

Power Supplies Activities: International Policy Round Up

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Power Supply Opportunities



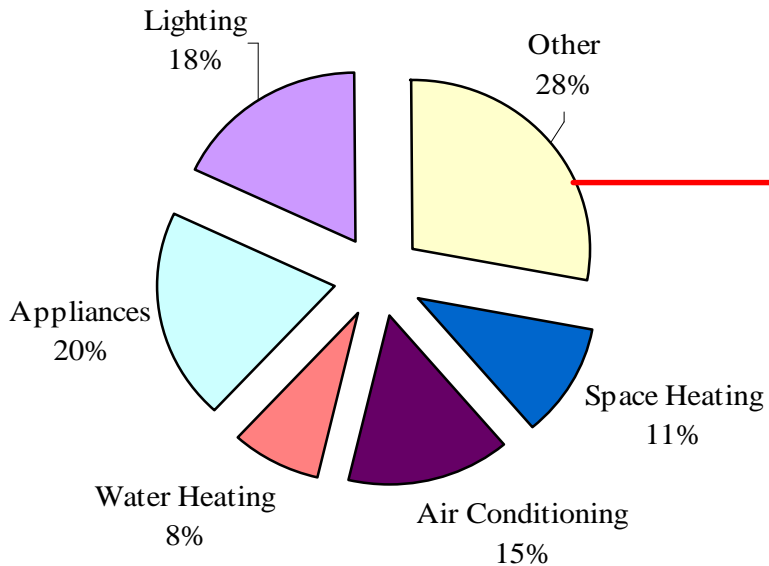
- Broad application in finished electronic products
 - More than **10 billion power supplies in use worldwide**
- Many current designs are **30 to 60% efficient**, but 90% or more is feasible
- Opportunity to encourage & recognize advanced designs



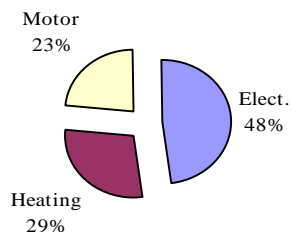
Digital Home in 2015

By 2015, "Misc." projected to grow to **34%** of home electric consumption

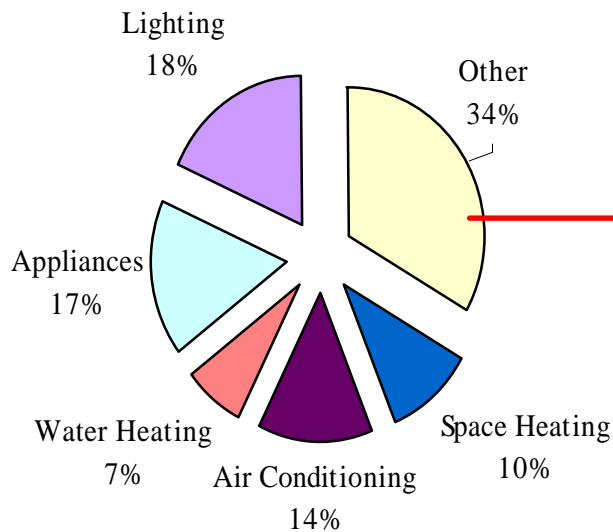
2005 Residential Electricity 4.5 Quads



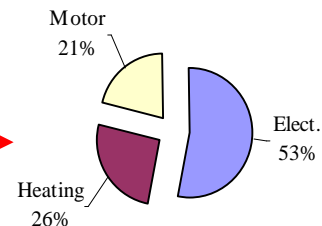
1.3 Quads "Other" 2005



2015 Residential Electricity 5.4 Quads

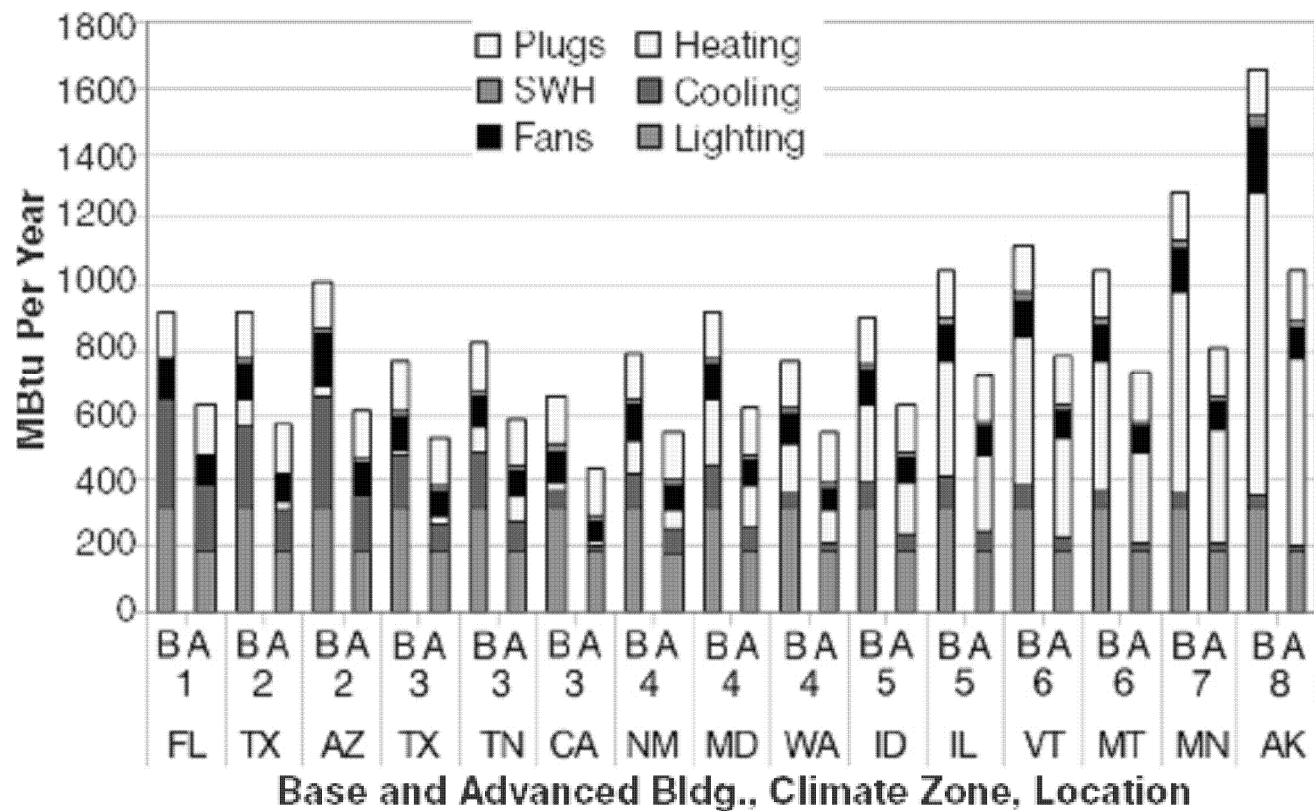
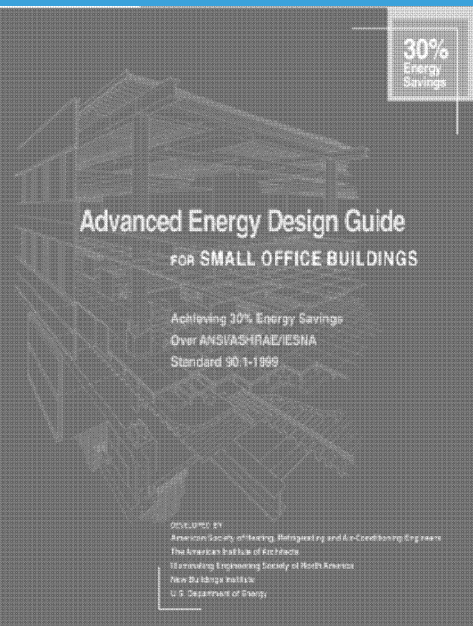


1.8 Quads "Other" 2015



Source: US DOE, 2005

ASHRAE Analysis Confirms Significance of Plug Loads Especially in Highly Efficient Buildings

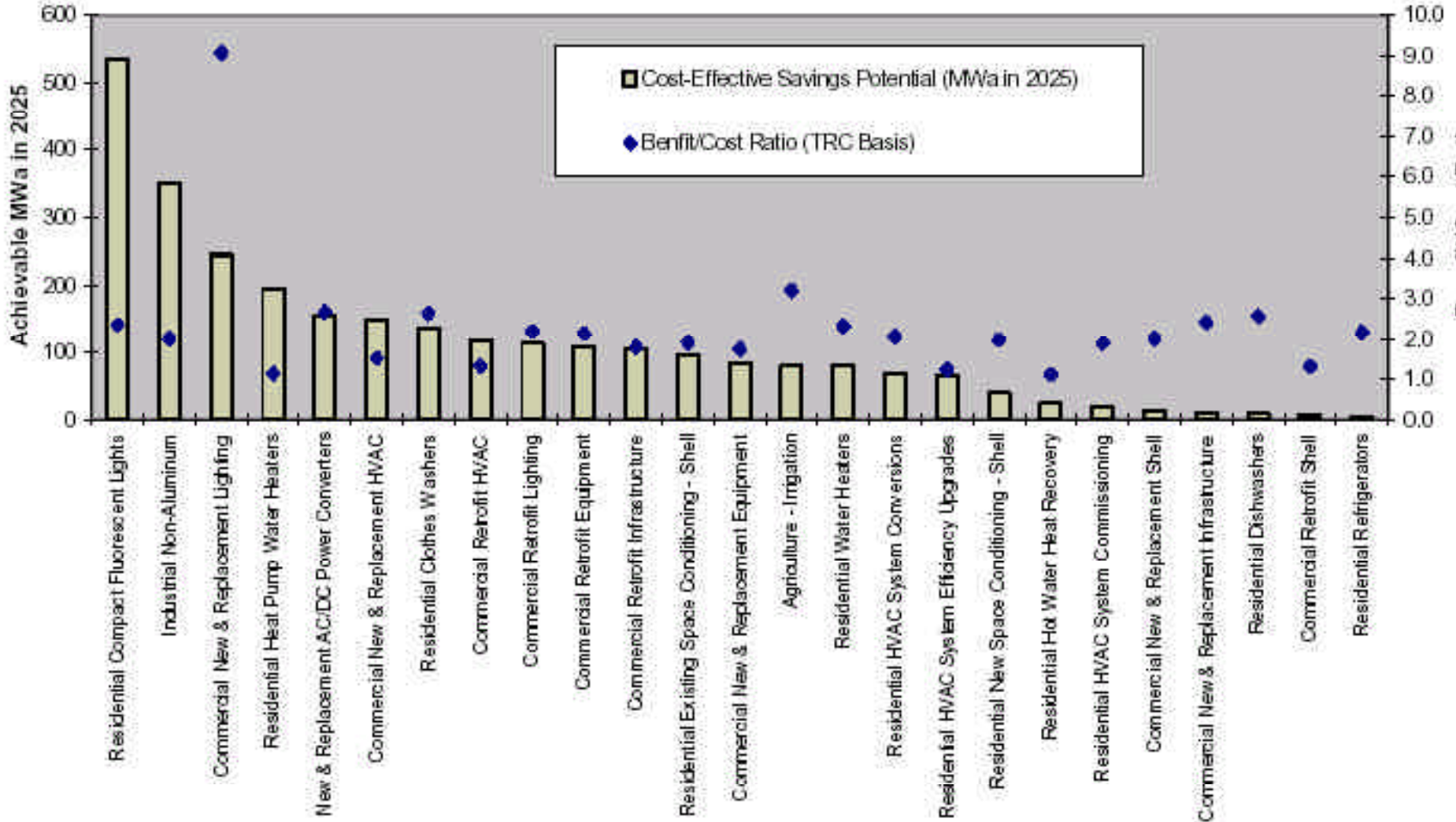


Plug loads are 10% (cold climates) to 30% (mild climates) of total energy use in efficient buildings

Figure 4b: 20,000 ft² building.

Internal Power Supplies Opportunities Compare Favorably

Achievable and Cost Effective Conservation Potential - Medium Forecast



Influencing the Market for Energy-Efficient Power Supplies



- Provide standard platform to recognize efficient power supply design
- Steps to influence market change:
 - External Single Voltage Ac-Ac and Ac-Dc Power Supply ENERGY STAR specification (effective January 1, 2005)
 - Battery Charger ENERGY STAR Specification (effective January 1, 2006)
 - Internal Power Supply ENERGY STAR requirements: implicit (imaging equipment) and explicit (computers)
- Each of these measures:
 - Provide for a broad application across many products (ES and non ES products)
 - Are receiving international interest from variety of countries

International Interest in Promoting Efficient Power Supplies



- Many countries share EPA's interest in implementing policy measures to encourage the design & sale of energy-efficient power supplies
 - Countries are choosing to pursue either voluntary specifications or mandatory standards



Natural Resources
Canada

Ressources naturelles
Canada



Steps to Implement Global Harmonization



- Coordinate activities with manufacturers, government partners, and other stakeholders
- Develop one globally applicable test procedure per product
- Compile a global dataset per product
- Harmonize specifications and timeline

Harmonize test procedure and
specification levels



Different policy
measures

International Activities Summary

Country	EPS and/or BCS	IPS
US – National	EPS/BCS Specs EPS/BCS Standards	OE Specs
US States - Arizona, California, Massachusetts, New York, Oregon, Rhode Island, Washington	EPS Standards:	Utility Support for 80%+
Canada	EPS Spec/BCS Specs	Utility Support for 80%+
European Union	OE Specs EPS COC	OE Specs
Japan	OE Specs	OE Specs
Taiwan	EPS Spec	OE Specs
Australia	OE/CE Specs OE/CE Standards	OE Specs
New Zealand	OE/CE Specs OE/CE Standards	OE Specs
China	EPS Specs EPS Standards	Computer Spec (when revised)

Australian perspective



- Australian Greenhouse Office supports the development of initiatives to improve the efficiency of internal power supplies
- **Test Method:**
 - Australia to adopt final IPS test procedure as an Australian Standard
 - Considering submittal to IEC for formal adoption

- Performance requirements
 - Levels will mirror US ENERGY STAR specification levels
 - No final decision yet as to which products will be addressed, but likely to be computers first
 - Implementation date to be decided on a case-by-case basis



Australian perspective



- Programs

- Energy Allstars: procurement site for high efficiency products

- (www.energyallstars.gov.au)



Australian Government

Department of the Environment and Heritage
Australian Greenhouse Office