

2 local schools on the grid for 'green' energy



ZACHARY KAUFMAN/The Columbian

Solar panels on the roof of the playground shelter at the Washington State School for the Blind produced enough electricity in May to power about two houses.

Did you know?

- Tacoma Community College received \$243,000 for solar panels to recharge its electric trucks and hybrid vehicles.
- The Coyote Ridge Corrections Center at Connell recently added a "thin-film" solar energy system to a warehouse, gluing it to the roof.

School for Blind, Clark part of statewide effort

By TOM VOGT
Columbian staff writer

The playground is an energy-enhanced spot, and not just because of the kids climbing on the play structure.

The answer is on the roof of the playground shelter, where a series of rectangles face the sun. They're solar panels. They soak up power, then pipe it from the campus of the Washington State School for the Blind into the region's electrical grid.

The solar panels are part of Washington's effort to get state institutions involved in renewable energy. Washington State School for the Blind received its grant a year ago.

Now, Clark College has been awarded \$50,745 for 12 solar panels and two wind turbines. But don't expect to see giant propellers turning slowly above the cherry trees on

Clark's downtown campus.

The grant will go into Clark's Columbia Tech Center campus in east Vancouver. And, the turbines will be the "eggbeater" style of wind-powered generator — not three-bladed props. These turbines are cylinders that spin on roof-mounted masts about 30 feet tall.

In addition to providing power, the wind and solar technology will be teaching tools.

"The grant guidelines called for educational opportunities as well as actual power generation," said Phil Sheehan, the college's interim vice president of administrative services. "Students in science and technology classes will have an opportunity to see how these systems work."

Clark's Columbia Tech Center campus will open in the fall

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Cranking out kilowatts

Washington State School for the Blind was awarded \$118,000 a year ago, and the solar array has been cranking out kilowatts for a month.

The roof of the playground structure "is the perfect exposure and it's the perfect spot," said Rob Tracey, facilities manager at the school. "We didn't even have to tilt the panels, and the money we saved bought us another panel."

The school's solar system generates a maximum of 10.2 kilowatts, Tracey said. Over the first month of operation, the photovoltaic panels generated enough electricity each day to power about two homes. If that electricity had been generated by burning fossil fuel, it would have generated 2

tons of greenhouse gases.

The solar panels work best on a clear, cold day, Tracey said. But they will work at 45 percent efficiency on an overcast day.

As far as the school goes, "it was free money," Tracey said. "Even though it's not powering the whole school, it's money we can put back into the school."

The power doesn't actually flow from a solar panel into a campus computer or a light bulb, by the way. It goes into the regional electrical grid.

That's because solar power is variable.

"If a cloud goes by, it's not an absolutely reliable source of power by itself," said Bob Johnson, a state energy engineer.

"Over an eight- or 10-hour period, it produces a lot of watts. But for stable operation of a device, using batteries is expensive. Put the power into the grid, and that is the battery," Johnson said.

Clark is among seven colleg-

es and universities sharing \$1 million in this year's "green" energy grants.

"It's money that was set aside by the Legislature to promote and develop renewable energy," Johnson said. "One of the best ways to encourage it is to increase awareness and make it visible."

Eventually, renewable power pays for its investment. However, "the payback depends on utility costs," Johnson said.

In this area, residential customers pay about 7.8 cents a kilowatt hour for electricity.

"A homeowner might be breaking even at 25 years," Johnson said. "The Northwest uses hydropower, which is the cheapest there is."

"In California, it's 12 to 15 cents a kilowatt hour," Johnson said. "In Europe, they're putting this on residential buildings all the time, because their costs are much higher."

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