

DATA CENTER BASELINE STUDY REPORT PREVIEW

Now more than ever, energy efficiency seems to be on everyone's minds. Faced with concerns such as global warming and skyrocketing energy costs, more and more companies are considering if and how to increase efficiency. Yet they face challenges in doing so.

Organizations that rely on their data centers must make particularly hard decisions when it comes to accommodating growing demands without creating a negative impact on their finances or the environment.



The Green Grid Administration recently conducted a thorough baseline efficiency study to explore data center professionals' views with regard to energy efficiency in the data center. *The Data Center Baseline Study Report*, released in June 2008, is based on in-depth interviews with engineers and data center managers. These professionals represent a cross-section of companies in terms of industry, size, number of servers, storage capacity, age, geography, and so on. The interviews, which covered everything from the steps used to manage the data center environment to the tools and best practices managers would like the industry to provide to help them control power consumption in the data center, produced a number of interesting findings, including a few surprises.

The study describes what's behind the need to boost efficiency, as well as the incentives (and lack thereof) for making changes. For instance, the data center professionals pointed to capacity constraints driving the need to optimize, including a lack of physical space and available grid capacity, the need to expand power or cooling infrastructures, and localized power density or spot cooling problems. Other motivators included cost savings—such as those from reduced consumption and utility rebates—and impending regulations, both in the United States and abroad.

Data center professionals ranked growth in IT demand as among the most common obstacles to becoming more energy efficient. Data centers must contend with constant expansion in data volume, along with new and extended application requirements. The interviews also revealed hurdles in the form of a lack of time to devote to sustainability (instead, focusing on implementing new services), aversion to risk, and a lack of funding.

As part of the study, the Green Grid asked data center professionals how they calculate the power load of individual IT devices. Some organizations use actual consumption data, while others calculate using the nameplate rating and by estimating. Interestingly, none mentioned taking advantage of vendor-supplied tools to calculate expected consumption.

The Data Center Baseline Study Report also outlines helpful strategies for approaching energy efficiency in the data center. The discussion covers virtualization, air-flow management, server decommissioning, equipment upgrades, storage consolidation and optimization, and use of fresh-air cooling and renewable energy sources. The report also includes tips on how to improve energy efficiency in the data center so that other data center professionals can evaluate their options and identify the most appropriate steps for their particular organizations.

Read the complete report to see how your data center compares to others around the world and learn more about how to increase your data center's energy efficiency. We want to hear from you if you're interested in joining the Green Grid and contributing your efforts and expertise as we work to increase energy efficiency in the IT sector.