

What happens when wind turbines get too old?

By COURTNEY FLATT
Oregon Public Broadcasting

Taylor Hays grew up watching her father fix wind turbines. She didn't consider herself to be very mechanical. But she knew she wanted to work with her hands.

So she decided to follow in her father's footsteps. Hays is studying at Walla Walla Community College in southeast Washington to repair renewable energy equipment, like wind turbines.

"This is my first wind application class, so I'm kind of excited because we haven't been able to work with actual wind turbine equipment yet," Hays said, standing in a large room filled with mechanical equipment.

As a potential second-generation wind technician, Hays said she's ready to be part of an industry that's helping develop technology that will reduce fossil fuel dependence.

"It makes me wonder, 'Will I be a big part of this whole change? Will I help develop new technologies and all of that?'" It's exciting to think about," she said.

The four students in this class huddle around a computer. Hays reads instructions from a large workbook. Various parts of a



Evan Taylor, left, and Taylor Hays are studying at Walla Walla Community College to work in the renewable energy field. In this class, they're purposefully causing problems with wind turbine equipment so that they can learn how to fix it.

OPB Photo/Courtney Flatt

wind turbine hang from the wall in front of them.

They punch commands into the computer, and the equipment whirs to life, rotating this way and that.

"In this case, we're making things go wrong on purpose so that we can practice fixing them," Hays said.

Fixing turbines

Down the road in Pasco, Washington, H&N Electric

is in the business of fixing things that go wrong inside the turbines.

Inside the company's shop, machinist Mike Byrd has a broken piece of equipment suspended on a hook. It's an essential part of the wind turbine generator called a slip ring.

"These are one of the pieces of the generator that are designed that they wear out. And so we'll exchange

them out for a one that's in good shape," Byrd said.

Several of these heavy pieces of equipment sit next to his workstation. This particular piece he's working on is damaged beyond repair.

"This one's junk now. So I'll put it in our recycling bin and it'll get recycled," he said.

Nate Glessner, manager of H&N Electric's Pasco plant, used to work

as a wind technician in the early 1990s. Now, he says, he's seeing more wind turbine generators break down before they are 5 years old. That's way earlier than their expected 20-year lifespan.

"A lot of the manufacturers had to produce a huge volume of equipment to meet the demands of the market. And the wind when market has grown very rapidly. So basically lot there is a lot of design issues," Glessner said.

The U.S. Energy Information Administration says wind power is set to outpace hydropower this year.

Glessner said he's seeing design issues getting worse. In the Northwest, some of the oldest wind farms were built in the early 2000s. When the turbines get too old, wind farm owners can either upgrade to newer technology or shut down the farms. Those processes are called re-powering or decommissioning, respectively.

In Oregon, the oldest wind project under state jurisdiction is asking to re-power its turbines. The Stateline Wind Project began operating in Umatilla County in 2001. The re-powering would increase the turbine height so that the farm can generate more energy.

The Energy Facility Sit-

ing Council is expected to make a decision on the re-power request Friday.

In the U.S., old turbine blades usually end up in the landfill. About 22,000 pounds each. Three blades per turbine.

A new way to recycle

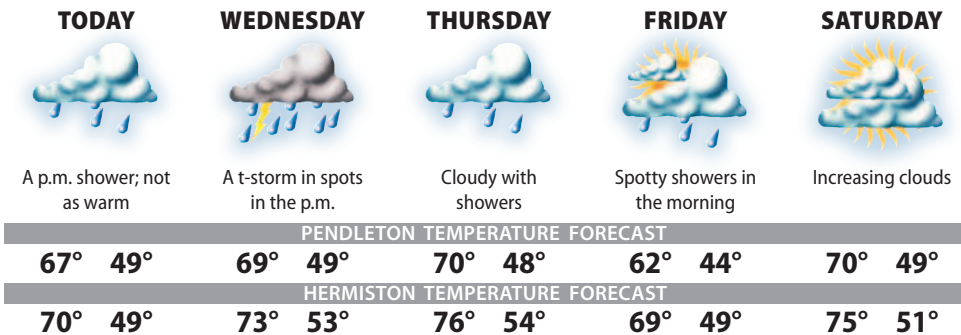
Washington State University professor Karl Englund hopes to prevent that. He's helped develop a new recycling process for the fiberglass blades.

"They're difficult material to handle, and there is not a clearcut path," Englund said. He's working with Global Fiberglass Solutions in Bothell, Washington. The company has built a blade recycling plant in West Texas. It should be up and running by 2020.

To recycle the blades, the plant breaks them down into quarter-inch pieces or smaller. Eventually, those chunks are turned into plastic pellets or panels similar to particleboard. Unlike wood, the fiberglass panels are water resistant.

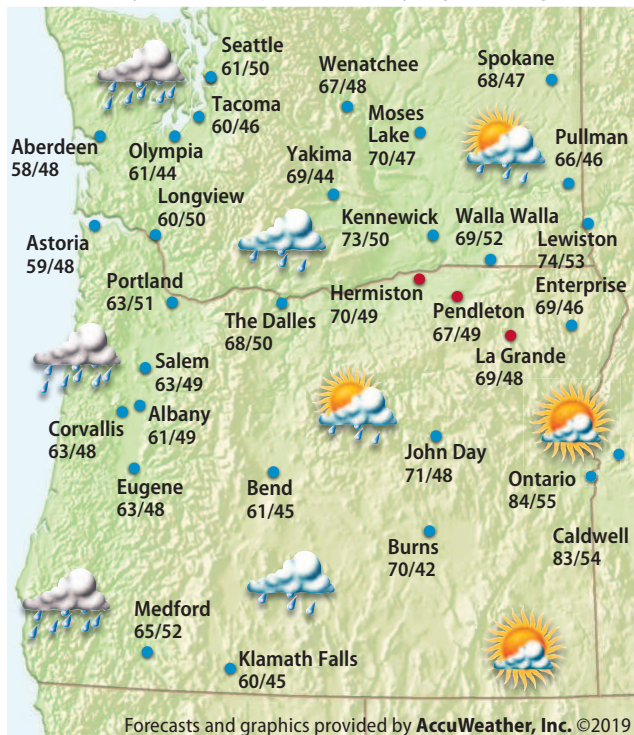
"So that has some very unique attributes of being able to go where wood falls short. That goes into places where there's high humidity or water where fungi and deterioration and swelling occur with wood," Englund said.

Forecast for Pendleton Area



OREGON FORECAST

Shown is today's weather. Temperatures are today's highs and tonight's lows.



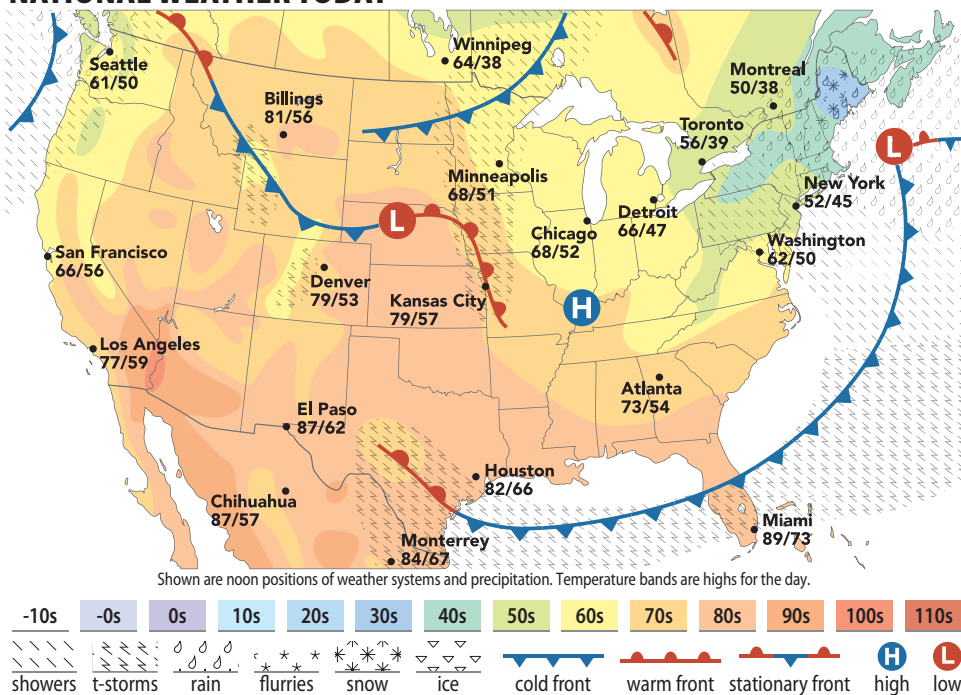
ALMANAC

PENDLETON through 3 p.m. yest.		
TEMP.	HIGH	LOW
Yesterday	73°	46°
Normals	70°	46°
Records	96° (1931)	30° (1903)
PRECIPITATION		
24 hours ending 3 p.m.	0.00"	
Month to date	0.00"	
Normal month to date	0.49"	
Year to date	7.76"	
Last year to date	6.00"	
Normal year to date	5.60"	
HERMISTON through 3 p.m. yest.		
TEMP.	HIGH	LOW
Yesterday	80°	55°
Normals	72°	46°
Records	100° (1993)	33° (2004)
PRECIPITATION		
24 hours ending 3 p.m.	0.00"	
Month to date	0.00"	
Normal month to date	0.49"	
Year to date	3.88"	
Last year to date	4.91"	
Normal year to date	4.48"	
WINDS (in mph)		
Today	Wed.	
Boardman	WSW 7-14	E 4-8
Pendleton	WNW 6-12	NE 4-8
SUN AND MOON		
Sunrise today	5:26 a.m.	
Sunset tonight	8:18 p.m.	
Moonrise today	3:27 p.m.	
Moonset today	3:42 a.m.	
Full	Last	New
May 18	May 26	June 3
		June 9

NATIONAL EXTREMES

Yesterday's National Extremes: (for the 48 contiguous states)
High 97° in Palm Springs, Calif. Low 22° in Burgess Junction, Wyo.

NATIONAL WEATHER TODAY



Oregon legislative leaders present new plan for tackling big PERS debt

By JEFF MAPES
Oregon Public Broadcasting

Oregon legislative leaders on Friday released their own plan for grappling with the financially troubled pension system for the state's public employees — and it has some key differences from the proposal offered last month by Gov. Kate Brown.

The two top Democrats, House Speaker Tina Kotek and Senate President Peter Courtney, say their plan would dramatically reduce some of the punishing rates that public employers will have to pay in coming decades.

The pension system, commonly known as PERS, now faces a \$27 billion debt that must be paid off. The Democratic leaders say they have come up with a plan aimed at reducing costs for all levels of state and local government, including public schools.

The new proposal comes as Courtney, D-Salem, is struggling to get Republican senators to return from a walkout that has prevented Democrats from passing a \$1 billion-a-year tax hike on business to help fund schools. GOP lawmakers say they are blocking a quorum in the Senate in part to force big changes to the PERS system.

Brown quickly put out a statement saying that legislative leaders took a reasonable approach given the political hurdles her own plan faced.

Legislators were briefed on the new plan at a budget subcommittee meeting studying the PERS problem. It shows that the plan would keep PERS employer rates from climbing to more than 30% of payroll by the early 2020s and staying

there through the end of the decade. That's what current projections warn will happen if nothing else is done.

Kotek and Courtney say their plan would cap rates at around 27% of payroll costs in the early part of the decade. They would slowly decline to under 25% by the end of the decade.

In contrast, the governor presented a plan that focused solely on protecting school districts from higher PERS costs. Kotek quickly made it clear that she wanted to provide relief to all parts of state and local government, not just schools.

Like Brown, Courtney and Kotek call for public employees to share some of the costs of shoring up the system. However, about two-thirds of the reduction in employer rates would be financed by stretching out the period for paying back much of the debt from 20 years to 22 years.

Tim Nesbitt, a former Oregon labor leader now working with business groups on the PERS issue, said he's pleased the legislative leaders are asking for some cost sharing by employees.

But he said he'd like to see "a little more in the category of legitimate savings and a little less in the category of deferred payments."

Public employee unions — who are key financial backers of Democratic lawmakers — make it clear they're opposed to any benefit cuts.

A coalition of Oregon unions released a statement charging that several of the plans amounted to illegal benefit cuts that the unions would seek to overturn in court.

"We will join any and all efforts to protect the

secure retirements they have earned," said Bruce Humphreys, president of the Oregon Nurses Association.

Under the Kotek-Courtney plan, Tier 1 and Tier 2 members, who are public employees who entered the PERS system before 2004, would have 2.5% of their salaries diverted from their individual retirement accounts into paying off the system's debt. Workers hired in 2004 and after, who receive less-generous retirement benefits, would face a much lower diversion — just 0.75% of their salaries.

Workers earning less than \$30,000 a year would not face these diversions.

Republicans and business leaders have long sought a bigger contribution from workers. Proposed initiatives filed by former Gov. Ted Kulongoski, a Democrat, and former GOP Sen. Chris Telfer of Bend, would divert up to 6% of worker salaries toward paying off the debt. And they're also looking at requiring 401(k)-type retirement plans for new public workers.

Nesbitt, who is also working on the Kulongoski-Telfer measures, said he and his allies will wait to see what the Legislature does next before deciding whether to seek the signatures needed to place an initiative on next year's ballot.

He said he hopes lawmakers more toward finding bigger cost reductions in the system. Republican legislators are making similar calculations.

Sen. Tim Knopp, R-Bend, who has long worked on PERS issues, called it "a step in the right direction." But he said Republicans would have to weigh whether to back a plan that is far less than a "complete fix."

CORRECTIONS: The East Oregonian works hard to be accurate and sincerely regrets any errors. If you notice a mistake in the paper, please call 541-966-0818.

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