

CSU's (big) little engine that could

New research center will provide plenty of power

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By tapping into new demands for low-emission, high-efficiency engines that can support entire power grids, Colorado State University hopes to generate more jobs for the city and steer its graduates into industry.

CSU on Tuesday unveiled its new Distributed Power Generation Research Center, built with large donations from both Caterpillar, Inc., and Woodward Governor.

The gifts will enable CSU to conduct research on distributed power generation and become a world leader in engine research.

Such engines are capable of providing emergency power during blackouts and extra power during hours of peak use, helping to avoid rolling blackouts.

It's an increasingly popular option for power companies, said Bryan Wilson, a CSU mechanical engineering professor and director of the engine lab.

"In its simplest form, it means generating power at many sites," Wilson said.

The lab will allow students to work on Caterpillar's latest natural gas engine that is able to produce, in its current configuration, 1.6 megawatts of electricity.

The massive yellow engine is about 15 feet square.

Spin-off companies dealing with clean-burning energy production could emerge from the laboratory, Willson said.

Caterpillar, which is just now ready to start producing the massive engine commercially, donated the new engine to CSU. Commercially, the engine would cost between \$320,000 and \$360,000.

Woodward Governor donated \$150,000 to install the engine and prepare it for the first phase of testing.

Because the engines would be located on-site, at a hospital for example, energy isn't lost as it is transmitted long distances, Willson said. The engines must be clean burning if they are to be located on-site.

"This laboratory is the only laboratory in the world that can conduct research on engines this size," Willson said.

It also gives CSU's graduate and undergraduate students a chance to work on cutting edge technology, said CSU President Larry Penley.

"For Colorado State University, this is something very important," Penley said. "Our students get a chance to work in a laboratory at a research university."

In return for their donations, Caterpillar and Woodward Governor get a pool of graduates already trained on their equipment, Penley said.

"Our students can go to work for them immediately," Penley said.

There are 45 students working in the lab. Almost all of them had a hand in installing the new engine.

Students working on the machine were optimistic about what the donations will do for CSU's reputation.

"It's a very good opportunity to establish contacts in the industry," said Justin Lisowski, 23, a mechanical engineering major. "I really think we are building a good name and reputation for CSU solely based on this engine lab."

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