IT Managers Make a Power Play

**New Software, 'Thin Clients' Help
To Tame Energy-Guzzling Computers**
By JIM CARLTON
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Electricity consumption hadn't been a big issue for information-technology managers in the past few decades. The move to personal computers in the 1980s initially cut power consumption from the big iron mainframes of yore, and technology budgets focused on getting and managing more computing power.

But information-technology managers are now discovering what big data-center operators have found in recent years: Electricity is a significant portion of their tech spending -- and growing quickly.

Power costs for computers are rising not just because of energy prices but because the machines are tackling more power-hungry tasks, such as handling video. If a large business did nothing for the next five years, it would need to spend as much as $2.3 million to run a typical cabinet full of server-computers over the three-year life of the machines, compared with $206,000 now, according to an estimate from the Uptime Institute, a think tank in Santa Fe, N.M. And unlike companies such as Google Inc. and Yahoo Inc., which can afford to build new data centers in places such as Washington state where power is cheap, most businesses are stuck paying the growing bill from the local power company.

Now IT managers are experimenting with new ways to cut power use, while also helping the environment. Companies are taking advantage of software programs such as Surveyor from Verdiem Corp., which enables IT managers to automatically turn off desktops when they aren't in use. Other firms are turning to "thin client" computers, which are barebones machines that connect directly to servers and use far less power than desktops. And many are also using new features, including enhanced "sleep" features, in software and products from PC manufacturers and companies such as Microsoft Corp. that also save on energy.

City University of New York, for example, in 2005 began outfitting its fleet of 20,000 PCs with Surveyor, which acts like a night watchman to automatically turn computers off when they are idling in the dark. The software contrasts with familiar "screen savers," which shut down monitors to save screen life but can actually use more electricity. Using the software has so far cut more than 10% from the university's computer power bills, or about $320,000 a year, university officials estimate.

Quad/Graphics Inc. in Sussex, Wis., has also outfitted its 4,000 PCs with Surveyor after a pilot study of the software last year showed it would shave 35% to 50% off the cost of the company's computer power bills, say officials of the commercial printer. This equates to as much as $70,000 annually in lower power costs. That's a real boon, the officials add, since their business has been squeezed by fierce pricing pressure. "Every dollar saved has a direct impact to the bottom line," says Mike Fegley, Quad/Graphics's manager of energy and corporate facilities.

Some companies are turning to barebones PC terminals known as thin clients to cut electricity costs. The Verizon Wireless call center in Chandler, Ariz., for example, last year swapped out most of its 1,700 PCs with Sun Microsystems Inc. thin clients. That helped slash its power usage at the call center by a third, say Verizon officials. Afterward, an official of the local power utility "joked whether we were leaving the building," says Carl Eberling, vice president for information technology at Verizon Wireless, a Basking Ridge, N.J., carrier owned by Verizon Communications Inc. and Vodafone Group PLC.

Power savings previously weren't a big part of the thin-client sales pitch. In the past, the barebones machines were attractive because they helped cut costs of buying and managing back-room servers, not because they used less power. But officials of Sun, Santa Clara, Calif., say that customers in the U.S. and Europe are now citing the need to save on power as a major reason for replacing their fleets of PCs with thin clients. Sun's thin clients typically consume less than half of the electricity a PC does, says David Douglas, Sun's vice president of eco responsibility. (PCs usually consume 80 to 100 watts of electricity at any one time, Sun officials say.)

Other computer manufacturers are also paying heed to the power problem. In client pitches, Hewlett-Packard Co. officials say they play up how they embarked on a streamlining plan in 2005 to lower the company's own IT power costs by 20% to 25% over three years. This is being done largely by consolidating its number of servers and data centers. "We describe to [corporate] enterprises what we are doing" and then say: "Here is what we think we can do for you," says Mark Hurd, chief executive of the Palo Alto, Calif., company.

Other PC giants are incorporating energy-saving features in their product designs. Chip giant Intel Corp. in August unveiled a series of Dual-Core Intel Xeon 7100 microprocessors for servers that the company said offered "nearly three times better performance per watt" over previous Intel Xeon chips. Rival Advanced Micro Devices Inc. contends its line of server chips is even more energy-efficient. Meanwhile, Via Technologies Inc., an Intel clone maker in Taiwan, says some of its chips for PCs can cut power consumption on a desktop by as much as 50%.

Microsoft, meanwhile, has included an enhanced "sleep" feature in its new Windows Vista operating system that is aimed at helping companies and individual users cut their power bills. Past Windows versions had a standby mode that wouldn't allow the computer to power down nearly as much. Older Windows versions also took four steps to activate

standby, versus one to put Vista to sleep. PCs draw as much as 100 watts of power even when they aren't in use, compared with as little as three or four in sleep mode.

The Vista design has garnered support from one unlikely corner: environmentalists, who have long scolded the computer industry for being wasteful. "The bottom line is we need to make sure computers go to sleep when people are sleeping," says Noah Horowitz, a senior scientist at the Natural Resources Defense Council, which gave Microsoft input on Vista.

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