

BUSINESS FACT STUDY

Take a “byte” out of energy costs

As energy prices rise, more and more Wisconsin companies are looking for ways to curb runaway energy consumption in their information technology (IT) departments. That's why Focus on Energy, Wisconsin's statewide program for energy efficiency and renewable energy, has joined forces with leading IT experts to help you save energy and money in these areas, even as IT energy consumption soars to new levels.

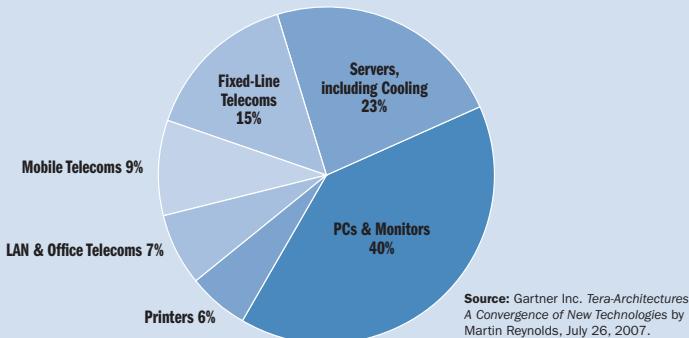
The result is our energy-efficient computing initiative—a comprehensive approach that combines energy-efficient equipment, smart energy management software, enhanced system design, and cost-effective cooling systems within the equipment and the facilities in which they're located.

Our team of experienced energy advisors can work with you to assess your facility's energy use, find inefficiencies, and recommend solutions. This includes education on energy-efficiency opportunities across your IT infrastructure and data-processing equipment. You'll receive valuable insight and advice to help maximize efficiency and savings through planning, design, and best practices from a trusted third-party resource.

INCENTIVES FOR ENERGY EFFICIENT COMPUTING

Focus on Energy provides financial incentives for IT and data center projects to help offset the costs of energy efficiency upgrades. Many solutions are available to improve energy efficiency and your bottom line while maintaining or improving system reliability. Visit focusonenergy.com/incentives for the most up-to-date information.

BREAKOUT OF IT ENERGY CONSUMPTION



For more information,
call 800.762.7077 or visit focusonenergy.com.



LET FOCUS MANAGE YOUR PC POWER

PC Network Energy Management

These software-based energy management products allow a PC network administrator to remotely set the power management features and turn off computers and monitors when they are not needed.

Thin-Client Conversion

The goal of this solution is to replace a desktop computer that may require more than 200 watts with a thin-client machine that may need as little as 5 watts. To achieve this, the workload of your computer will need to be moved into the server room with a thin-client computing or desktop virtualization solution.

LET FOCUS SERVE YOUR SERVERS

Server Virtualization

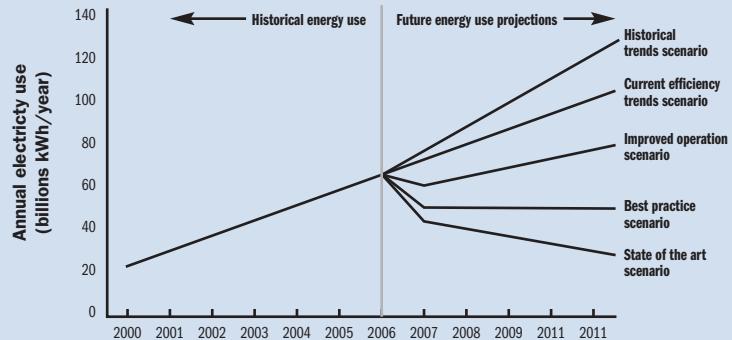
Server virtualization is a software solution that allows multiple physical servers to be “transformed” into software. Instead of using a separate physical server for each application—each with its own power-hungry CPU, RAM, hard disk, and network controller—multiple servers can be virtualized so that one server does the work of many.

This way, numerous servers that are underutilized can be reduced to a much smaller number of higher utilized servers. Since a single underutilized server uses almost as much electricity as a server running many virtual machines, energy use can be substantially reduced.

Take a “byte” out of energy costs



COMPARISON OF PROJECTED DATA CENTER ELECTRICITY USE



Source: U.S. Environmental Protection Agency ENERGY STAR Program.

ENERGY STAR® Qualified Enterprise Servers

The Environmental Protection Agency has developed new product specifications for enterprise servers. The new qualification will allow consumers to easily identify energy-efficient equipment. For the latest information on the new specifications, visit energystar.gov. Focus on Energy can provide additional information to assist you in making an informed decision between standard and ENERGY STAR qualified servers.

LET FOCUS ENERGIZE YOUR OTHER IT AND SUPPORTING EQUIPMENT

Cooling Systems

Chillers and computer-room air conditioners (CRAC units) often represent more than 25 percent of a data center's electric load. After first reducing your electric load by one or more of the energy-efficient measures described here, your facility's cooling needs may be substantially decreased, enabling the shutdown of one or more cooling units. Focus offers incentives for high-efficiency air-cooled and water-cooled chillers, as well as unitary and split-system air conditioners.

Power Distribution

Supplying a highly reliable source of electricity to data center equipment itself consumes substantial amounts of energy. Uninterruptible power supplies (UPSs), transformers, inverters, and other power distribution equipment often consume more than 10 percent of a data center's total energy needs. Energy-efficient UPS devices, converting to DC power delivery, and other measures can substantially improve efficiency.

Bring your solution to fruition

Do you have other energy-efficient ideas you don't see here? For custom projects, work with an energy advisor early in your project-planning process to get started. Call Focus on Energy at 800.762.7077 for more information. Also consider these options to take your savings to the next level:

- Air management
- Centralized air handling
- Cooling plant optimization
- Direct liquid or gas cooling
- Free cooling via economizers
- Heat recovery for use in other parts of a facility
- Humidification controls
- Lighting upgrades and occupancy sensors
- Electronic data storage systems

TAKE ACTION TODAY. SEE RESULTS TOMORROW.

To learn more about Focus on Energy's energy-efficient computing initiative and how we can help your data center or IT department save energy and money, call **800.762.7077** or visit focusenergy.com/computing.

STAY CURRENT AND CONNECTED!

Join our online conversation at focusenergy.com/socialnetworks to connect with people who share your interest in saving energy and money at home and work. Also, visit focusenergy.com/incentives for the latest incentives and requirements as Focus offers are subject to change.

Focus on Energy works with eligible Wisconsin residents and businesses to install cost-effective energy efficiency and renewable energy projects. Focus information, resources, and financial incentives help to implement projects that otherwise would not be completed, or to complete projects sooner than scheduled. Its efforts help Wisconsin residents and businesses manage rising energy costs, promote in-state economic development, protect our environment, and control the state's growing demand for electricity and natural gas. For more information, call **800.762.7077** or visit focusenergy.com.