingly strong." Public agencies and businesses have been among the first to purchase renewable energy, a trend RNP encourages with its aggressive "Go Green" marketing campaign.

First wind farm on an Indian reservation

The dramatically rising costs of wholesale electric power and natural gas in the Western power markets has made wind power look more attractive than ever. Suddenly there is more

For example, BPA recently announced that it would help fund one of its largest industrial customers, an aluminium smelter near Goldendale, Washington, in developing a wind farm near Kenetech's old Columbia Hills site. The federal agency is also sponsoring the environmental review of SeaWest's 25 MW Condon Wind Project in north central Oregon; it plans to buy that project's entire output when it is completed this winter. BPA has also signalled its support for another SeaWest initiative, the first commercial wind farm to be built on an Indian reservation.

In September 2000, the Blackfeet Tribal Business Council and SeaWest WindPower announced that they would jointly develop a 22 MW wind power project on the tribe's reservation in north-western Montana. In addition to BPA's willingness to purchase the project's output, Montana Power, the state's largest utility, has said that it would also support Montana's first wind farm.

Located in north-western Montana on the eastern slope of the Rocky Mountains, Blackfeet tribal lands see 20 mph (8.9 m/s) annual winds. Sea-

the Blackfeet project before the end of the year.

Back in Washington, Energy Northwest, a consortium of public utilities, is planning the Nine Canyon Wind Energy Project on a dry-land wheat farm ten miles south of Kennewick, Washington. Energy Northwest plans to file permit applications for a 15-MW wind farm this spring. Construction will begin late this autumn with commissioning to follow in the spring of 2002.

Taken together, SeaWest and Energy Northwest's projects still add up to less than half of FPL Energy's Stateline Wind Generating Project. At 300 MW, the project will be able to serve the energy needs of some 70,000 homes annually.

The Stateline site will cover about 100 acres (40.5 hectares) in Washington and 64 acres (26 hectares) in Oregon. Roughly two-thirds of the 450 turbines will be built in Walla Walla County, Washington, with the rest of the machines planned forumatilla County, Oregon. The area was "primed for a wind farm," said Collie Powell, FPL Energy's project manager. The Stateline project is a "natural extension of the legwork of Vansycle," he added, since the 1998 project laid the groundwork with baseline environmental studies and a convincing demonstration of the resource itself. "And," Powell emphasised, "local landowners want to participate in green energy."

Bird studies during this spring time

Walla Walla County planners unanimously approved Washington's share of the project last November. Their decision linked full build out of the project to the results of additional night-time bird migration studies that will be completed this spring. Ongoing studies of the turbines' effect on avian and bat populations round out an environmental monitoring programme that environmentalists are citing as a national model.

FPL Energy still needs permit approval from Oregon's Energy Facilities Site Council before building that state's 100-MW share of Stateline. Officials are optimistic in part because Governor John Kitzhaber has promised a "timely review" by the state.

RNP's Rachel Shimshak saluted Stateline as a "...substantial, meaningful action." In recognition of wind energy's new status, Shimshak added that it comes "at a time when power prices are skyrocketing in the wholesale market and the region is short of power." "Stateline," she said, "is simply a smart business decision." ●



demand for wind power than there is supply in the pipeline. "The problem isn't finding funding for projects," one developer confided, "it's finding good, developable sites in the first place."

One utility actively looking for new renewables is Seattle City Light, the agency responsible for keeping the lights on in the Northwest's largest city. Seattle City Light is planning to add hundreds of megawatts of renewables to its portfolio over the next ten years and most of that will be wind. Meanwhile, BPA is committed to tapping as much as 1,000 MW of renewables before 2010 and the federal power agency is encouraging new wind power investments throughout the region.

West anticipates that the proposed project's capacity factor would be at least 37 per cent. "The topographical features on the Blackfeet Reservation are similar to Foote Creek Rim," Montana Power's Dave Ryan told Conweb, "[they're] on the back side of the Rockies, catching tremendous, very cold and winter-peaking winds."

Tribal officials are gratified. They see potential economic benefits in much-needed employment, wind lease revenues and other returns. "This wind energy project will allow the Blackfeet Tribe to take advantage of one of our most plentiful natural resources on our Reservation," Earl Old Person, the council chairman, said in a news release. SeaWest hopes to commission