Post details: Data Centers: The heat is on: EPA’s Energy Star program could focus on power consumption in the server room

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"If you are just buying a server based on what the stated cost is, and don’t take into account operations, you are missing half to two-thirds of your expenses." Andrew Fanara, Energy Star www.energystar.gov

Data centers aren’t much different from automobiles, at least when it comes to energy usage. While a small percentage of a car’s fuel goes into moving people from place to place, the vast majority of its energy goes into moving the car itself or is given off as heat.

In a data center, less than 50 percent of the electricity goes to the servers’ CPUs, and some of that is converted to heat. The rest of the electricity is used to run other components of the servers, the center’s cooling system, or is lost in power supplies, uninterruptible power supplies and switches. While this is a problem for a data center manager trying to stay on budget, it is also becoming a national concern.

The Environmental Protection Agency and the Energy Department are focusing on data centers as an important and emerging sector in the economy from a standpoint of energy consumption, said Andrew Fanara, product development team leader for EPA’s Energy Star program.

... Data centers, however, come at a high cost in terms of energy independence and environmental damage. According to Jonathan Koomey, Osman Sezgen and Robert Steimetz of the Lawrence Berkeley National Laboratory at the University of California, data centers in California alone consumed between 2,000 and 3,000 gigawatt-hours of electricity in 2001, and that figure has risen considerably since then. (One gigawatt, according to California’s Consumer Energy Center, provides power enough for 1 million average homes.)

Congress took note this year, and last December passed HR 5646, which would require the Energy Star program to analyze “the rapid growth and energy consumption of computer data centers by the federal government and private enterprise.”

... "These are voluntary standards, but not for government buyers," Fanara said. "There was an Executive Order signed by President Clinton and