



# Draft 1 Technical Specification Review

# Determining the Levels



- EPA sets specifications to recognize the top 25% performers in the marketplace
- EPA applied test results to develop minimum performance levels within the technical specification
  - 24.8% of models meet or exceed Active thresholds
  - 26% of models meet or exceed No-Load thresholds
  - 12% of models meet both thresholds

# Status of Specification Development



- EPA distributed a Draft 1 technical specification for comment
- EPA will compile all written comments and feedback from today's meeting
- Draft 2 version to be distributed in late June

# Elements of Technical Specification



- Defines what requirements an external power supply must meet to qualify as ENERGY STAR
- Separated into five separate sections:
  - Key Definitions
  - Product Categories Eligible for Qualification
  - Performance Requirements for Eligible Products
  - Testing Requirements to Qualify Models
  - Effective Date

# Definitions



- **Purpose:** To define the key terms included within the technical specification
  - Manufacturers are encouraged to provide assistance to ensure EPA uses terms that are globally accepted
  - Examples: external power supply, active load, no load

# Qualifying Products



- **Purpose:** Provide clear direction regarding product types that are eligible to qualify for ENERGY STAR
  - Ensures that only the appropriate products are considered for qualification
  - Example: External single voltage ac-dc power supplies vs. battery chargers

# Qualifying Products Key Comments/Questions



- Can multiple output products qualify?
- Specification should also cover ac-ac products.
  - No data collected to date
- Will this specification also apply to internal power supplies?
- Battery chargers should be addressed under a separate test procedure and specification.

# Energy Efficiency Requirements

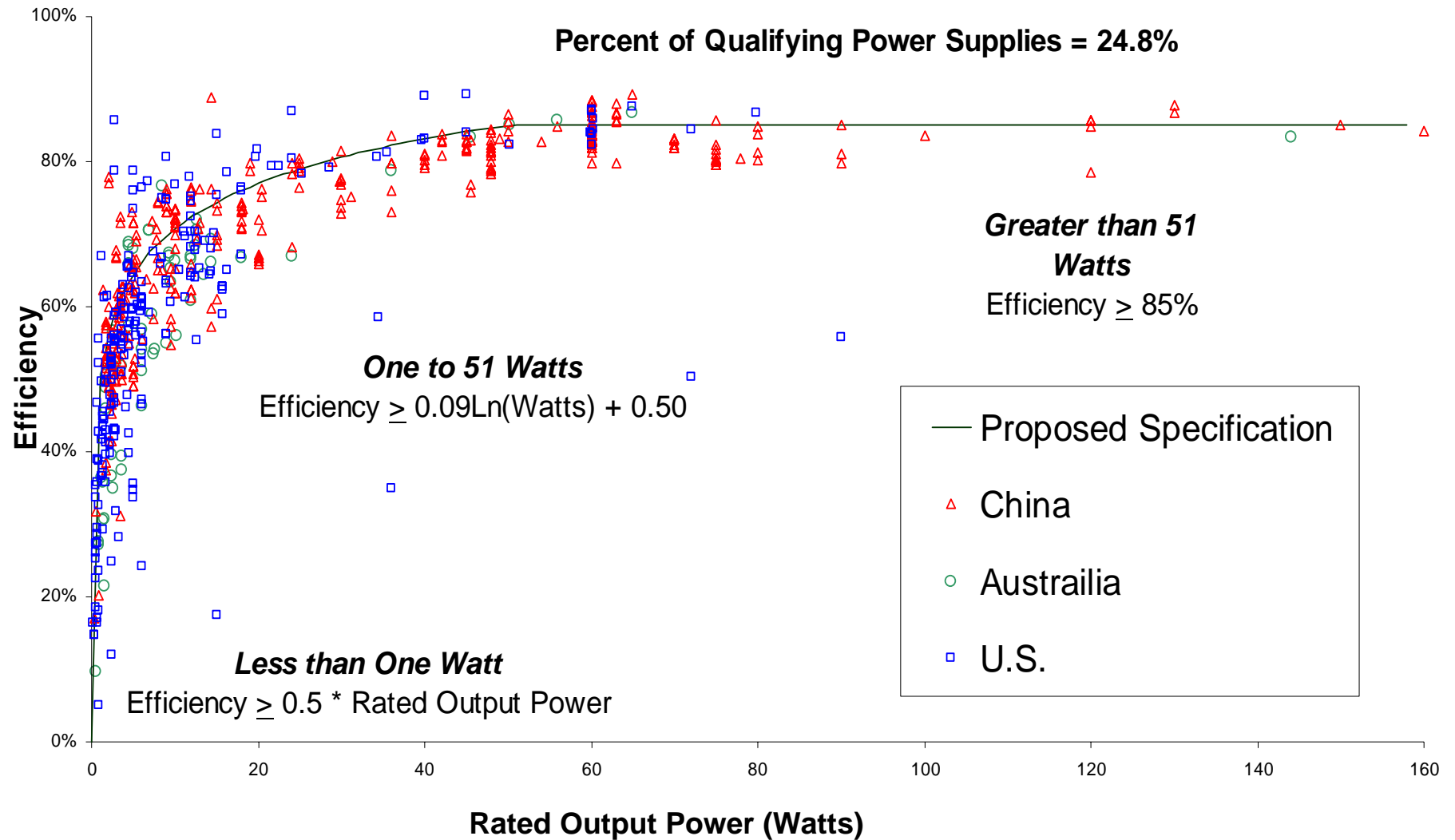


- **Average** Active Mode efficiency value is derived from measuring rated current output at 100%, 75%, 50%, & 25%
- Efficiency curve consists of 3 equations based on wattage range

Nameplate Output Power ( $P_{no}$ )	Average Efficiency in Active Mode (expressed as decimal)
0 to <1 watt	$\geq 0.5 * P_{no}$
1 to 51 watts	$\geq 0.09 * \ln (P_{no}) + 0.5$
> 51 watts	$\geq 0.85$

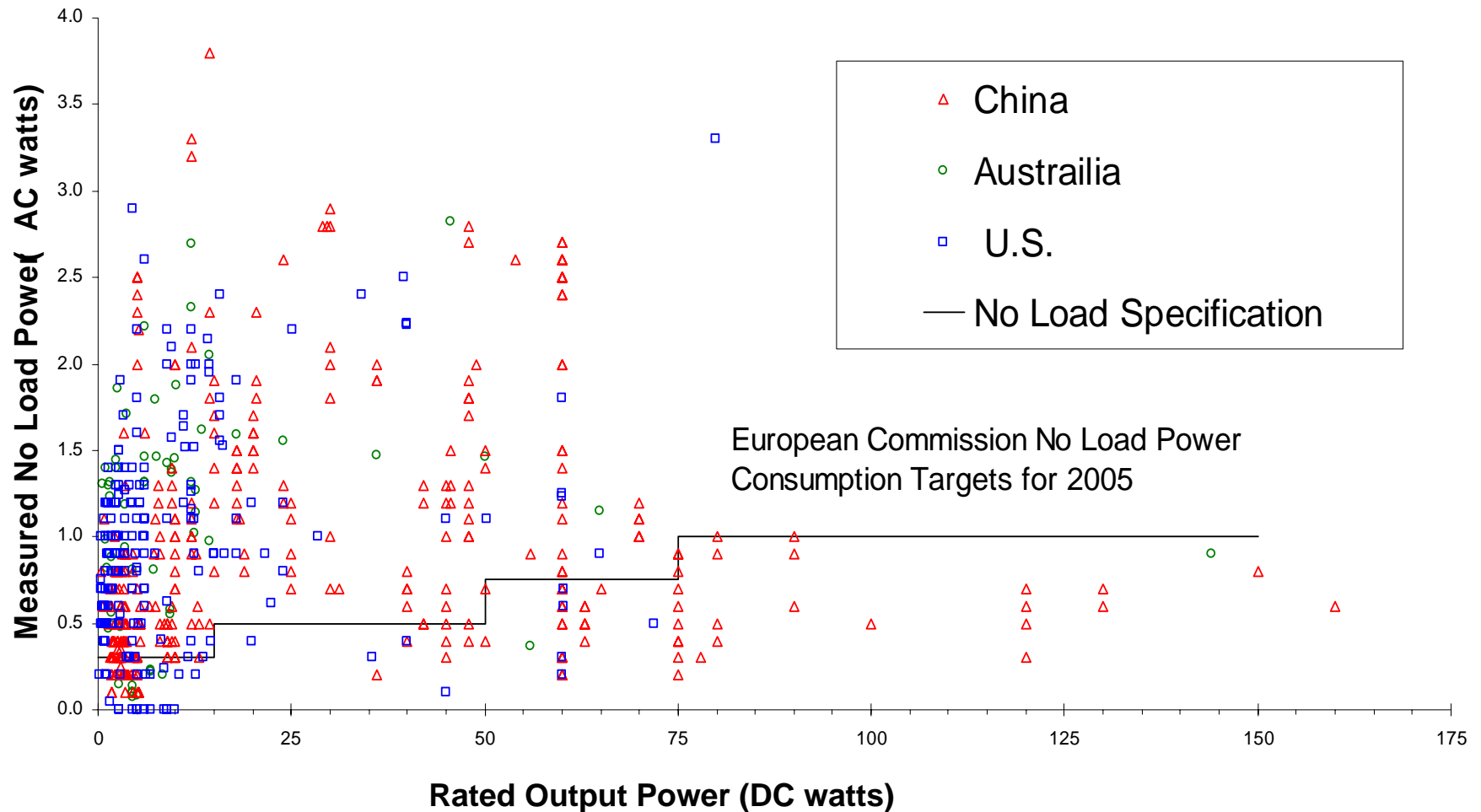


# Top Quartile of Power Supplies in Active Mode



# Top Quartile of Power Supplies in Standby/No-Load

**26% of measured power supplies qualify for 2005 no load power target  
12% qualify for both the active and no load specifications**



# Efficiency Requirements Key Comments/Questions



- EPA should work to harmonize with the levels set forth in the Code of Conduct.
- EPA should use measured power instead of rated power to determine specification.
- Others?

# Test Procedure



- **Purpose:** Ensures all manufacturers are using the same method to measure power supply efficiency
- Additional benefit of providing one test method for use across many different programs and countries
  - Minimize burden on power supply manufacturers with worldwide distribution

# Test Procedure Key Comments/Questions



- How do manufacturers test models with multiple taps or switch selectable voltage capabilities for ENERGY STAR qualification?
- Others?

# Effective Date



- Date in which power supply manufacturers can begin labeling, promoting, and marketing qualified models as ENERGY STAR
  - Manufacturers must sign a Partnership Agreement
  - Qualified models must be submitted to EPA for approval
- Tentative effective date: November 1, 2004

# Draft 2 Specification Format



- Draft 2 specification will be in two pieces:
  - Partner Commitments (Labeling and Reporting Requirements)
  - Eligibility Criteria (Technical Specification)
- Detailed explanations supporting revisions will be provided in text boxes throughout the document
  - Specific comments on Draft 1 are posted to the ENERGY STAR Web site:  
[www.energystar.gov/powersupplies](http://www.energystar.gov/powersupplies)