

## PCC looks to a carbon-free future

*Sylvania is seeking funds to retrofit its campus to have net-zero emissions*

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JON HOUSE / THE SOUTHWEST COMMUNITY CONNECTION

Portland Community College Sylvania campus President Linda Gerber says she is going to work hard to get federal and local funding for retrofitting the campus to have net-zero carbon emissions. The rooftop panels in the background were installed in the 1970s to heat pool water through heat from the sun, but they haven't worked for many years.

**FAR SOUTHWEST — Imagine a small, self-sustaining city of little more than 100 acres. All the energy is generated there, all the storm water and sewage is processed there and even some of the food is grown there.**

This is the place that Portland Community College officials have been dreaming of for the past six months. It is the holy grail of green planning: net-zero carbon emissions, with resource management thrown in for good measure.

This, say Portland Community College officials, is just what Southwest Portland's Sylvania campus has the potential to be — if they can find someone, or several someones, willing to fork over the needed millions of dollars.

The net-zero concept grew out of a report prepared by Gerding Edlen, a leading Portland-based sustainable developer, and presented to the Gov. Ted Kulongoski's Oregon Way Advisory Group in April. The advisory group is tasked with making recommendations to Kulongoski on which projects he will support in the quest for American Recovery and Reconstruction Act (ARRA) funds — better known as the Obama Administration's stimulus package.

The report listed seven levels of energy efficiency PCC Sylvania could undertake — from basic upgrades all the way up to net-zero.

### **A 'living lab'**

PCC Sylvania President Linda Gerber says that because of the size and nature of the campus, this wouldn't just be any net-zero project.

“We want it to be more than just a sustainable building,” Gerber says. “We want it to be a living lab.”

For an institution that is trying to create the next generation of green builders, the upgrades would do double duty in teaching students about how to live in and plan for the next generation of buildings, she says.

Kipp Baratoff, president of Gerding Edlen Sustainable Solutions, agrees.

“Doing this project not only creates a new level of family-wage jobs,” he says, “...(but it) is a fantastic opportunity to create the next set of young folks that can do this work in a green economy.”

### **The journey is half the fun**

The long path to full funding for the net-zero scenario is very rocky at this point, but many officials say even just the fact that PCC is seriously considering net-zero has had fringe benefits.

Courtney Warner, a spokeswoman for the Governor’s Oregon Way Advisory Group, says PCC Sylvania could be used to represent a larger state strategy.

“Their example helped show the leadership that the post-secondary institutions around the state are playing in sustainable and green development,” Warner says. “This would be an example of Oregon’s strategy. It would be a way for Oregon to rise above it and show our strategic plan to the federal government.”

Baratoff — noting that military bases are required to be net-zero by 2030 — says his company learned a lot about large-scale, government upgrades that could apply to other projects.

“There’s so much more at stake here than just this project in terms of ‘at PCC.’ It’s a really fantastic project,” he says. “At the end of the day, just doing this assessment has been a fantastic learning process for achieving net-zero.”

Baratoff says the attention his team paid to the realities of a large bureaucracy — the multiple funding sources, the shifting timetables, the scores of stakeholders — is the most innovative part of a plan that mostly involves the standard upgrades to energy-efficient windows, low-flow fixtures, improved insulation and solar arrays.

“There’s a lot of people who do solar today; it’s not particularly unique,” Baratoff says. “But the combination of all of these things — to comprehensively look at a million square-feet and say: ‘How do all of these things work together?’ — that’s new.”

In fact, Baratoff says those lessons may go international after sharing their insights with people like with Doug McCarron, president of the international United Brotherhood of Carpenters.

“We have people calling us all the time and saying: ‘Now what are you exactly doing at Portland Community College?’” he says, “... and you better believe that what I’m pushing is Portland and Oregon first. Just remember that it got done here.”

### **Most upgrades could be done within a year’s time**

The governor’s advisory group is expected to make its recommendations at the end of the summer, but even then, as Warner says: “That doesn’t mean that that means money.” PCC will still have to apply to the federal government directly for ARRA funds.

But Gerber says she’s ready to go the distance.

“I’m not willing to give up the idea of net-zero,” Gerber says. “It’s good for our students, it’s good for the environment and actually it makes good dollars and sense.”

Early and, Gerber says, “conservative” estimates say the upgrades would pay for themselves in 25 years at today’s energy prices. But since those prices will likely go up, PCC could see savings accumulate even faster.

Officials say construction wouldn’t even take that long. If all the funding were to come in at once, the majority of the upgrades needed for a net-zero Sylvania could be finished within a year of the start date.

Perhaps a more realistic outcome is the seven-level plan offered in stages in the Gerding Edlen report.

“It all depends on where it goes,” Baratoff says. “It’s still a big question.”

Either way, Gerber says PCC has an obligation to do something towards lessening its impact on the environment.

“I believe that colleges are in a unique position to show the pathway to the solution to global climate change, and I think we have a responsibility to do that,” she says, adding: “We really need to walk the talk and change how we use energy and water.”

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### **What would a net-zero campus look like?**

While many of the details of Portland Community College’s plan to model Sylvania as a net-zero carbon emission campus are vague, undecided or unavailable to the public, the suggestions made to the Oregon Way Advisory Group in April paint a fairly predictable picture.

The campus’ many concrete buildings would have façade work to repair cracks and other air leaks that let out heat. Combined with energy- and water-efficient windows, lights and plumbing fixtures, Gerding Edlen, the company who prepared the report, expects a 40 percent reduction in energy use.

The other 60 percent would come from energy generators such as roof-mounted solar panels, a geothermal system and possibly a small natural gas plant.

In fact, says Gerding Edlen Sustainable Solutions Project Manager Renee Loveland, if all the upgrades are made in concert: “The campus could theoretically become an energy producer.”

On the water side, Loveland’s team envisions a rainwater aquifer and a “living machine” that would process wastewater — both of which would be designed to be visible learning opportunities for students as well as visitors.

In all, Gerding Edlen officials say the campus would operate like a mini-city, which would likely hold lessons for planners and developers trying to create so-called 10-by-10-block eco-districts in real cities.