UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

December 28, 2006

Dear Enterprise Server Manufacturer or Other Interested Stakeholder,

The purpose of this letter is to inform you that the U.S. Environmental Protection Agency (EPA) is initiating its process to develop an ENERGY STAR specification for enterprise computer servers. In the coming months, EPA will conduct an analysis to determine whether such a specification for servers is viable given current market dynamics, the availability and performance of energy-efficient designs, and the potential energy savings.

ENERGY STAR is a voluntary partnership between government, businesses, and purchasers, which is designed to encourage the manufacture, purchase, and use of efficient products. Energy efficiency – delivering equal (or better) performance while using less energy – helps protect the environment. Using less energy means fewer power plants, and thus reduces greenhouse gas emissions and improves air quality. Commercial and household products earn the ENERGY STAR by meeting strict energy efficiency guidelines. Manufacturers that qualify their products according to these ENERGY STAR specifications can use the label as a customer marketing tool. To date:

- over 1,500 manufacturers partner with ENERGY STAR
- more than 35,000 product models carry the ENERGY STAR mark across more than 50 product categories
- more than 60% of Americans recognize the ENERGY STAR mark
- American consumers have purchased more than 2 billion ENERGY STAR qualified products

Energy efficiency also helps the economy by saving consumers and businesses billions of dollars in energy costs. In 2005 alone, Americans – with the help of ENERGY STAR – saved 150 billion kWh, or 4 percent of total 2005 electricity in the U.S. This saved $12 billion dollars on energy bills – all while reducing greenhouse gas emissions equivalent to the annual emissions of 23 million vehicles. For more information about ENERGY STAR, please visit our Web site at www.energystar.gov.

EPA's ENERGY STAR server initiative is a response to the rising concerns of energy consumption by datacenters. Since hosting the *Conference on Enterprise Servers and Data Centers: Opportunities for Energy Savings* in January 2006, EPA has spent more than a year

developing relationships with key industry stakeholders including component and equipment manufacturers, industry associations, utilities, datacenter managers and energy-efficiency advocacy groups. Through these relationships, EPA has gained both valuable insight into the datacenter industry and compelling evidence of the need for this specification. These include:

- A single datacenter can house hundreds or thousands of servers. Continued growth in the server population is expected as companies look to expand datacenter capabilities.
- As server densities also increase to squeeze more computing power into less space, the energy consumption estimates of a single server rack can exceed 20KW.
- According to AFCOM's Data Center Institute, power failures and limits on power availability will halt data center operations at more than 90% of all companies over the next five years[1].
- A survey conducted by Ziff-Davis revealed that more than 70% of operators identify IT power and cooling as a primary issue in datacenter management[2].

With rising energy costs and fears of inadequate energy supply and reliability on the horizon, businesses are looking for efficient solutions to address these trends.

The United Kingdom, European Union, and China have also expressed concern about the trends in energy consumption by servers and datacenters. Each has indicated an interest in supporting the development of harmonized energy efficiency measures with EPA.

In the U.S., President Bush recently signed HR 5646, a bill directing EPA to study and make recommendations on the use of energy-efficient computer servers. The legislation also requires EPA to look more broadly to assess other energy efficiency opportunities in U.S. datacenters as a whole. From the date of enactment, EPA will have 180 days to submit the study to Congress. EPA intends to work closely with its existing network of industry experts and other stakeholders, including the U.S. Department of Energy (DOE) and international government representatives, who may have information that would be helpful to this effort. Early in 2007, EPA will provide guidance to all interested stakeholders wishing to learn more about the study's objectives and opportunities to participate.

In addition to informing Congress about the impact of datacenters' energy consumption, the study will facilitate EPA's research on the viability of an ENERGY STAR specification for servers. This effort will include working with industry stakeholders to encourage standardized testing and reporting procedures for server energy use. Also, EPA's ENERGY STAR Commercial and Industrial Buildings team is exploring the development of an energy performance benchmark for facilities that house datacenters. It is envisioned that an ENERGY STAR server specification will help operators of datacenters to improve their performance relative to any benchmark ENERGY STAR might develop.

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[1] AFCOM Press Release: *AFCOM's Data Center Institute Issues Five Bold Predictions* for the Future of the Data Center Industry
[2] *Ziff-Davis Cooling & IT Survey: http://enterprise.amd.com/downloads/Ziff_Power_and_Cooling_IT_survey_en.pdf*

Please take a moment to visit our ENERGY STAR Server and Datacenter Initiatives Web site at www.energystar.gov/datacenters.   To be added to the ENERGY STAR server and datacenter distribution list please contact Rebecca Duff, ICF International, at rduff@icfi.com. If you have any questions about EPA's efforts and plans for 2007, please feel free to contact me at (202) 343-9019 or Fanara.andrew@epa.gov. I look forward to working with each of you over the next year.

Signed,

Andrew Fanara, EPA
ENERGY STAR Program Manager