

# ENERGY STAR® for External Power Supplies



## **Specification Update**

*Prepared for “Meeting on Power Consumption of  
Power Supplies” on 10 Nov. 2004*

Andrew Fanara

United States Environmental Protection Agency

Climate Protection Partnerships Division

ENERGY STAR Program

Product Specifications Team Leader

fanara.andrew@epa.gov

# A Global Opportunity and a Global Approach



- Australia, China, EU, Canada, and others share EPA's interest in implementing policy measures to encourage the design & sale of energy-efficient power supplies
- Our Approach:
  - Coordinate with other countries
  - Employ the same test procedure
  - Develop a global dataset of power supplies
  - Harmonize specifications and timeline



# China and US Collaboration



- China is home to significant share of power supply manufacturing capacity
  - World's fastest growing market for power supplies
- Marks the first time EPA and the China Certification Center for Energy Conservation Products (CECP) have jointly developed a voluntary energy-efficiency specification

Contact:

Mr. Li Tienan

Director

E-mail: [litn@cecp.org.cn](mailto:litn@cecp.org.cn)

Web: [www.cecp.org.cn](http://www.cecp.org.cn)



# Major Elements of Draft ENERGY STAR Specification



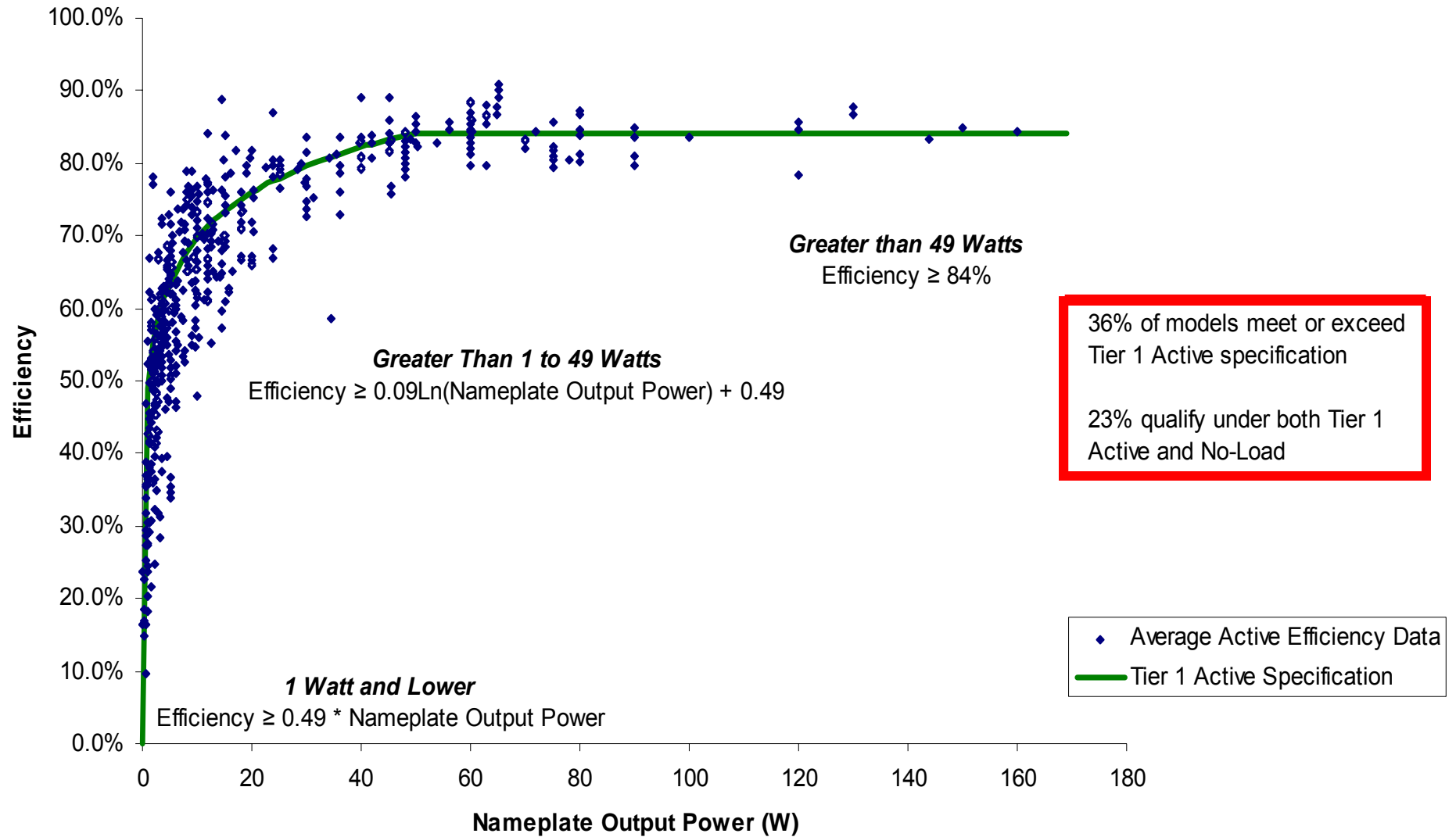
- Technical specification consists of two parts
  - **Active and No-Load** performance thresholds
  - Models must meet both to comply; Emphasis is on Active where the majority of energy savings will be realized
- Testing results (over 600 models tested in Australia, China, and US)
  - 36% of models meet or exceed Active thresholds
  - 39% of models meet or exceed No-Load threshold
  - **23% of models meet both thresholds**

# Highlights of Final Draft 4

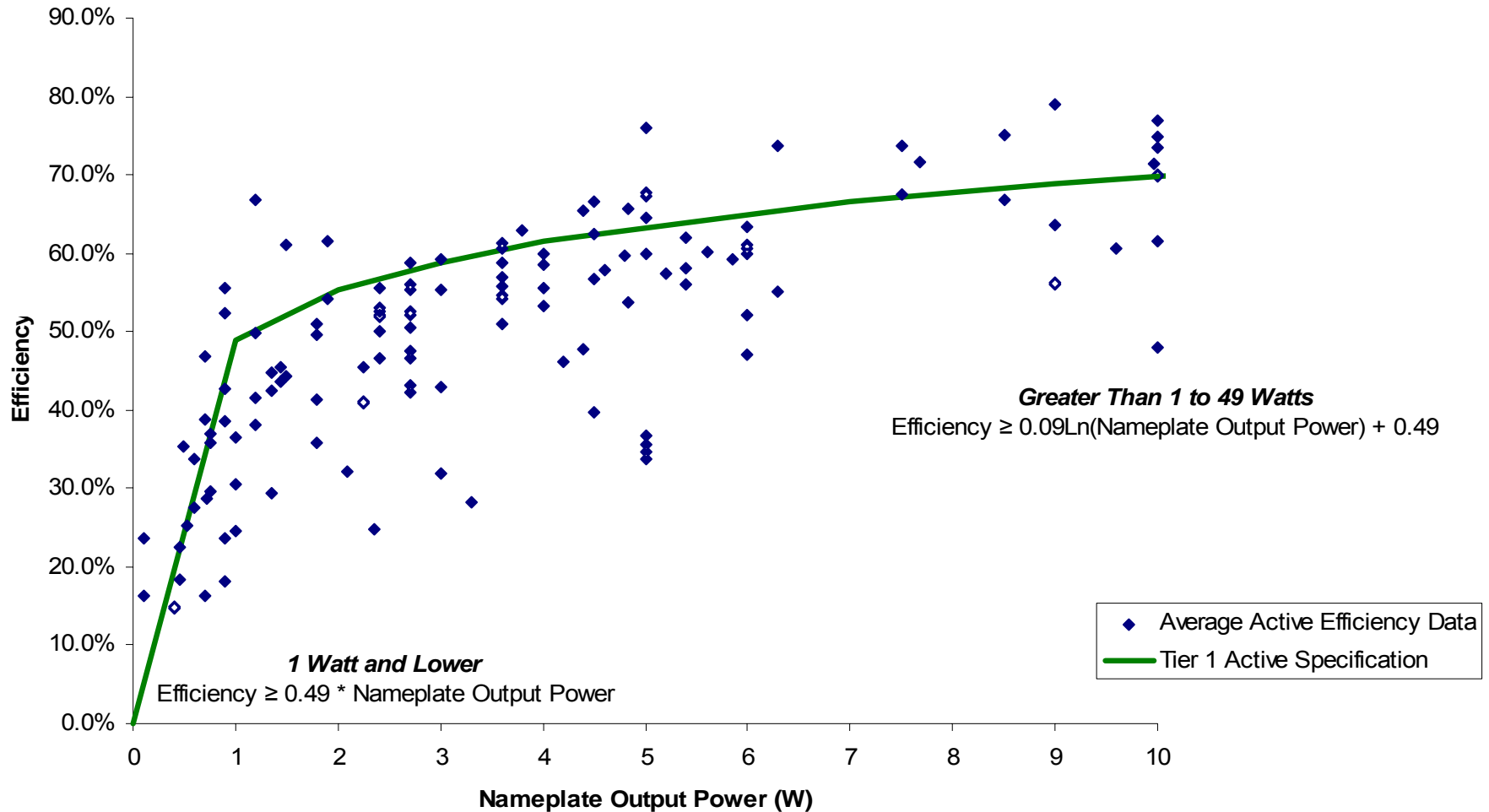


- Revised definition of single voltage external ac-dc/ac-ac power supply
  - **Temporarily excludes a subset of external power supplies** with battery charging functionality typically found in household appliances
  - Exclusion will be in place from January 1 – Dec. 31, 2005
- Made **no changes to Active and No-Load** performance thresholds (same as Draft 3)
- Included proposed effective date of **January 1, 2005**
- Added new section, **International Efficiency Marking Protocol**
  - Universal system to designate and determine a power supply's efficiency
  - Initial support from Australia, China, and the United States
  - Proposed effective date of January 1, 2006

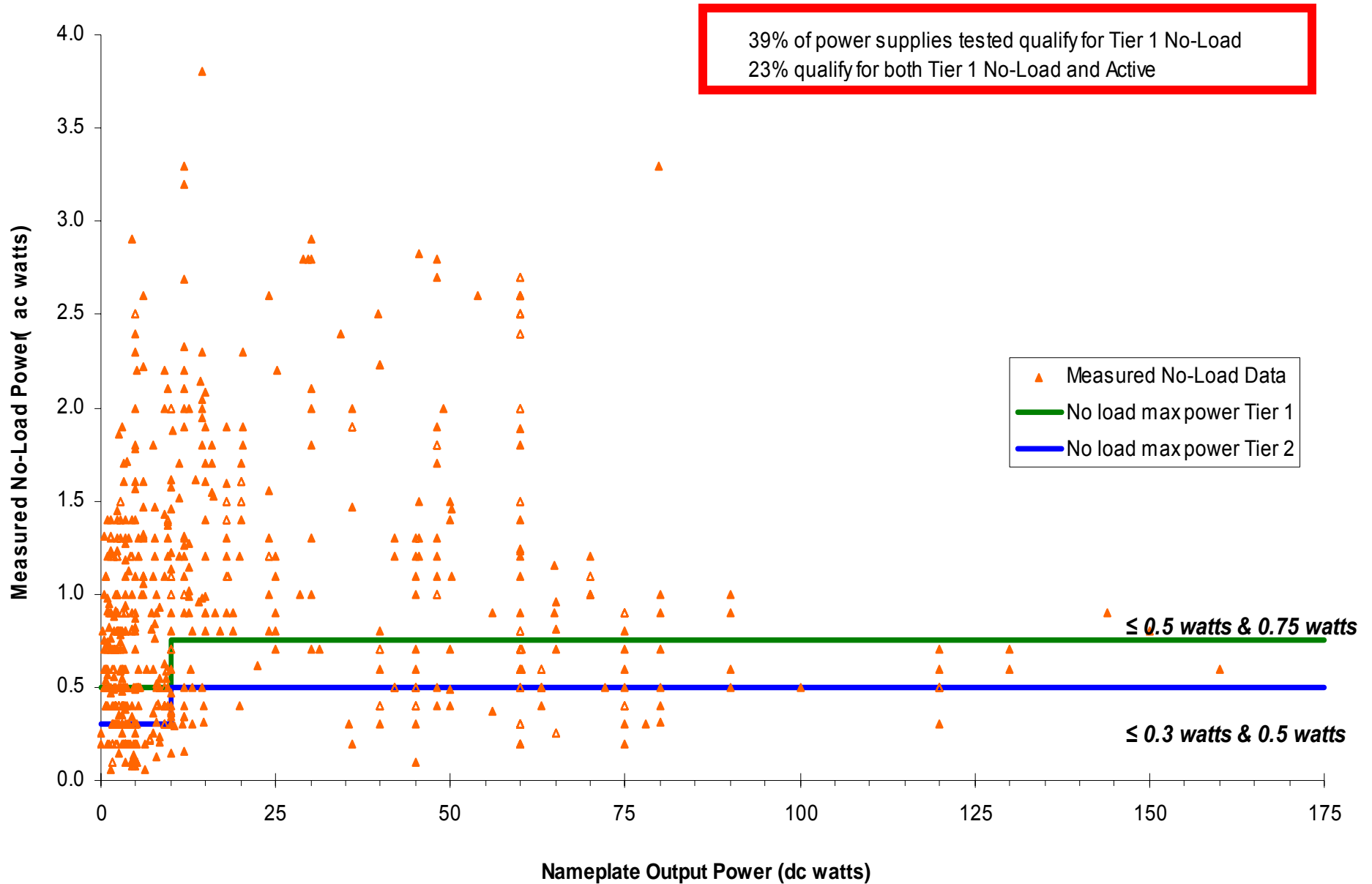
# EPS Average Active Mode Efficiency



# EPS Average Active Mode Efficiency ( $\leq 10\text{W}$ )



# EPS No-Load Distribution





# International Efficiency Marking Protocol



- Universal numbering system using Roman numerals (I-VI) being developed.
- The higher the number, the greater the efficiency.

# Key Promotional Efforts



- **CES** (Consumer Electronics Show) in Las Vegas, NV – January 6-9, 2005
  - Promoting ENERGY STAR and EPS partners and qualified models to end-use product manufacturers
  - Interested manufacturers to showcase their products at “Green Gadgets” on January 8
- **APEC** (Applied Power Electronics Conference and Exposition) in Austin, TX – March 6-10, 2005
  - Plenary presentation
  - More details to come on promotional activities

# Create and Sustain Demand for Qualified EPS Models



- End-Use Product Manufacturers (where an ENERGY STAR specification exists)
  - Will be required to meet *both* the end-use product specification and the external power supply specification to earn the ENERGY STAR
  - New external power supply requirement will be phased in as existing end-use product specifications are revised
  - Effective dates will be determined independently for each applicable end-use product category

## Anticipated Dates for Changes to Existing ENERGY STAR Product Specifications

**GOAL:** Create and sustain customer demand for highly efficient power supplies

ENERGY STAR® End-Use Product Category	Power Supply Type	Final Specification Release Date w/Power Supply Requirements*	Effective Date*
Telephony (e.g., cordless phones)	External	Spring 2005	TBD (revised Tier II)
<b>Imaging Equipment</b> Copiers Faxes Multi-Function Devices (MFDs) Printers Scanners Upgradeable Digital Copiers (UDCs)	Internal Internal or External Internal or External Internal or External External Internal or External	Winter 2005 (all products)	TBD
<b>Computers/Laptops/Servers</b> Computers Laptops Servers	Internal External Internal	Winter 2005 (all products)	TBD
Audio/DVD	Internal or External	Revisions not planned yet	NA
Monitors (V4.0)	Internal (CRTs) or External (LCDs)	Revisions not planned yet	NA
Set-top Boxes	Internal	TBD	TBD
TVs/VCRs	Internal	TBD (active power)	TBD

\*Dates represent targets and may change based on industry discussions and draft documents leading up to the final specification.

# Next Steps



- Review Draft 4 comments received by November 19, 2004 deadline
- Release Final Specification in December
- Sign up interested manufacturers as ENERGY STAR partners
- Begin work to address excluded battery charging systems in January 2005