

Promoting Greater Energy Efficiency and Clean Energy: EPA's Market Based Programs

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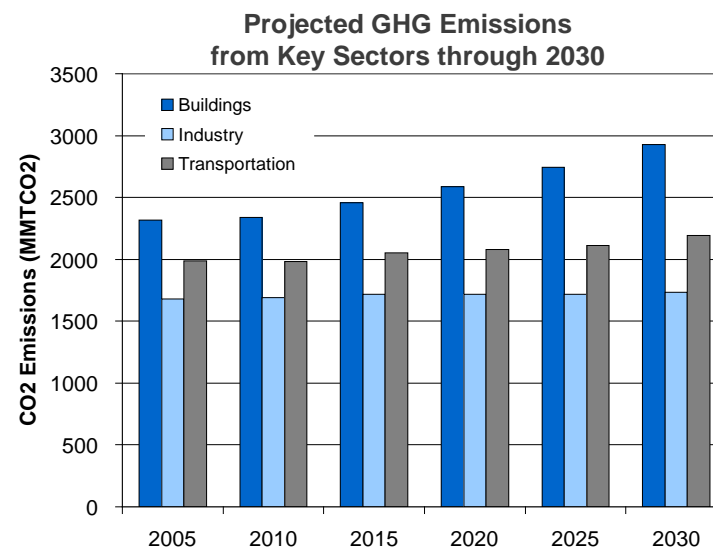
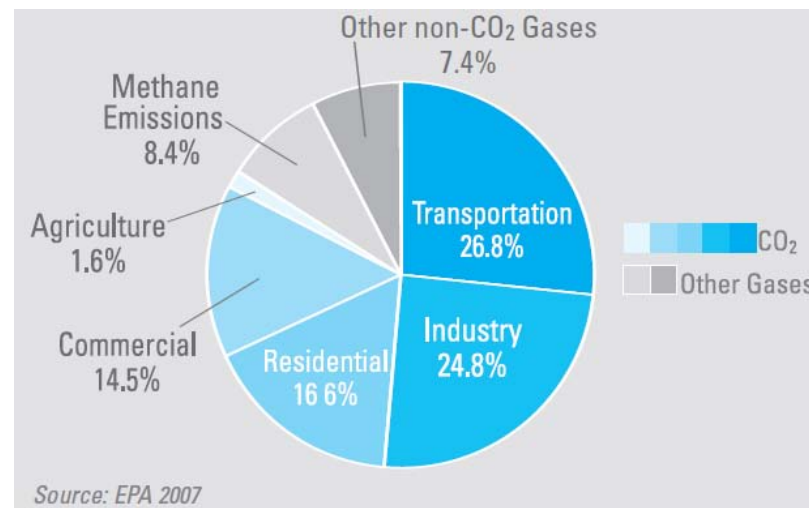
Priorities

- ❑ Build policy and program infrastructure to reduce GHGs in least cost manner
- ❑ Energy Efficiency programs
- ❑ Clean energy programs
- ❑ State policy assistance

Driving Greater Efficiency: ENERGY STAR

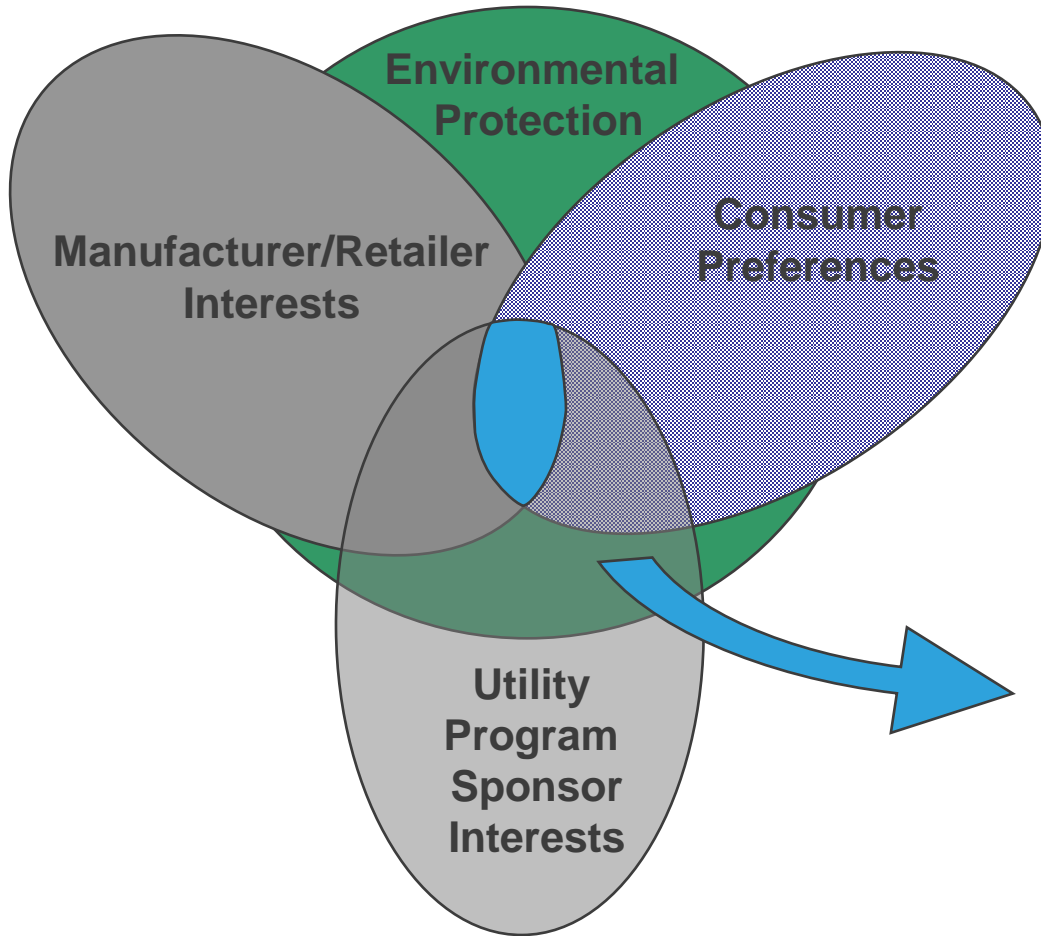


- GOAL: Reduce greenhouse gas (GHG) emissions through large win-win-win opportunities with today's energy efficient technologies and practices.
- Achieve 30% savings possible in many buildings, homes, and facilities
- Provide credible information to buyers to
 - reduce transaction/research costs
 - reduce perceptions of risk
 - enhance investment in efficient technologies and practices
- Work with the marketplace to capitalize on motivations of individual actors



Source: AEO 2008

Builds Upon Intersection of Interests



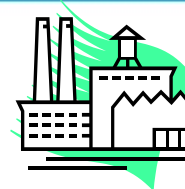
Consumer is Key



ENERGY STAR

- Protects the environment through superior energy efficiency
- No tradeoffs in performance or quality
- Cost effective (2nd price tag)
- ENERGY STAR is a government backed symbol providing valuable, unbiased information – source of authority
- Binary (Y/N)
- Power of the individual to make a difference

ENERGY STAR Strategies



Residential

Labeled Products

- 60+ products / 2000 manufacturers
- 10-60% more efficient

Labeled New Homes

- 20-30% more efficient

Home Improvement

Services

- beyond products
- ducts / home sealing
- whole home retrofits

Commercial / Industrial

Corporate energy management

- benchmarking, goals, upgrades (mgmt & systems --not widgets)
- whole building labeling for excellence
 - technical assistance

Labeled Products

- for plug load, not system components

Industrial

Small business initiative



International partnerships – Canada, EU, Japan, etc

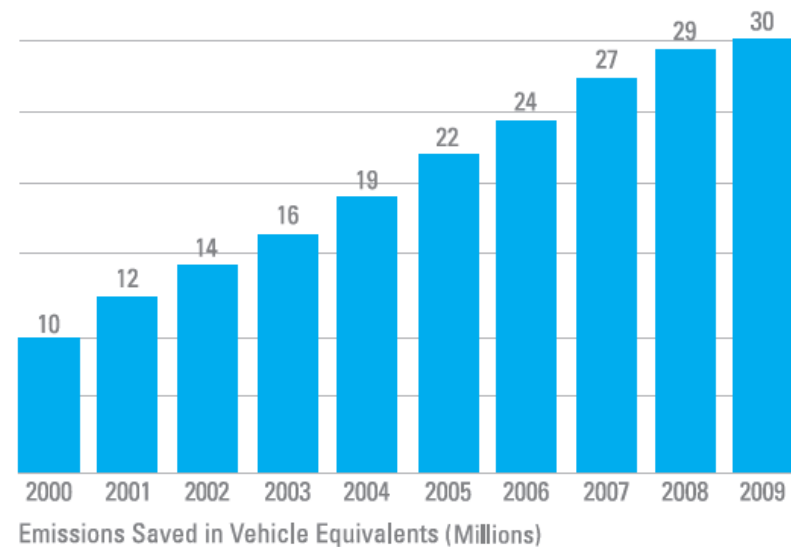
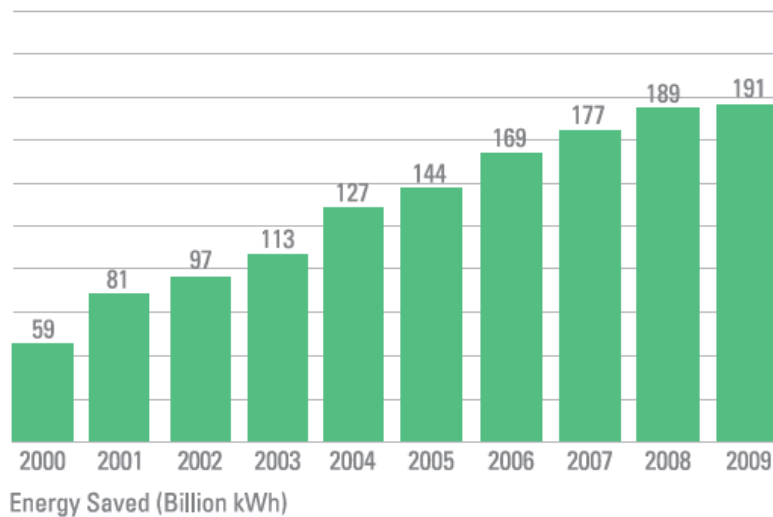
Success

Accomplishments - 2009



In 2009, Americans with the help of ENERGY STAR:

- Prevented 45 million metric tons of GHG emissions— equivalent to 30 million vehicles
- Saved \$17 billion on energy bills



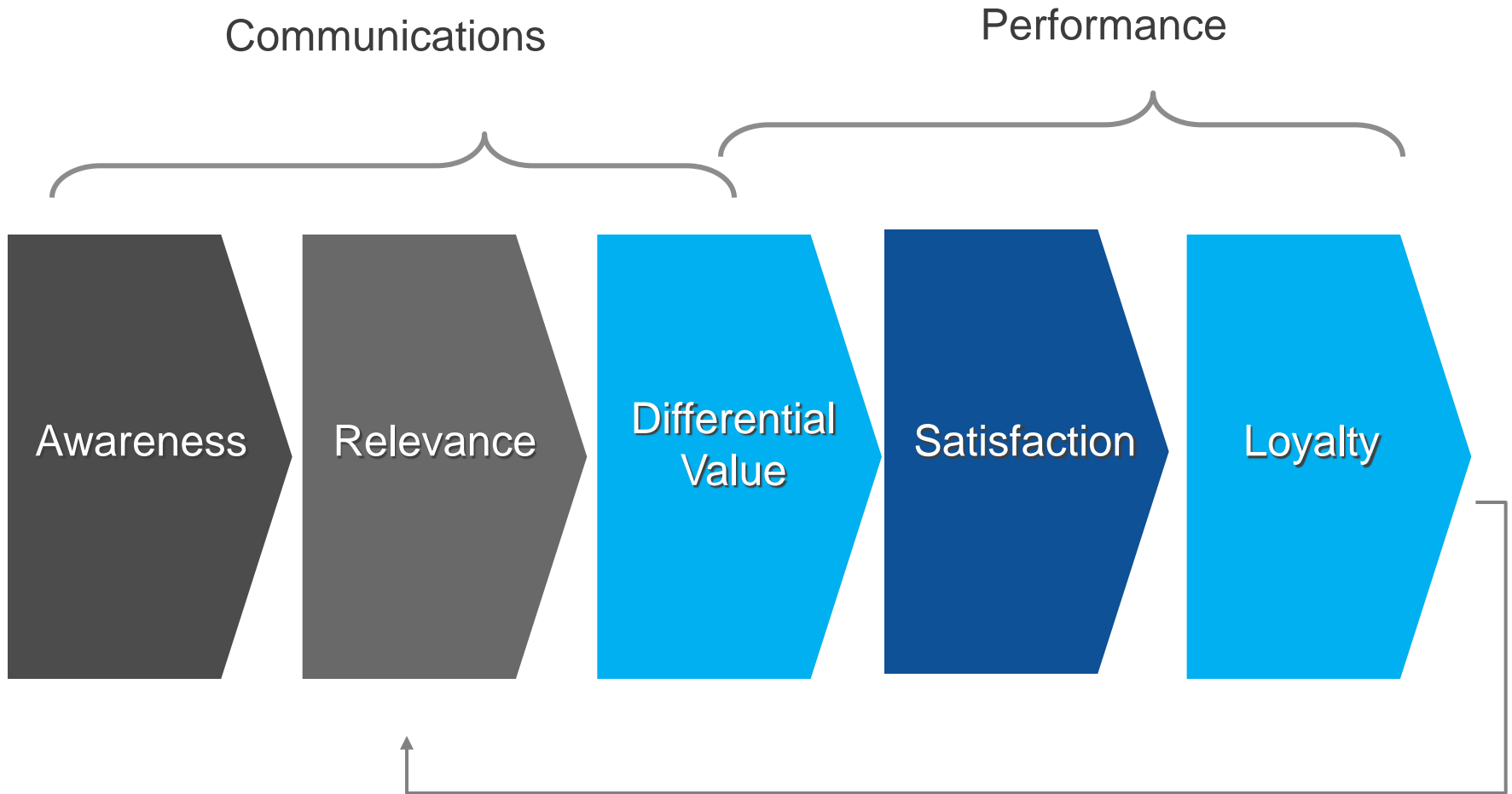
Success



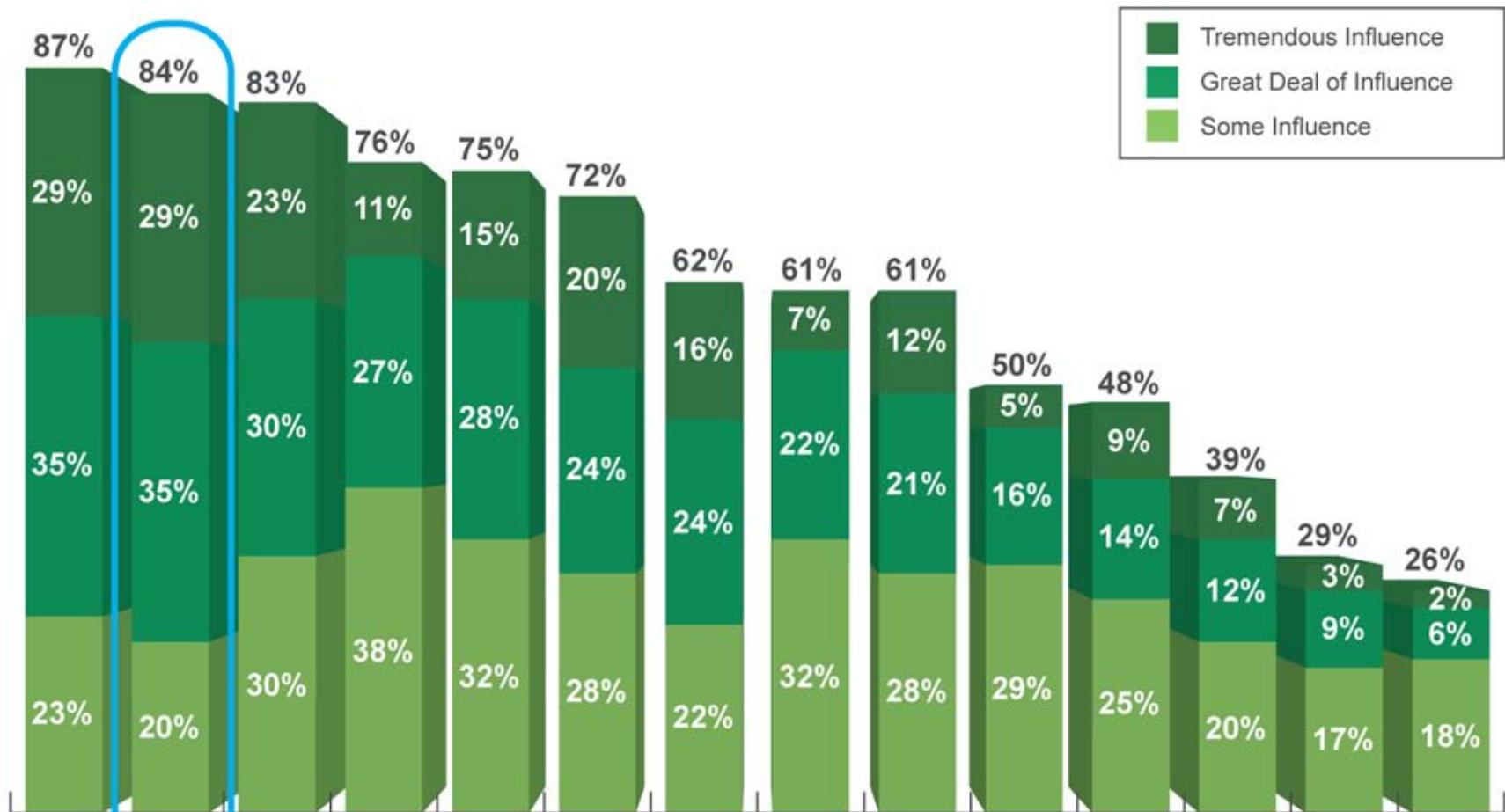
- Public awareness of ENERGY STAR over 75%
- Engaged 17,000 partner organizations in manufacturing, delivery, adoption of energy efficiency
- Helped consumers purchase more than 3 billion qualified products from more than 2,000 manufacturers across 60 product categories
- Over 1 million new homes are ENERGY STAR; 17% of new homes starts across the country are ENERGY STAR
- Tens of thousands buildings benchmarked, thousands of buildings improved

**ENVIRONMENTAL RESULTS POSITIONED TO DOUBLE OVER
NEXT 10 YEARS**

Loyalty is the goal



Brand Influences Product Purchases



60+ Product Categories Are Covered by ENERGY STAR in the US



Heating & Cooling

Central AC
Heat pumps
Boilers
Furnaces
Ceiling fans
Room AC
Ventilating fans

Office Equipment

Computers
Monitors
Printers
Copiers
Scanners
Fax machines
Multi-function devices

Home Electronics

Battery chargers
Cordless phones
Answering machines
TV/VCRs
DVD products
Home audio
External power adapters
DTAs

Appliances

Clothes washers
Dishwashers
Refrigerators
Dehumidifiers
Air cleaners
Water coolers

Lighting

CFLs
Residential light fixtures
Exit signs

Commercial Food Service

Refrigerators
Freezers
Fryers
Steamers
Vending machines

Home Envelope

Home sealing
Roof products
Windows/Doors



Clear process for Setting/Revising ENERGY STAR Specifications

- Criteria weighed when developing or revising ENERGY STAR product specifications:
 - **Significant energy (GHG) savings** will be realized on a national basis.
 - Product energy consumption and **performance can be measured and verified** with testing.
 - Product **performance will be maintained or enhanced**.
 - Purchasers of the product will **recover any cost difference** within a reasonable time period.
 - **Specifications do not unjustly favor** any one technology.
 - Labeling will **effectively differentiate products** to purchasers
- Strive for top 25 percent of product models (not sales) but key criteria can trump that goal
- Use a well documented, transparent process

WIW: Important Process Elements



- Consistent
- Transparent
- Inclusive
- Responsive
- Clear



ENERGY STAR New Homes and Home Improvement



- New Construction Highlights
 - More than 1 million ENERGY STAR homes constructed by end of 2009; 17% market penetration for 2008
 - EPA updating ENERGY STAR new homes guidelines for second time:
 - Due to increased market penetration and increasing codes.
 - 1st time -- large homes must meet more stringent specifications than smaller ones
 - Requiring multiple check lists to address installation issues not captured in HERS
 - Public comments now; finalize 2009; in effect by 2011
 - Existing Homes Highlights
 - Over 50,000 homes retrofit under Home Performance with Energy Star
 - 27 state or regional sponsors for this program
 - New ENERGY STAR HVAC proper installation program (CA, NE, OR, TX, CT)
 - More homeowners benchmarking their homes through the Home Energy Yardstick; over 200,000 households to date.
 - ENERGY STAR Mortgage Pilot Program
 - Allows borrowers to incorporate cost of EE into mortgages
 - Available for purchase of an ENERGY STAR home or improvements via HPwES or Weatherization Assistance Program
- Pilots launched in ME and CO; expanding nationally

Campaign: Change the World, Start with ENERGY STAR 2009/2010



- Combat global warming
- Launched Earth Day 2009
- Expanded ENERGY STAR Pledge
- Nationwide events with local sponsors
- Focus: youth (8-15) and families
- Community service projects
- National youth organization partnerships
 - Boys & Girls Clubs of America
 - PTO Today
- Many ways to leverage



Cornerstone: The ENERGY STAR Pledge



CHANGE THE WORLD. START WITH ENERGY STAR

I pledge to:

Replace at least one light in my home with an ENERGY STAR qualified one.

How many bulbs do you plan to replace with an ENERGY STAR qualified bulb? (up to 50) _____

Make my home heating and cooling system work better. I will:

- Set or program my thermostat to save energy while I'm asleep or away from home
- Have my heating and cooling equipment tuned-up by a professional and change my air filter
- Seal obvious leaks and repair disconnections in my home's duct system

Make sure my home is well sealed and insulated. I will:

- Seal my home's envelope (outer walls, ceiling, windows, doors, and floors) with caulk, spray foam, or weather stripping, and add insulation to the attic.

Choose ENERGY STAR qualified equipment for my home office. I plan to purchase a(n):

- Computer
- Fax
- Monitor
- Ink-Jet Printer
- Multi-Function Device

Choose ENERGY STAR qualified home theater products. I plan to purchase a:

- TV
- DVD player
- Home Theater in a Box (sound system)

Enable my ENERGY STAR computer and monitor to sleep while I'm away.

Choose ENERGY STAR qualified products for my kitchen and laundry. I plan to purchase a:

- Clothes Washer
- Dish Washer
- Refrigerator

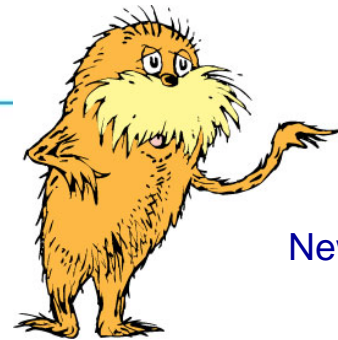
Purchase ENERGY STAR holiday lights this holiday season. I plan to buy _____ light strings

I'd like to receive quarterly e-mails from ENERGY STAR with energy-saving tips.

*More than
2 million
Pledges*



Engaging People/Kids/Teens



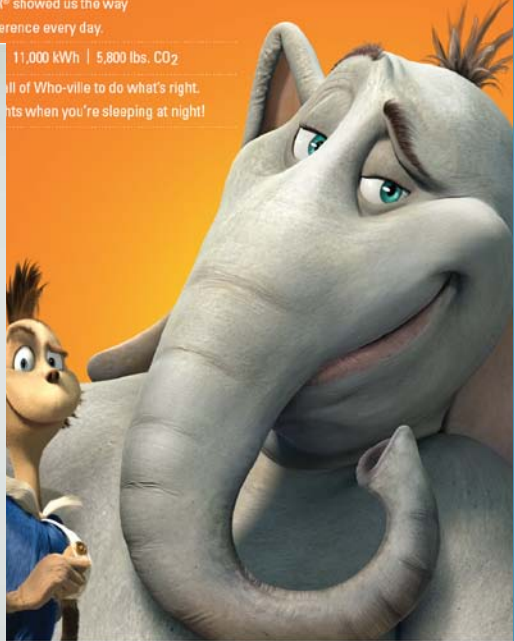
New in 2009

NAME: The Mayor

FIGHTING GLOBAL WARMING: With my friend Horton lending a hand
We helped all the Whos across the land!
We insulated homes and changed lights.
They're now fluorescents—so very bright.
ENERGY STAR® showed us the way
To make a difference every day.

11,000 kWh | 5,800 lbs. CO₂

all of Who-ville to do what's right.
nts when you're sleeping at night!



NAME: Martha Ware

FIGHTING GLOBAL WARMING BY: Using ENERGY STAR® qualified products, including lighting, a programmable thermostat, a furnace, and new insulation.

ANNUAL SAVINGS: \$1,150 | 11,000 kWh | 12,000 lbs. CO₂

NEXT PROJECT: Teaching Shadow to roll over



MAJOR IN THE FIGHT AGAINST GLOBAL WARMING: Horton and important it is for each of us to do our part. We can all fight global warming in our homes, at school, and at work. Learn more at energystar.gov.

For The Corporation, Dr. Seuss, Horton Hears A Who! and Dr. Seuss Characters TM & © 1981, 2007 Dr. Seuss Enterprises, L.P. All Rights Reserved.



Join the Lorax and EPA by doing your part every day. We can all fight global warming by making easy changes at home and at school. Learn more at energystar.gov/kids.

JOIN MARTHA IN THE FIGHT AGAINST GLOBAL WARMING. ENERGY STAR® qualified products and energy-efficient behaviors can help you save energy and money at home while reducing greenhouse gas emissions. Learn more at energystar.gov.



Commercial Buildings Program



- **Building Benchmarking Progress**

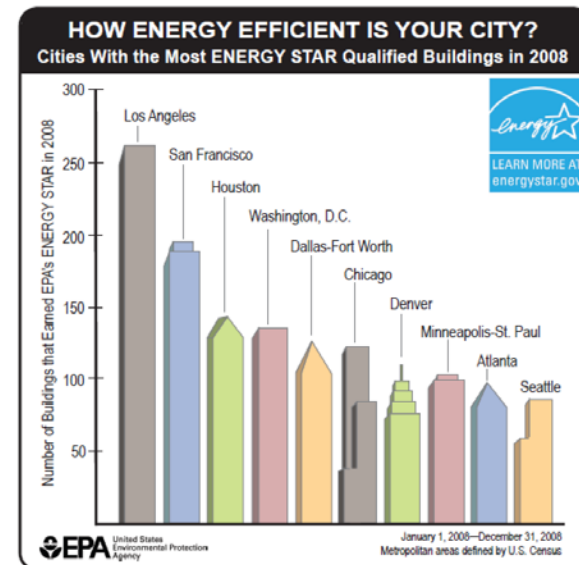
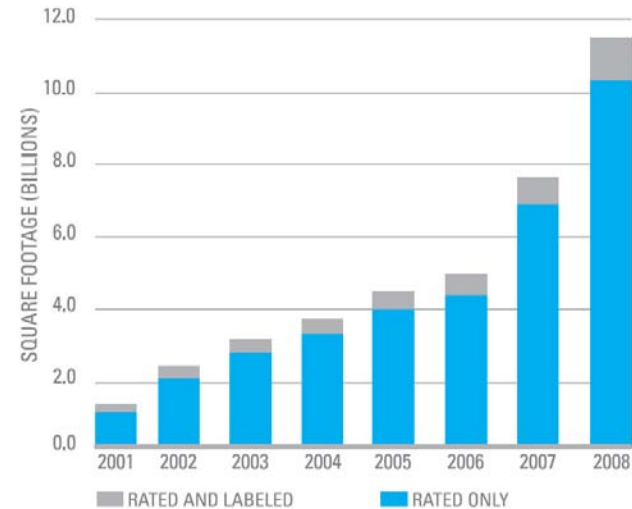
- The use of building-level energy use information is growing: 17% of commercial square footage assessed thru 2009
- Many state and local governments taking/ considering action to make information available on the energy use of public / private commercial buildings and leveraging EPA's energy performance rating system

- **ENERGY STAR buildings growing**

- More than 9,000 buildings nationwide have earned the ENERGY STAR

- **New construction highlights**

- More than 250 buildings have achieved Designed to Earn ENERGY STAR



Energy Performance in the Market



- **Washington, D.C.**
 - Mandatory Benchmarking and Disclosure for Existing Buildings Clean and Affordable Energy Act of 2008
- **California**
 - ENERGY STAR Disclosure During Real Estate Transactions Assembly Bill (AB) 1103
 - PG&E Automated Benchmarking Service for customers
- **New York City**
 - Proposed Mandatory Benchmarking and Disclosure Proposed Int. No. 476-A
- **Wisconsin Lt. Governor ENERGY STAR School Challenge**
 - State campaign to challenge 100 WI school districts to reduce energy use by 10 percent or more, based on EPA Portfolio Manager
- **Mayor Abramson's ENERGY STAR Challenge to the community**
 - Louisville Kilowatt Crackdown
- **Chicago Green Office Challenge**
 - Participants using EPA Portfolio Manager to track energy / water use and compile results at the end of the contest period.
- **Washington**
 - Mandatory benchmarking and improvement for public buildings Climate Pollution Reduction-Energy Efficiency 2009
 - Disclosure during real estate transactions
 - Utility transfer of energy bill data

Clean Energy



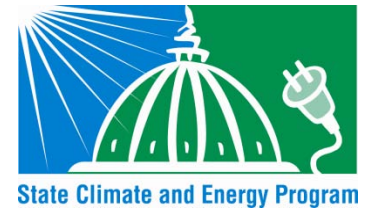
- ## Green Power Partnership

- The Green Power Partnership (GPP) counts 11 state government offices among its more than 1200 Partners.
- GPP's 11 state government Partners are together purchasing more than 720,000,000 kWh of green electricity; an average commitment of 65,000,000 kWh per Partner.
- The single largest state government commitment within the GPP is the Commonwealth of Pennsylvania (over 400,000,000 kWh/year).
- GPP also works with state energy offices to support development of effective green power policies and to conduct voluntary green power purchasing outreach to stakeholders.

- ## Combined Heat and Power Partnership

- The Combined Heat and Power Partnership (CHPP) works with state-level partners to promote CHP in strategic sectors (e.g., wastewater treatment facilities, data centers, biomass CHP, tribal casinos, and utilities).
- CHPP identifies opportunities for policy developments (energy, environmental, economic) to encourage energy efficiency through CHP.
- Currently, agencies from 12 States participate in the CHPP, including 5 state energy offices (Delaware, Michigan, Minnesota, Vermont, and Wisconsin).

Technical Assistance to State Policy Makers



The State Climate & Energy Program

helps state governments overcome information, technical, and policy barriers to GHG reductions by providing best practices information, guidance, quantification tools, and peer exchange opportunities.

Key Elements

- State Climate & Energy Partner Network
 - Since September 2009, 175+ Partners receive a weekly summary of state climate and energy policy news; participate in a network listserv; and provide recommendations for peer exchange opportunities
- Guide to Action
 - Guidance on implementing 16 clean energy policies
- Peer exchange opportunities
 - Tech Forum webinars (~8 per year), EM&V webinars
- New resources
 - State and Local Climate and Energy Website www.epa.gov/statelocalclimate/
 - *The Clean Energy Lead by Example Guide: Strategies, Resources, and Action Steps for State Programs*
 - *State Bioenergy Primer: Information and Resources for States on Issues, Opportunities, and Options for Advancing Bioenergy*
 - *Assessing the Multiple Benefits of Clean Energy: A Resource for States*

Guide to Action - Clean Energy Policies

State Planning and Incentive Structures

Lead by Example

State and Regional Energy Planning

Determining the AQ Benefits of Clean Energy

Funding and Incentives

Energy Efficiency Actions

Energy Efficiency Portfolio Standards

Public Benefit Funds for Energy Efficiency

Building Codes for Energy Efficiency

State Appliance Standards

Renewable Energy and Combined Heat and Power

Renewable Portfolio Standards

Public Benefit Funds for Clean Energy Supply

Output-Based Environmental Regulations

Interconnection Standards

Fostering Green Power Markets

Utility Planning and Incentive Structures

Portfolio Management Strategies

Utility Incentives for Demand-Side Resources

Emerging Approaches: Removing Rate Barriers to Distributed Generation



National Action Plan for Energy Efficiency



- Initiated in 2005
- Engaged 60+ state-level leaders
- Addressing issues such as
 - Aligning utility incentives
 - Establishing appropriate cost-effectiveness tests
 - Guide to implementing good EM&V
 - Guide to conducting potential studies
 - Best practices in resource planning
 - Best practices in providing customers with energy billing data
 - Customer incentives for energy efficiency
- Developed comprehensive implementation framework
 - Vision for 2025; released Nov 17, 2008
 - 10 implementation goals
 - Measurement of state progress toward goals

State Energy Efficiency Action Network



- Phase II of the National Action Plan
- Goal: Help the nation achieve all cost-effective energy efficiency by 2020 by focusing on the assistance states need in their critical role in advancing policies and practices that bring energy efficiency to scale.
- Overseen by Executive Group of diverse stakeholders from across the country
 - Includes state and local governments, associations, business leaders, national non-government organizations, others
 - Provides visionary leadership and strategic direction to ensure SEE Action achieves the goal
 - Facilitates coordination across various funding streams for EE
 - Chaired by DOE/EPA
- Tackling issues common across states necessary to take EE to scale through technical work groups
 - Measurement and evaluation
 - Access to energy bills
 - Financing
 - Deep savings retrofit programs
- DOE/EPA continue state technical assistance
 - Across policy and program design
 - \$7M in State Energy Efficiency Action Grants (DOE) to also help states explore / establish efficiency policies, promotes in-state collaboration