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## **ADC gets SMUD discount for energy-efficient data center**

Environmental impact would be like taking 3,500 cars off the road

Sacramento Business Journal - by [Melanie Turner](#) Staff writer

A fast-growing data center company could be more energy-efficient than corporate giant **Google Inc.**

**Advanced Data Centers'** possible industry-best performance could earn the company a \$150,000 Savings by Design award and a lower utility rate.

The San Francisco-based company, which is building its first data center at McClellan Park, plans to pass the savings on to customers.

The **Sacramento Municipal Utility District** granted ADC a commercial utility rate discount of about 1.1 percent of its total bill, a savings of about \$79,000 a year.

If ADC can meet its energy-efficiency goals, SMUD would pay the \$150,000 cash award, the largest ever in the utility company's service area. When operating at full capacity, the business would save more than \$2 million a year as a result of its reduced energy consumption and discounted rate, SMUD said.

The data center's design is expected to save enough energy to potentially power 2,500 homes. The effect on the environment from the energy savings would be equivalent to taking 3,500 passenger cars off the road every year, said Mike Moreno, key account manager for SMUD.

ADC could receive the maximum \$150,000 when the first phase of the project is built and the energy savings are reached. SMUD also approved a lower utility rate for 10 years.

Plans call for the company's \$100 million project at McClellan Park to include four buildings totaling about 500,000 square feet. About 300,000 square feet would be used for servers.

The design award and rate discount were for ADC's first building now under construction at McClellan, a 70,000-square-foot former U.S. Air Force radar repair facility.

ADC would be a wholesale provider that leases large blocks of space for servers. The company has 90 megawatts allocated by SMUD for its project. It aims to lease space to its first customer by July.

"We're talking to customers that will consume between 500 kilowatts and 4 megawatts of power," who would lease between 5,000 and 40,000 square feet of floor space, said Bob Seese, chief data center architect for ADC.

ADC would not disclose potential customers.

Last fall, the company finished construction of a 69,000-volt, 45-megawatt substation on the site. The substation would be dedicated to providing power to 160,000 square feet of data center space, and support power loads of up to 250 watts per square foot.

Forty-five megawatts is enough to power 150 homes, Seese said.

Moreno said the discounted rate is a tool to compensate customers for energy savings they provide to SMUD.

“They’re pretty rare,” he said of such rates. “We probably have six of these throughout the whole service territory.”

ADC’s center will use features such as advanced airflow systems that use outside air for cooling, energy-efficient lighting, and enclosed hot-air aisles that use chimneys and fans to pump hot air out.

SMUD’s actions lend credibility to ADC’s energy-efficiency claims for its McClellan campus, Seese said.

Last year, ADC claimed a “power usage effectiveness” — or PUE — of 1.2 or better. PUE is an emerging standard used to assess data center efficiency; the lower the number the better.

ADC says its data center will operate at a PUE of 1.1, reducing the energy required to operate the center by more than 35 percent. A score of 1.1 indicates that for every watt of energy used by servers it takes 0.1 watts of additional energy to cool the servers and operate the data center.

KC Mares, president and chief energy officer for **Megawatt Consulting Inc.** in Reno, Nev., said it’s a big leap from 1.2 to 1.1, but he believes ADC can pull it off.

Modern data centers average around 1.5, he said. “It doesn’t sound like a big difference, but percentage-wise it is a big savings,” Mares said.

The **U.S. Environmental Protection Agency** has forecast that “best in class” data centers should achieve 1.2 by 2011. Last fall, Google announced it is averaging 1.21 across its six data centers.

“As far as I know, there are no data centers below 1.2 that are currently operational and fully loaded,” Mares said.

Rob Leonard, director of economic development and intergovernmental affairs for Sacramento County, said the lower utility rate means a reduction in utility tax for the company.

“That translates to us being an appealing place for these companies to invest and grow, and that’s a good thing,” he said.

Last spring, ADC received pre-certification from the U.S. Green Building Council for a Platinum rating under the Leadership in Energy and Environmental Design standard.

A handful of data center and telecommunications industry veterans founded ADC two years ago. The company is financed by California business magnate Bernard Osher, who sits on the ADC board, and a private equity fund, according to the company.