



# NETWORK NEWS

Get ready for your changing network

Monthly mailer from Emerson Network Power

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## EDITOR'S NOTE

Energy efficiency is fast becoming the focal point in any discussion that concerns data centers. While there has been immense progress in the development of energy-saving measures, it still is undeniable that what we need is a holistic approach to this issue.

In this edition, Emerson Network Power presents the **Energy Logic** approach. Details on the "how to?" aspect will be discussed in the main article. We invite you to download the white paper and view the webinar for a complete presentation of Energy Logic. In our succeeding issues, we will share more informative materials and case studies.



Best Regards,

**Toni Mercado**  
Editor  
Network

## Emerson Network Power Introduces ENERGY LOGIC

### WHITE PAPERS



### **Energy Logic: Reducing Data Center Energy Consumption by Creating Savings that Cascade Across Systems**

The model demonstrates that reductions in energy consumption at the IT equipment level have the greatest impact on overall consumption because they cascade across all supporting systems.

[Download this white paper](#)

### EMERSON E-TV



### **Efficiency without Compromise: Increase Data Center Performance while Lowering Energy Usage**

Speakers: **Kevin Noreen**, Senior Manager, Open Systems Product Marketing, Dell; **Fred Stack**, Vice President of Marketing, Liebert Precision Cooling, Emerson Network Power

[View webinar](#)

Need help with designing your data center?



## CHECKLIST

### What are the 10 Energy Logic Actions?

#### Processor Efficiency

Low power processors create a 10% reduction in overall data center power consumption.

#### Power Supplies

Best-in-class power reduces power draw within the data center by 124kW (11%) of the 1127kW total.

#### Power Management Software

Power management features integrated in server processors reduce power draw during idle period.

#### Blade Servers

Blade servers consume about 10% less power than equivalent rack mount servers because servers share common power supplies, cooling fans and other components.

#### Server Virtualization

Implementing virtualization provides an 8% reduction in total data center power draw for the 5,000sq ft facility.

#### Cooling Best Practices

Employing best cooling practices improved cooling system efficiency by 5%.

#### 415V AC Power Distribution

The 415V three-phase input eliminates step-down losses and enables an increase in server power supply efficiency.

#### Variable Capacity Cooling

Converting fans to variable frequency allows fan speed and power draw to be reduced as load decreases.

#### High Density Supplemental Cooling

Supplemental cooling units can reduce cooling costs by 30% compared to traditional approaches to cooling.

## Emerson Network Power Unveils Blueprint to Energy-Efficient Data Center

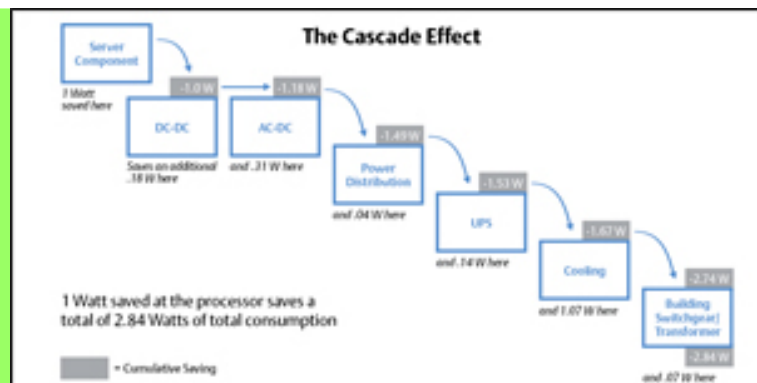
*Energy Logic utilizes today's best-in-class technologies to enable greater energy reductions without compromising performance or availability*

***Driven by rising energy cost and growing energy demands of today's high density data centers,*** energy efficiency in the data center continues to be a priority among IT and data center managers. Best practices for addressing energy consumption have been made and in early 2007, the U.S. Environmental Protection Agency emphasized that energy reductions can be achieved with proper planning and implementation of efficient technologies that exist today.

***Despite the progress, efficiency remains a difficult concept to measure.*** Emerson Network Power bucks the trend with its new report, "Energy Logic: Reducing Data Center Energy Consumption by Creating Savings that Cascade Across Systems. The vendor-neutral evaluation features a holistic approach to energy reduction. Coined as "Energy Logic", the approach centers on the 'cascade effect' by which one watt saved at the processor level can save an average of 2.84 watts in energy consumption.

***Based on research and modeling, the report outlines ten interrelated technology strategies that compose a sequential approach to saving more than half of a data center's load.*** It starts at the server component level, discussing the benefits of low-power processors, and ends on system-level monitoring and control. Equipped with charts and diagrams, the report features quantified savings of each action at the system level, as well as identifies how energy reduction in some systems affect consumption in supporting systems.

***There's more to learn from Emerson Network Power's 20-page Energy Logic report.*** Learn to prioritize efficiency efforts and tailor best practices to your Data Center.



**Monitoring and Optimization**  
Based on the model, system-level monitoring and control provides an incremental saving of 1%.

*Figure 1. With the Cascade effect, a 1W savings at the server component level creates a reduction in facility energy consumption of 2.84W.*

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According to IDC's prediction, the ICT market in Asia Pacific excluding Japan will reach 154 USD billion in 2008 a 10% growth rate over 2007. China and India will contribute close to half of the region's total IT spending in 2008. India is the fastest growing country in terms of overall IT spending in 2008 over 2007.

The top 10 key IDC prediction that will shape ICT industry in Asia Pacific excluding Japan are: China and India's double growth drives in IT market in the region; Demand of end-user for IT services from product vendors; continued growth in the Business Intelligence market in the region; demand for constant presence and enhanced collaboration in the work place through the use of unified communications; importance of energy efficiency with the emergence of Green IT in Asia Pacific has placed a significant factor in purchasing IT equipments for end-user organizations; increase in the demand for multimedia phones; growing demand for wireless broadband access; convergence of business and IT consulting; increase of IT spending in infrastructure for improvement of business environment and for attracting foreign investment in the ASEAN and South Asia region; and government's deployment of technologies to extend connectivity and move towards a society of digital inclusion in Asia.

*SOURCE: IDC: IDC Predicts Continuing Disruptions Across the APEJ ICT Industry for 2008, Driving Double Digit Growth and New Market Segmentation 12 December 2007*

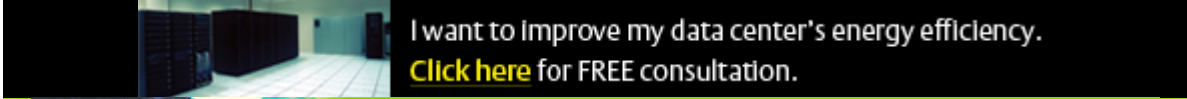


...that Emerson Network Power Introduces a New Approach to Data Center Energy Optimization with Energy Logic?

[Click here for the full story](#)

...In a report made by Environmental Protection Agency (EPA) on server and data center energy efficiency, existing technologies and strategies could reduce typical server energy use by an estimated 25%. This reduction in energy use could amount to \$4 billion in savings from annual electricity costs through more energy-efficient equipment and operations as well as broad implementation of best management practices. According to a DCN article, identifying the amount of power that data center consumes helps in creating a data center to be energy efficient which can lead to at least 50% of data center's power consumption costs.

*SOURCE: Data Center News: Data Centre Managers Need to Manage Power Proactively by Bridget Botelho August 2007*



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