"Overview of Energy and Environmental Impacts of Proposed ENERGY STAR Spec for Computers"



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NRDC Approach

- 1. Focus on three product categories
 - Desktop computers
 - Laptop computers
 - Servers ("desk top derived")
- 2. Assumptions:
 - Unit sales based on 2003 IDC reports
 - Duty Cycles Acknowledge different user behaviors in residential and commercial setting
- 3. Assume no changes in current user power management enabling rates

Per Unit Energy Savings

Product	Annual Unit Savings (kWh per	Lifetime Unit Electricity Savings	
	year)	(dollars)	
Commercial Desktop	127	38	
Residential Desktop	82	25	
Commercial Laptop	64	19	
Residential Laptop	39	12	
Server	216	65	

Note: assumes \$0.10 per kWh electricity rates; 3 year computer lifetime

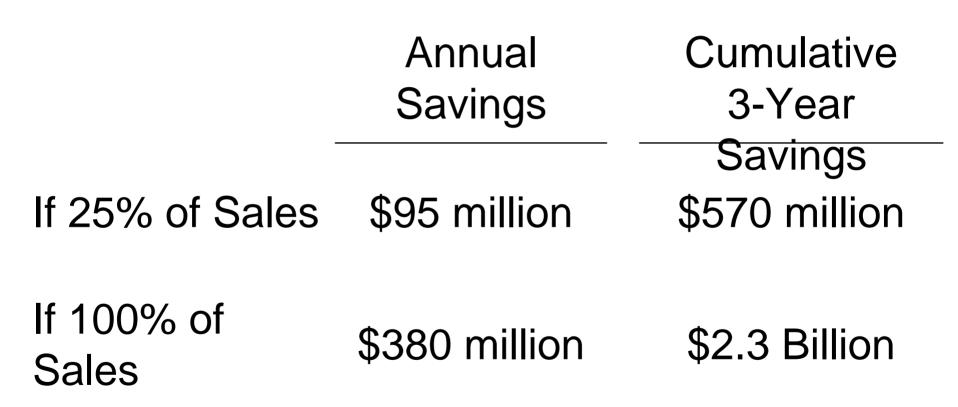
National Energy Savings Impacts @ 25% Penetration

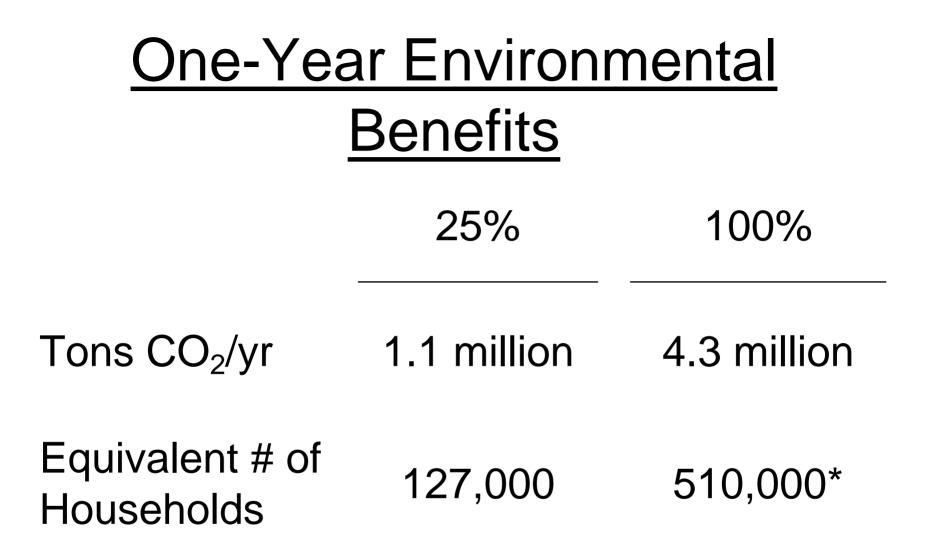
ENERGY STAR Computer Spec Impact - 25% Penetration						
Product	Unit Sales	Percent of units that meet ENERGY STAR that Year		National Annual Savings (Millions of kWh)		
Commercial Desktop Computer	23,215,268	25%	127.3	739		
Residential Desktop Computer	14,228,712	25%	82.1	292		
Commercial Laptop Computer	9,482,292	25%	63.8	151		
Residential Laptop Computer	5,811,728	25%	39.0	57		
Servers	1,187,104	25%	215.8	64		
	Annual Savings Total (millions of kWh)					

If 100% of computers sold meet this spec...

A	A	A		
		Percent of units		National Annual
		that meet		Savings
		ENERGY STAR	Annual Unit	(Millions of
Product	Unit Sales	that Year	Savings (kWh)	kWh)
Commercial Desktop Computer	23,215,268	100%	127.3	2,954
Residential Desktop Computer	14,228,712	100%	82.1	1,168
Commercial Laptop Computer	9,482,292	100%	63.8	605
Residential Laptop Computer	5,811,728	100%	39.0	226
Servers	1,187,104	100%	215.8	256
	Annu	5,209		

Economic Benefits





* > all households in Sacramento County, CA or Nassau County, NY.

Big Picture

A 25% ESTAR adoption rate, will save:

"Enough Electricity to power over 3 million of today's typical desktop computers for a year."