

DOCKETED

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ITI/Technet Computer presentations

Additional submitted attachment is included below.

Impact of CEC's Proposed Computer Energy Efficiency Regulations On Commercial and Consumer Customers

Contents

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- Computers Highly Configurable
- Impact CEC Proposal on Computers
- Concerns CEC Proposal Computers

Computers Serve Broad Range Customers (1)

IT Product Market Segmentation

Home Users



Business Users

Advanced Desktop PCs

A mainstream business PC that's the perfect combination of performance, expansion and affordability.

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Mobile Office Productivity

Flexible Thin Clients

Starting at \$279



Computers Serve Broad Range Customers (1)

Wide Range Computer Users			
Span of Computer User Profiles			
Basic Home Users	Mid Level Home / Office Users	High Level Home / Office Users	Extreme Home Users
			
<p>Accessing internet, basic productivity activities – writing, using email, etc.</p>	<p>Activities listed on left plus processing pictures, viewing movies, using basic productivity software, collaboration, etc.</p>	<p>High Level Home / Office Users perform activities listed on left plus processing pictures, viewing movies, using basic productivity software, collaboration, etc.</p>	<p>Gaming, Other Computing Solutions (Evolutionary Computing Products)</p>

Computers Also Highly Configurable (1)

Example - HP Commercial Desktop Models Sold Annually (2015)

Step 1. Determine Number Desktop Computer Models (Families)

Market Segment	Models (Families)
Commercial Desktop Computer Models	25
Consumer Desktop Computer Models	27
(Total Models / Families)	52

Step 2. Determine Number Individual Configurations¹

Market Segment	Individual Configurations ¹
Commercial Desktop Configurations (2015) (117 Hardware configs. x 3 Operating Systems)	351
Consumer Desktop Configurations (2015) (143 Hardware configs. x 5 Operating Systems)	715
(Total Configurations)	1,066
Total HP Desktop Computer Configurations Offered - US 2015: (52 Total Commercial and Commercial model Families X Total Configurations)	55,432

Notes:

1. Number of individual configurations consists of hardware and operating system (OS) combinations, but does not include additional configurations required for multiple languages (multiplier of > 25 languages / keyboards world wide)

Computers Also Highly Configurable (2)

- In the previous example, HP will offer approximately 55,432 unique Desktop Computer Configurations in US Market (2015)
 - This example is representative of other manufacturers as well
- Here is why the broad range of customer use profiles, wide range of computer models and extensive number of configurations offered to customers is important:
- Manufacturers are responding to a very wide range of customer needs (ID / branding, performance, expandability/extended life, and value)
- The energy efficiency requirements CEC proposed - impacts a substantial percentage of models and configurations on the market

Impact CEC Proposal on Computers (1)

- While most “Mainstream” Notebooks will be able to comply,
 - “High End” Notebooks do not comply with CECs proposed TEC limit
 - Notebooks without “traditional power management” also noncompliant (details next slide)
- Greatest impact applies to Commercial and Consumer Desktop Computers
 - ~ 60 +% of Commercial and Consumer Desktop Computer configurations (sold today) do not meet CEC’s proposed TEC limit
 - Using HP example, CEC’s TEC proposal impacts ~27,700 to 33,250 Desktop Computer configurations currently available to Consumer and Business customers in CA
 - Customer requiring high performance desktop computer configurations most impacted
 - Cost of many configurations will be prohibitive
 - Greater detail including specific examples provided later

Impact CEC Proposal on Computers (2)

- Power Management Proposal Impacts
 - As currently drafted, CEC power management requirements will impact customers who want to:
 - Purchase computers with non-power managed Operating Systems (OS) for IT Department use one time (installing customers' customized software images)
 - Purchase computers with “Non-Traditional Power Management” schemes
- 80Plus Gold Min. Energy Efficiency for Internal Power Supplies configured in Workstations
 - Customers will no longer have a choice in selecting internal power supplies with less than 80Plus Gold energy efficiency
 - \$ TBD M additional cost to customers annually

Concerns CEC Proposal Computers (1)

- “One-Size-Fits-All” Base TEC for Desktops, High End Notebooks
 - CEC proposal not harmonized with internationally recognized standards that accommodate wide range customer needs
 - Energy regulations worldwide, ENERGY STAR rely on these standards
 - Next presentation by industry will provide more detail on these internationally recognized standards (framework/categorization addressing wide range customer needs)
- Energy efficiency requirements proposed more restrictive than the exclusive Ver. 6.0 ENERGY STAR Program requirements
- Net Result -- Significant business risk for manufacturers and uncertainty for customers who rely on these computing products
 - Some customers continue to require performance, expandability, longevity, value Desktop Computers offer
 - Market forces already reducing the number of Desktop Computers purchased, driving continued reduction in power consumption

THANK YOU