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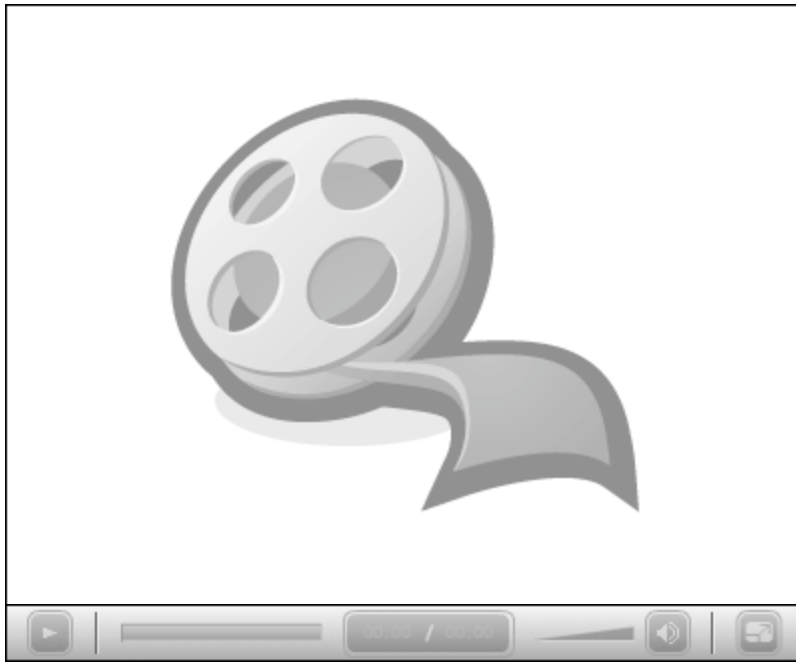
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Workouts on 20 machines feed the Cal State San Bernardino rec center's power grid

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By **DARRELL R. SANTACHI**
The Press-Enterprise



Video: Cal State fitness center workouts generate electricity

Veronica Hurtado, a senior nutrition major at Cal State San Bernardino, has been working out on the elliptical exercise machines in the student recreation center about an hour a day for the last two years.

She'll step that up, Hurtado says, now that she knows she isn't just burning calories.

She is generating electricity.

Story continues below



Stan Lim / The Press-Enterprise
Cal State San Bernardino is the first campus in the state and one of only nine nationwide using the technology to convert energy from exercise machines at the student fitness center into electrical power.

Twenty of the machines, which are a cross between a treadmill and a stair-climbing device, have been hooked up to an inverter that taps the small amount of electricity produced by a wheel on the back of the machine. The inverter then feeds the power into the grid that runs the two-story building.

"I think it's pretty cool that somehow somebody figured out how they could lower the energy cost by using us," said Hurtado, 23, of San Bernardino.

Cal State San Bernardino is one of nine colleges across the country, and the first in California, to employ technology developed by ReRev, a Clearwater, Fla., company that sells exercise equipment.

The Santos Manuel Student Union put up \$15,000 to hook up one inverter to all

20 elliptical machines at the student recreation and fitness center.

The machines began generating electricity in early August. The equipment, among the most popular in the student gym, won't face its biggest test until Sept. 24, when most of the university's 17,000 students and 2,000 staff members return for the fall term.

"As we get going and the students come back and more people are using them, the machines will generate 5 or 6 kilowatt hours per day," said Rick Craig, Cal State's director of recreational sports. "We could probably power a house."

Story continues below

PEDAL POWER: Electricity generated by 20 elliptical exercise machines at Cal State San Bernardino's student recreation center helps power the building. A 30-minute workout generates enough electricity to:



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That's not even close to the approximately 2,100 kilowatt hours of electricity used each day to power the 38,000-square-foot recreation building, he acknowledged.

And it will take 14 to 15 years for the system to pay for itself.

A typical 30-minute workout on one of the machines generates 50 watt hours of electricity, ReRev Marketing Director Beth Bennion said by phone.

That's enough to power a fluorescent light bulb for 2½ hours, a laptop computer for an hour or an incandescent bulb for 45 minutes.

The electricity goes straight from the machines to the inverter, Craig said, so students cannot plug in their cell phones or laptops to charge them up.

"What we *are* doing is generating clean electricity and educating our students about how they can be green," he said.

Oscar Riley, 38, of San Bernardino, said he thinks using the machines to

generate power is "awesome."

"Actually, when you're exercising you're kind of giving something. You are reducing your carbon footprint, so that's very exciting," he said.

Craig said he approached student leaders about installing the system in May, when a faculty member sent him an e-mail with a link to a Webcast from Oregon State University.

Oregon State connected an inverter to 22 elliptical exercise machines last winter and they seem to be working fine, said Bill Callendar, the university's assistant director of recreational sports.

"This is something that students believe in," Callendar said. "If you look around college campuses, students are on the cutting edge as far as supporting renewable energy projects. It's important to them."

As Callendar did at Oregon State, Craig placed stickers on Cal State's elliptical machines informing students that they are generating electricity.

So far, the machines' displays do not include a running tally of power being generated. As the students pump away on the pedals, they can watch television or use headphones.

Some of the TV screens have script running along the bottom saying how much energy all 20 machines have produced so far.

Not knowing how much power they are producing was no problem to most users on a recent day.

They are there for the exercise, they said. The electricity is a side benefit.

"I used the machines way before they hooked that thing up, and I'll continue to use them in the same way," said John Tenayuca.

He does, however, think about how much energy he is producing, the 25-year-old chemistry lab worker said.

"It seems like a smart and innovative way to be more green," Tenayuca said. "This place probably uses a lot of electricity, so it's a cool way to give back."

Aliyah Rashad, 22, of Riverside, said she uses the elliptical machine as a 20-minute warm-up for the 50 flights she walks on a stair machine.

A friend told her about the generators, but she said, "I'm still only going to do 20 minutes."

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