

What Manufacturers Want: Implications for Electronics Program Design

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Presentation Outline

- Study overview
- Implications for program design
- Program tactics
- Next steps

Electronics and Energy Efficiency: A plug load characterization study (2009)



Set-top
Boxes



Home Audio
Equipment



Game
Consoles



“Smart”
Power
Strips



Imaging
Equipment



External
Power
Supplies



UPSs



Servers

Implications for Program Design

Unique product characteristics require
individual program designs

Rapidly changing products require
flexible programs

International markets demand
cooperation among programs

Unique product characteristics require *individual program designs*



Images: www.southdacola.com/blog/category/rodin/, www.sigmundtv.com/electronics.html

Unique product characteristics require *individual program designs*



Images: www.southdacula.com/blog/category/rodin/, www.webdesignerdepot.com/.../

Unique product characteristics require *individual program designs*



Image: www.faqs.org/photo-dict/phrase/372/umbrella.html

Unique product characteristics require *individual program designs*



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Unique product characteristics require *individual program designs*



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Image: <http://img.diytrade.com/cdimg/565302/5016070/0/1199406627.jpg>

Example #1: Intervention Points

Product	Intervention Point(s)			
	Manufacturer	Retailer	End User	Other
Set-top boxes				Pay-TV Service Providers
Servers	X		X	Value-Added Resellers
Imaging Equipment	X	X	X	Dealers/Value-Added Resellers, Managed Print Service Providers
Home Audio Equipment	X	X	X	
“Smart” Power Strips	X	X	X	
Game Consoles	X	X	X	
Uninterruptible Power Supplies	X	X	X	Telecom Providers
External Power Supplies	X			

Example #2: Barriers

Product	Barriers						
	Higher cost	Lack of consumer awareness	EE spec incomplete	EE affects usability	Components not available	Lack of advance notice	Buyer's spec lacks ee req'mnts
Set-top boxes	X	X	X	X	X	X	X
Servers	X		X		X	X	
Imaging Equipment	X	X		X			
Home Audio Equipment	X	X	X	X	X	X	
"Smart" Power Strips	X	X	X				
Game Consoles			X	X			
Uninterruptible Power Supplies	X		X				
External Power Supplies	X	X					X
TOTAL # Products	8	6	6	5	4	4	2

The Checklist

Development timeline

Inputs to product design

“Ascendant” products

Key manufacturers

Distribution channels

Product marketing

Applicable energy efficiency standards

Engagement and commitment of the market to EE

The Checklist

- ✓ Development timeline
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Design → Manufacturing → Shelf

3 months → 5+ years

The Checklist



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Sources

- End Users
- Retailers
- Business-to-Business

Methods

- Direct
- Indirect
- Private Label
- Contract manufacture

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Examples of Fast Movers (2008-9)

- “All-in-one” copier/printer/fax
- DVR set-top boxes
- Blade servers
- MP3 docks
- LCD TVs

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<10 manufacturers
=
80% of the market

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✓ Distribution channels
Product marketing
Applicable energy efficiency standards
Engagement and commitment of the market to EE

Channels

- Brick-and-mortar Retailers
- Online retailers
- Dealers/VARs
- Direct-from-manufacturer
- Pay-TV service providers
- Telecom service providers

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✓ Product marketing

Applicable energy efficiency standards

Engagement and commitment of the market to EE

Messages

- Energy focus?

Mediums

- Mass media
- Personalized communication
- Events
- Point-of-sale

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Applicable energy efficiency standards

Engagement and commitment of the market to EE

U.S. Standards

- ENERGY STAR®
- CEE
- Other state-level standards

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Applicable energy efficiency standards



Engagement and commitment of the market to EE

Product market may be:

- Committed
- Committed but detached
- Considering
- Lagging

Rapidly changing products require *flexible programs*



Image: <http://fthats.files.wordpress.com/2009/04/spiral-jetty.jpg>

Rapidly changing products require *flexible programs*

Programs should:

Stay apprised of
market conditions



Consequences:

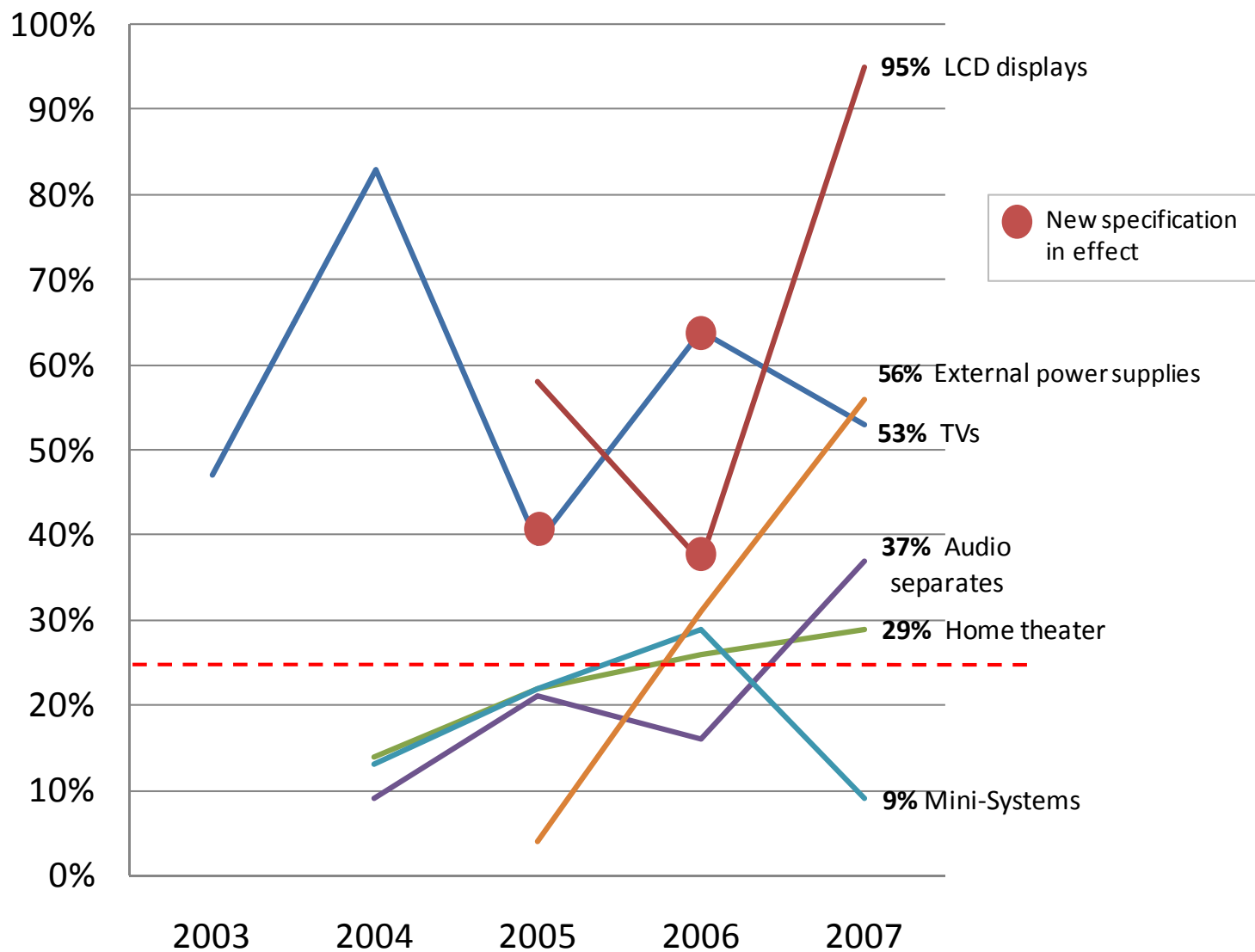
Missed opportunities

Reevaluate energy
targets on a regular
basis



Incentivized products not
among top performers

Penetration of ENERGY STAR-Qualified Products, 2003-2007



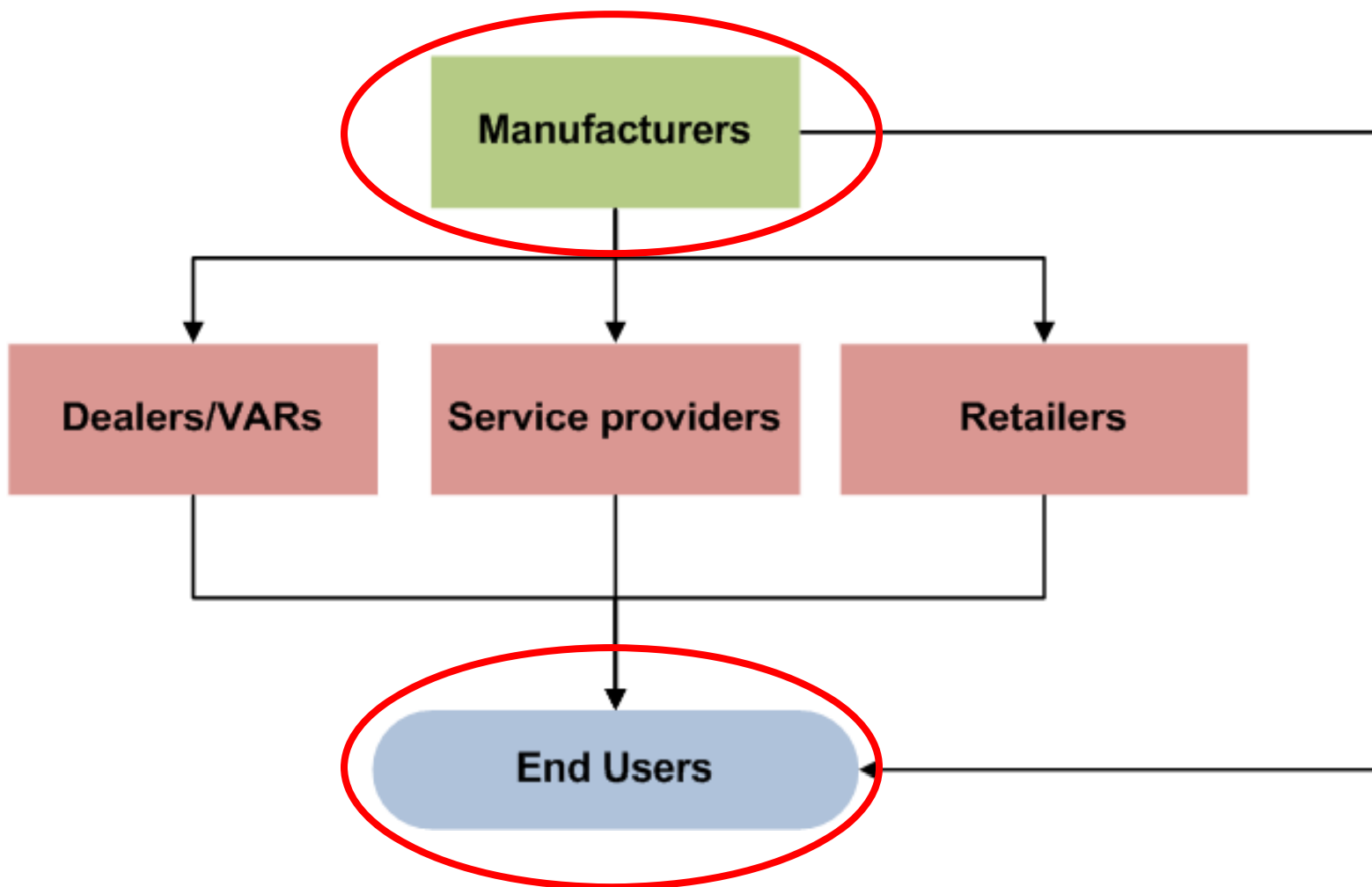
International markets demand *cooperation among programs*

Local programs = little impact on product design

Common energy targets/standards = major changes

Example: CEE's Residential Clothes Washer Initiative (1990s)

3 Program Tactics



3 Program Tactics

Manufacturers on the importance of aggressive standards:

“[ENERGY STAR] regulations have moved the bar substantially. But the specs are too loose.”

“Any time there’s a higher rating because of a more aggressive threshold, we’ll look at it closely.”

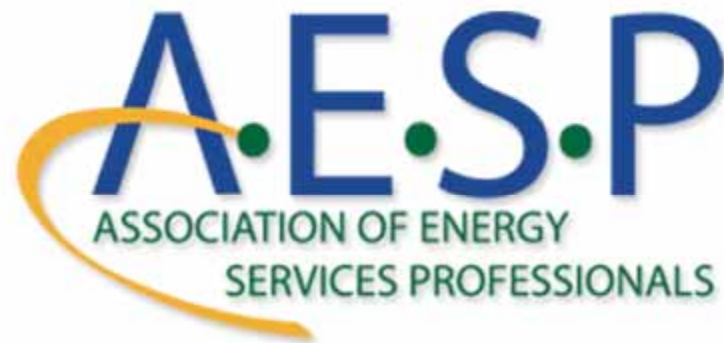
“We know that standards are getting tougher, so we’re always looking to do better.”

3 Program Tactics

			<u>Roadmap update</u>				Long-term	
	↓	Now	Year 1	Year 2	↓	Year 3	Year 4	Year 5
Milestone 1		10	10	15		15	20	20
Milestone 2			200	200		225	225	275
Milestone 3				X		X+3	X+4	X+5

Next Steps

Product	Energy Efficiency Strategies			
	Work with Manufacturers to Increase Efficiency of Devices	Incent Sale of Efficient Devices	Increase End-User Activation of (Existing) Power Management Settings	Increase End-User Demand for Efficiency through Education/ Raising Awareness
Set-Top Boxes	X	X		X
Servers	X	X	X	X
Imaging Equipment	X	X	X	X
Home Audio Equipment	X	X		X
“Smart” Power Strips	X	X		X
Game Consoles	X		X	X
Uninterruptible Power Supplies	X	X		X
External Power Supplies	X	X		X
TVs	X	X		X
PCs	X	X	X	X
Displays (monitors)	X	X	X	X



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