

DRIVE FOR DATA

Progressive's center biggest yet in Springs

By WAYNE HEILMAN THE GAZETTE

From the outside, Progressive Corp.'s new \$57 million data center in northern Colorado Springs looks like just another brick-and-glass office building.

But on the inside, the 175,000-square-foot center looks more like a sophisticated military command post that can withstand just about any challenge humans or Mother Nature can throw at it and hardly miss a beat, preserving the company's customer and corporate data.

The center will initially house 700 computers that operate everything from Progressive's Web site to its call centers and other operations. It is connected to two separate generators and electrical systems that provide backup in case of a power failure.

Progressive's center is the largest and most sophisticated data center ever built in the Springs, which also is home to 10 smaller such facilities. Local economic development officials predict that number could double in five years as the industry grows at double-digit rates.

Ten companies are considering the Springs as a potential site for new data centers, said Mike Kazmierski, president of the Greater Colorado Springs Economic Development Corp. The nonprofit business-recruiting group has made attracting data centers one of its top priorities.

"They don't provide a lot of jobs for their size, but the economic impact is huge because of the level of investment involved in these centers," Kazmierski said. "The jobs they do create are high-paying and aren't likely to be outsourced due to security concerns."

At least one of the companies seems to have already selected the Springs as the site of its center. FedEx Corp. sought approval in June of a 97,540-square-foot "data-center office building" on a 28-acre site in the Northgate business park on the city's north side.



Kevin Essary installed wiring Aug. 29 at Progressive's data center under construction in northern Colorado Springs. The Economic Development Corp. hopes more data centers come to the city. (JERILEE BENNETT, THE GAZETTE)

City officials are expected to approve those plans soon, but a spokesman at FedEx headquarters in Memphis, Tenn., declined to comment on the project.

The EDC isn't likely to land the biggest of the proposed centers looking at the Springs, a \$980 million, 470,000-square-foot center planned for Microsoft Corp. that would employ 100, because the city can't offer the rock-bottom electricity costs available in northwestern states, said David White, the EDC's marketing vice president.

That's because large data centers use massive amounts of power — up to 30 megawatts; the Progressive center will use 4 megawatts. As a result, some of the largest data centers, including another Microsoft center and others for Google Inc. and Yahoo Inc., are planned or being built in



northwestern states to take advantage of low-cost hydroelectric power.

More than 100 data centers of various sizes have been built across the nation annually for the past several years as companies and government agencies comply with new federal laws requiring them to better safeguard customer information and health records.

“We’ve only really seen the tip of the iceberg as far as demand by a lot of smaller to mediumsized companies for data centers,” said Jason Shepard of the commercial real-estate firm CB Richard Ellis, who specializes in helping firms choose data-center sites.

Centers like the Progressive facility also are designed to help a company recover from a natural disaster, so they are located far enough away from a company’s primary center to ensure that both facilities aren’t disabled by the same event, such as a storm or earthquake.

Data-center operators generally look for sites in areas that are not prone to natural disasters, have low-cost and reliable power, access to sophisticated telecommunications networks and a plentiful pool of available information technology workers, White said.

A recent study by The Boyd Co. Inc., a Princeton, N.J., corporate site-location consulting firm, ranked Colorado Springs seventh among 35 cities for data centers behind Sioux Falls, S.D.; San Antonio; Ames, Iowa; Tulsa, Okla.; Des Moines, Iowa; and Omaha, Neb.

The annual cost of running a 125,000-squarefoot data center with 75 employees in Colorado Springs, including labor, power and other costs, is \$10.7 million, compared with \$9.7 million in Sioux Falls and \$14.1 million in New York City, the study found.

Boyd Co. President John Boyd said the Springs also ranks high because of its proximity to the U.S. Air Force Academy’s Center for Information Security, one of a handful of such programs certified by the National Security Agency, the gold standard for data security.

“Locating close to these programs gives centers

access to the graduates, instructors and interns with the program,” Boyd said. “While academy graduates have a military obligation to fulfill, they often tend to come back to Colorado Springs after that.”

Colorado Springs also offers data-center operators a deep pool of potential applicants — hundreds, perhaps thousands of technology workers who lost jobs in a downturn earlier in the decade as well as military retirees with information technology expertise, Boyd said.

Labor availability has been a key factor in attracting data centers to the Springs, said Tom Rauchut, who manages two local data centers for computer giant Hewlett-Packard Co. The two centers employ about 30 people.

“If I were choosing a location for a data center, this is the area I’d target not only because of the labor, but the low risk of natural disaster,” Rauchut said. Data centers often are built adjacent to other corporate facilities, including call centers, Boyd said. Progressive’s data center is located on the same site as the auto-insurance giant’s call center, which opened three years ago.

New laws and regulations aren’t the only reason data centers are multiplying. New and expanded centers also are needed to handle the explosion of information stored on computers ranging from documents and records to video, photographs and audio files.

“The growth in the amount of data that needs to be stored has been logarithmic, then you add to that the requirements in various federal laws that you keep data longer,” said Rick Bauer, technology director for the Storage Networking Industry Association.

The San Francisco-based trade group operates a small simulated data center in Colorado Springs used by its 400 vendor members to test equipment for such centers to make sure gear from multiple vendors will work together properly before it is installed.

Advances in server technology have cut the cost of equipping and operating such centers, prompting more mid-sized companies and organizations to open one, said Galen Schreck, an analyst for



Forrester Research, a Cambridge, Mass., technology-research firm.

“At one time this sort of facility was only available to Fortune 500 or 1,000 companies, but these types of centers have really spread beyond that in recent years,” said Schreck, who focuses on data center computer architecture and automation for Forrester.

Those advances have made many data centers obsolete because new servers use more power and require massive air conditioning systems, said Michael Bell, server group vice president of Gartner Inc., a Connecticut-based technology research firm.

A recent survey by the Data Storage Institute, a California-based think tank operated by AFCOM, a trade group for data center managers, found that 53 percent of the 200 managers surveyed expected to expand their center in the next 10 years. The group represents more than 3,000 of the nation’s 10,000 centers.

Most of the time, that means building from the ground up because a company’s existing center doesn’t have enough space to house additional servers needed to handle the growing volume of data or new Web services, said AFCOM President Jill Eckhaus.

“The older facilities just aren’t cutting it. They weren’t built to house as many servers as companies need today,” Eckhaus said. “The newer servers generate more heat, so you need more space to compensate. You either have to expand, renovate or build a new facility.”

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PROGRESSIVE’S DATA CENTER

Progressive Corp.’s data center is designed to mirror all computer systems that the company operates at its headquarters near Cleveland. The \$57 million center complex includes a backup computer system for disaster recovery that will begin operating next year and a mailing facility designed to print and mail more than 350,000 policies, bills and other documents a day by April 2007. A few facts about the center:

Size: 175,000 square feet

Employees: 39 with plans to grow to 140 by the end of 2007, including 55 at the mailing facility

Begins operations: May 2007.

Capabilities: Get the company’s computers up and running within 24 hours of a disaster with just an hour of data loss. Data backup operations are now contracted out to SunGard Data Systems Inc., which can recover in 72 hours from a disaster with 24 hours of data loss.

What’s inside: 700 servers with capacity of 1,728 servers

Data storage capacity: 111 terabytes, or enough to hold 111 million books

Back-up power: Two generators, each connected to separate power systems

Telecommunications: Connected to Progressive’s headquarters by two different fiber-optic lines, one that is 1,440 miles long and another that is 2,129 miles long that transmit information at 2.5 gigabits a second, or 3,000 times faster than a broadband Internet connection.

Wired: Includes 19 miles of fiber-optic cable and another 38 miles of copper wiring. Entire site is served by a wireless network, and all telephones in the center will use digital calling through the Internet.

Power consumption: 4 megawatts (1 megawatt provides enough power for a 14-story building)