



# Overview of ENERGY STAR Program and Specification Development Process

*For more information:*

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# Overview



- ENERGY STAR program overview
- ENERGY STAR program successes
- ENERGY STAR specification development

# What is ENERGY STAR?



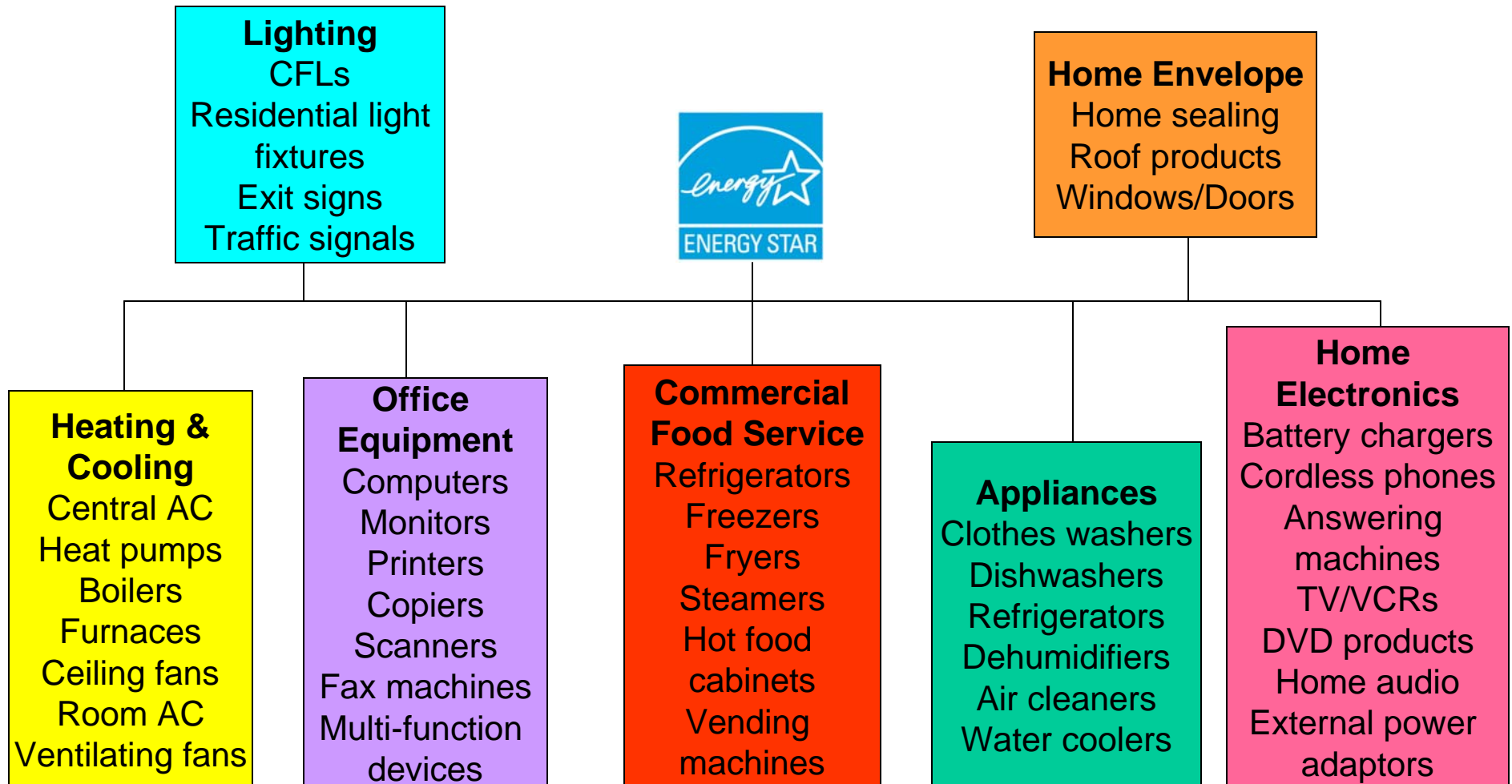
- ENERGY STAR is a voluntary program
- ENERGY STAR is the national symbol of energy efficiency, making it easy for consumers and businesses to identify high-quality, energy-efficient products
- ENERGY STAR distinguishes what is efficient/better for the environment without sacrificing features or performance
- Products that earn the ENERGY STAR meet strict energy performance criteria set by EPA or DOE

# ENERGY STAR

Homes, Buildings, Products



# 40+ Product Categories Are Covered by ENERGY STAR in the US



# ENERGY STAR Partners in the US



- ENERGY STAR works with many stakeholders in reducing greenhouse gas emissions including
  - Manufacturers, retailers, and state and utility partners
- More than 1,500 manufacturers labeling more than 35,000 product models
- Over 800 retailers (with more than 21,000 storefronts)
- More than 450 utilities and other energy efficiency program sponsors promoting ENERGY STAR

# Activities to Support Partners and Qualifying Products



- Publicity and consumer education
  - Public Service Announcements in print, TV, and radio
  - Annual National Promotions for Lighting, Cooling Equipment, Home Electronics, and Home Appliances
  - Consumer brochures
- Marketing tools
- Recognition with annual awards
- Purchasing tools including sample procurement language
- Consumer Web-site: [www.energystar.gov](http://www.energystar.gov)

# Outreach for Electronics/IT



## The Boston Globe

THIRD EDITION THURSDAY, AUGUST 26, 2004 HOUSE & HOME, H 1

### LIFE AT HOME: Reducing the wasted energy of power packs

By Alan R. Eavis,  
Globe Correspondent

In name the ubiquitous electrical device that, according to Environmental Agency estimates, wastes the \$11 billion worth it consumes each year? It's something big and the refrigerator or you're wrong.

Andrew Fanara of the power pack that or to cordless tools, cellphones, many appli- cation electronic products computers and games. In power packs are divide each year and million are in use in the U.S. With existing power packs, more than half of used to power most electronics products is con- sumed on standby, he said.

Fanara says, consumer electronics products are available for more than 40 household electricity compared with about 4 percent.

Direct the agency's Environmental Protection Agency program, which development and mar- keting-efficient products. All think a new design power packs could help

cut the waste in half, and are working to achieve one, Fanara recently returned from a negotiating session in China, where most of the world's power packs are manufactured. He says that with input from manufacturers worldwide, new energy-efficiency standards could emerge by fall, with some power packs sporting an ENERGY STAR designation as early as the end of the year.

Fanara concedes the more efficient products could be "marginally more expensive" than power packs available today but should save consumers money over the long run. Another possibility, he said, is that the industry may choose to offer higher-grade, more-efficient power packs that can work with more than one kind of consumer product, potentially further reducing energy use and reducing clutter around the home and office.

Another EPA program is seeking to squeeze greater efficiency from another, similarly invisible energy consumer - television sets. As of July 1, the ENERGY STAR specification for TVs changed to lower the standby power requirements for analog TVs from 3 watts to 1 watt. Non-ENERGY STAR-qualified TVs use about 6 watts. Again, according to EPA estimates, if half of all US households replaced their existing TV with an ENERGY STAR model, the change would be like shutting down a large

electric power

Even compact bulbs, long a energy savers, prove. A few- tion screw-in Welch, a Mar- and homeown first started us all bulky and fixtures in a ty the bulbs offer or lamp modifi and even then heavy, too od power to reali

Nowadays, th the EPA's EN getting light b and making th efficient bulbs i practicality as

"They cost m light bulbs to last so much l electricity, yo long run," she

ConsumerReports.org - AC power supplies | 05: DC power supply, switching power supply - Microsoft Internet Explorer provided by

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Overview

What you can do

### AC power supplies

Keep them from zapping your wallet and the environment

You may not think much about power supplies, those power cords with a bricklike appendage that converts AC power into the DC needed by cell phones, laptops, and a host of other devices. But touch that brick while any of those devices is on and it will probably feel warm. That's the energy lost during the conversion process. The power supplies hidden within desktop computers, TVs, cable boxes, and other appliances also waste energy.

POWER PLAY The switching power supply on the right delivers the same energy output as the linear one next to it, but with greater efficiency. It's also much lighter: 6 oz. vs. 1 lb. 9 oz.

With typical use, AC power supplies can waste \$20 to \$50 of what you spend annually on electricity. Nationwide, power supplies waste more than 58 billion kilowatt-hours yearly, equal to the annual output of 110 large power plants. That extra energy output translates into 40 million tons of the greenhouse gas carbon dioxide released into the atmosphere each year, according to Ecos Consulting, an environmental consulting firm.

A major culprit in this waste is the type of adapter known as a linear power supply, or transformer, which typically has an energy-efficiency rating of 30 percent to 60 percent. That means it loses 40 percent to 70 percent of the energy converted to DC when powering an appliance. A transformer can consume 2 to 5 watts just by being plugged in. Manufacturers

Figuring real cost of power adapters - Microsoft Internet Explorer provided by ICF Consulting Group, Inc.

Address: http://www.latimes.com/classified/readstate/vf/homesenergy/200205/ek020\_1\_1121161\_story?trac=20cset=true

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From Orlando Sentinel

### ENERGY CHECK

## Figuring real cost of power adapters

By Ken Sheinkopf, Special to the Sentinel

Considered individually, efficient light bulbs and small household appliances may save little more than pocket change during the year. But when we add up the savings from all those items, they can make a big difference in our power bill.

Now becoming more common in the typical household are the power packs that come with electronics and appliances, particularly with cell phones, PDAs, digital cameras, MP3 players and camcorders.

Odds are good that you have one or more of these products in your home. In fact, the Environmental Protection Agency estimates



# ENERGY STAR Successes

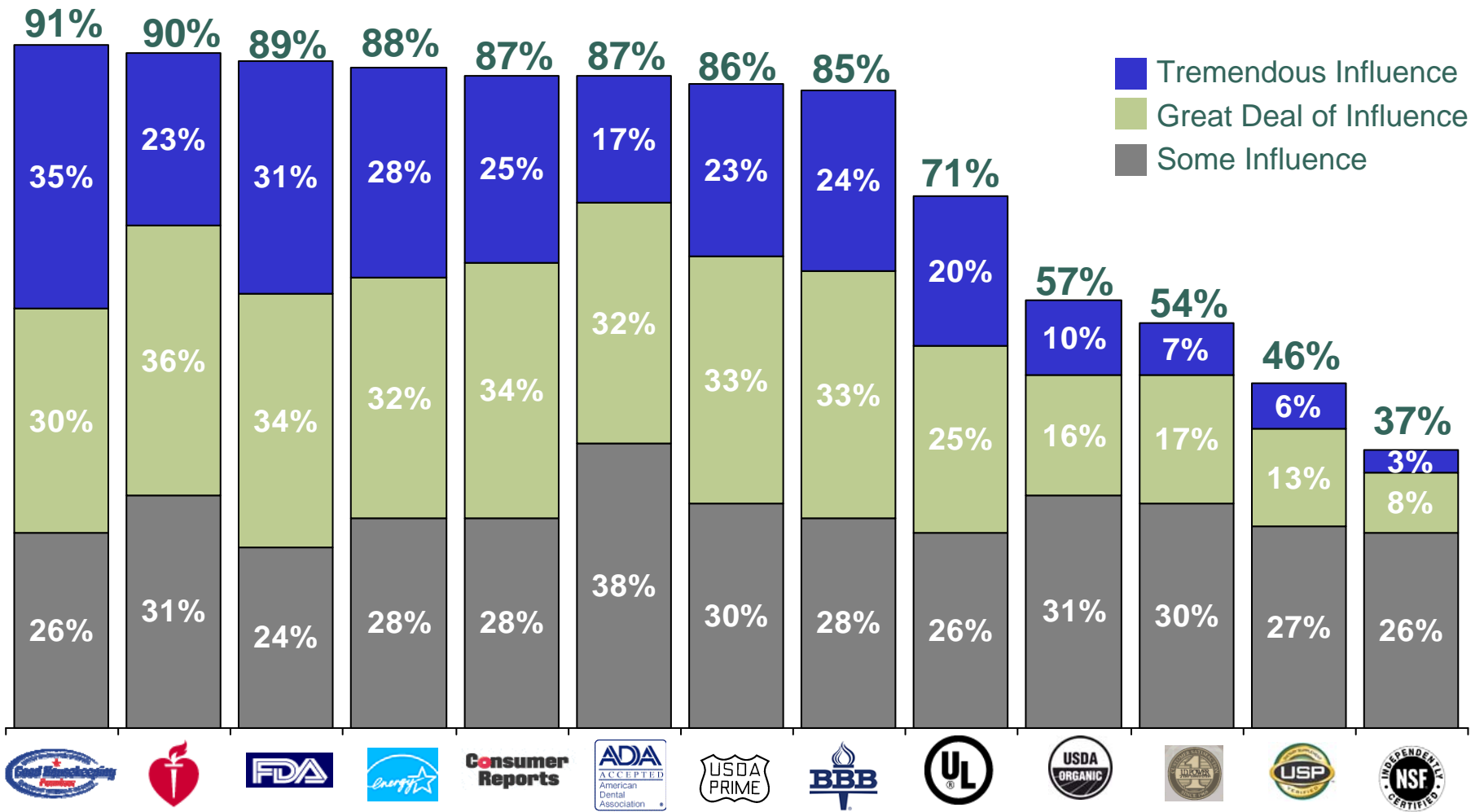


In 2005 alone, Americans:

- saved \$12 billion dollars with ENERGY STAR
- prevented 35 million metric tons of greenhouse gas emissions
  - equivalent to removing 23 million cars from the road
- purchased about 175 million ENERGY STAR qualified products

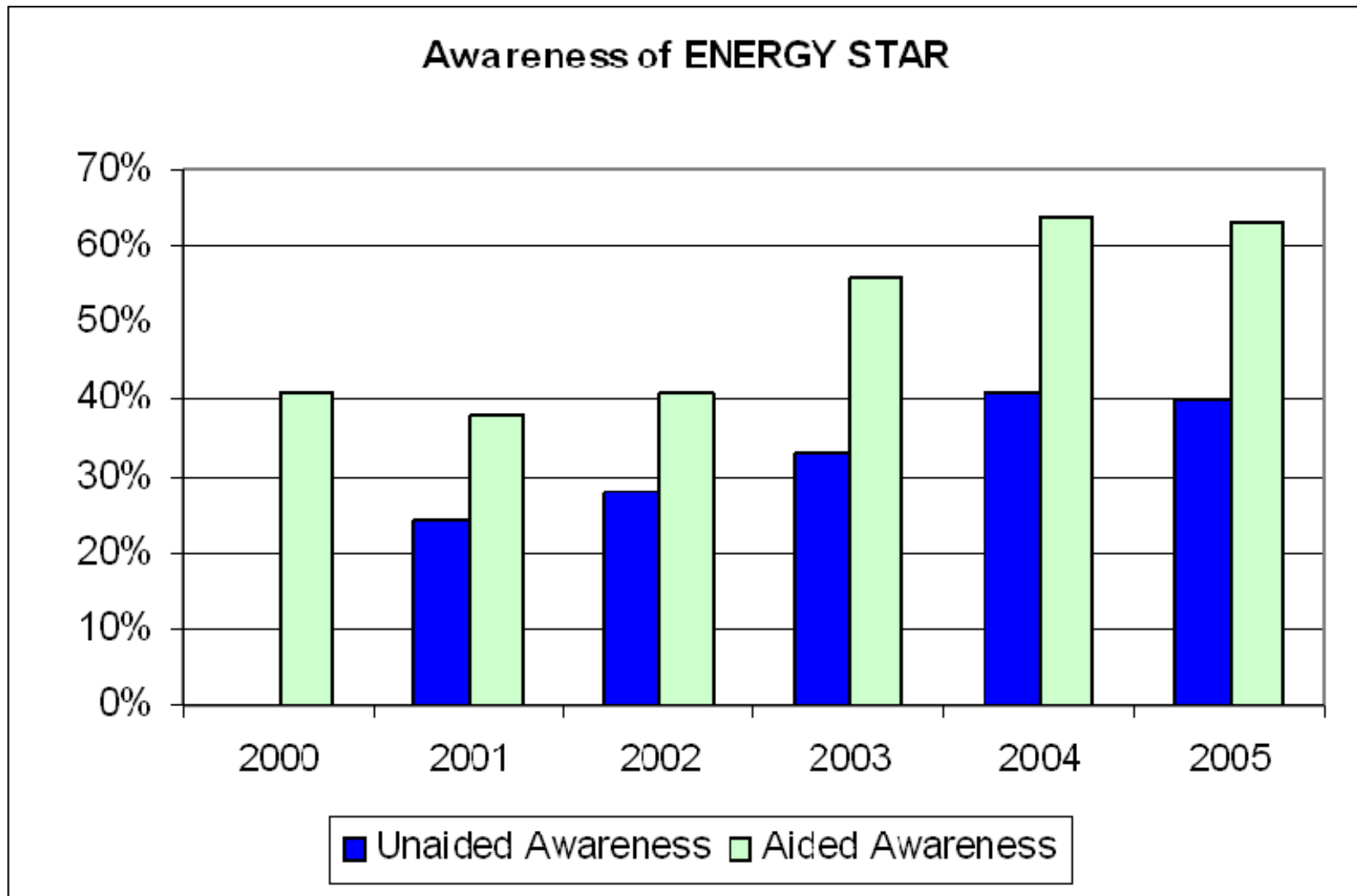
# GOOD HOUSEKEEPING SURVEY

ENERGY STAR label ranks among the highest level of influence on product purchase among all consumer emblems, similar in ranking to the Good Housekeeping Seal and Consumer Reports.



Source: Fairfield Research, May 2003

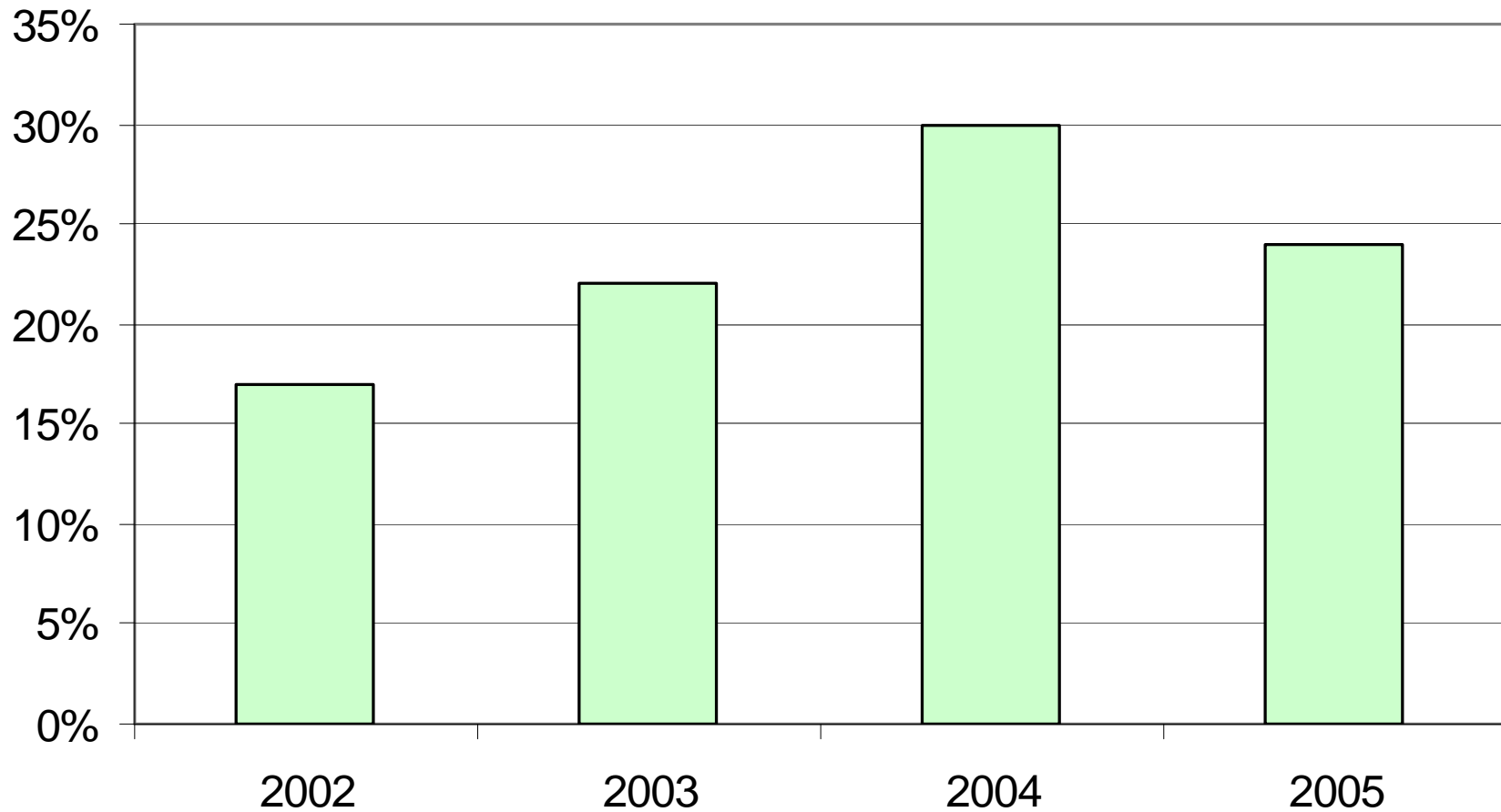
In 2005, more than 60% of households recognize the ENERGY STAR mark at the national level



**Approximately one in four households knowingly purchased an ENERGY STAR qualifying product in 2005**



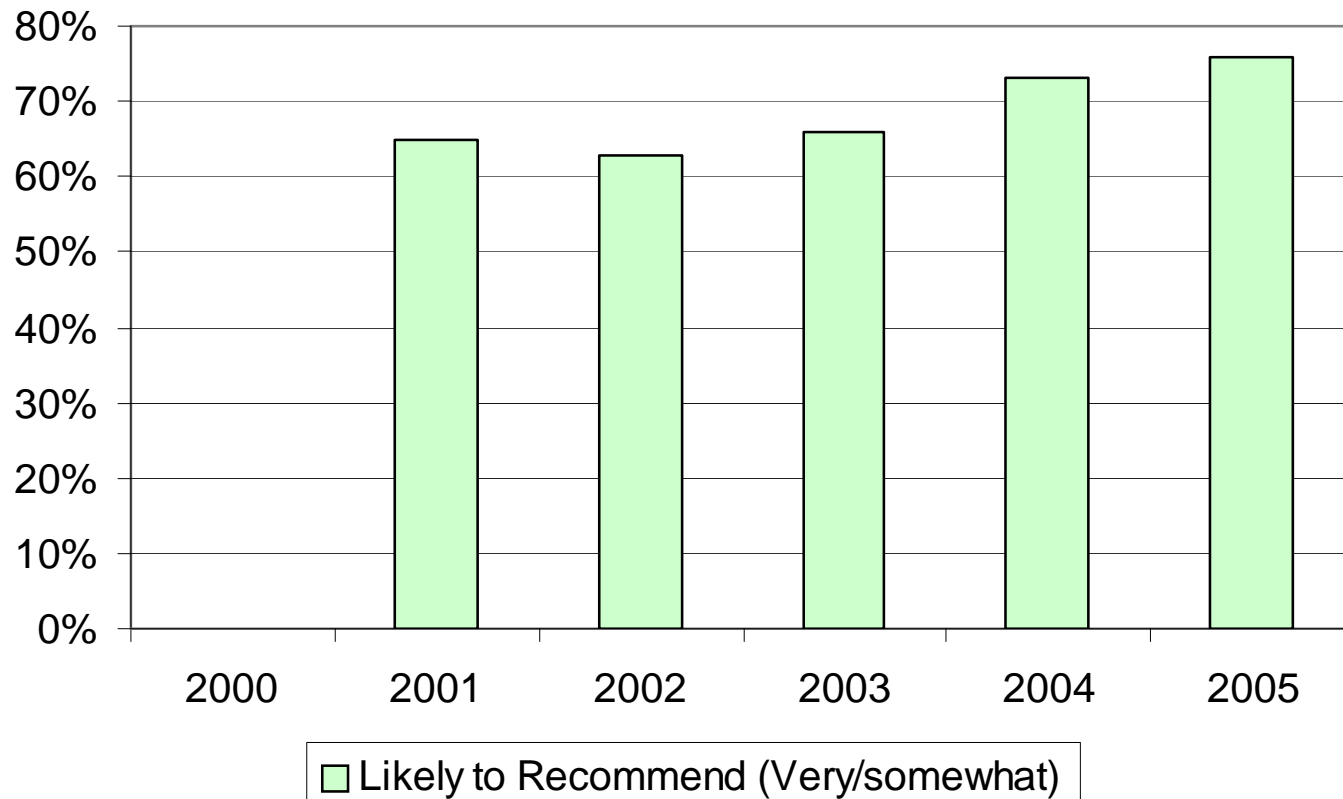
**Knowingly Purchased an ENERGY STAR Product**



Of the one in four households that knowingly purchased an ENERGY STAR qualifying product in 2005, more than 75% of them reported they are likely to recommend ENERGY STAR products to friends



**Likely to Recommend ENERGY STAR to a Friend**  
(Percent of those that knowingly purchased)



# Guiding Principles of Specification Development



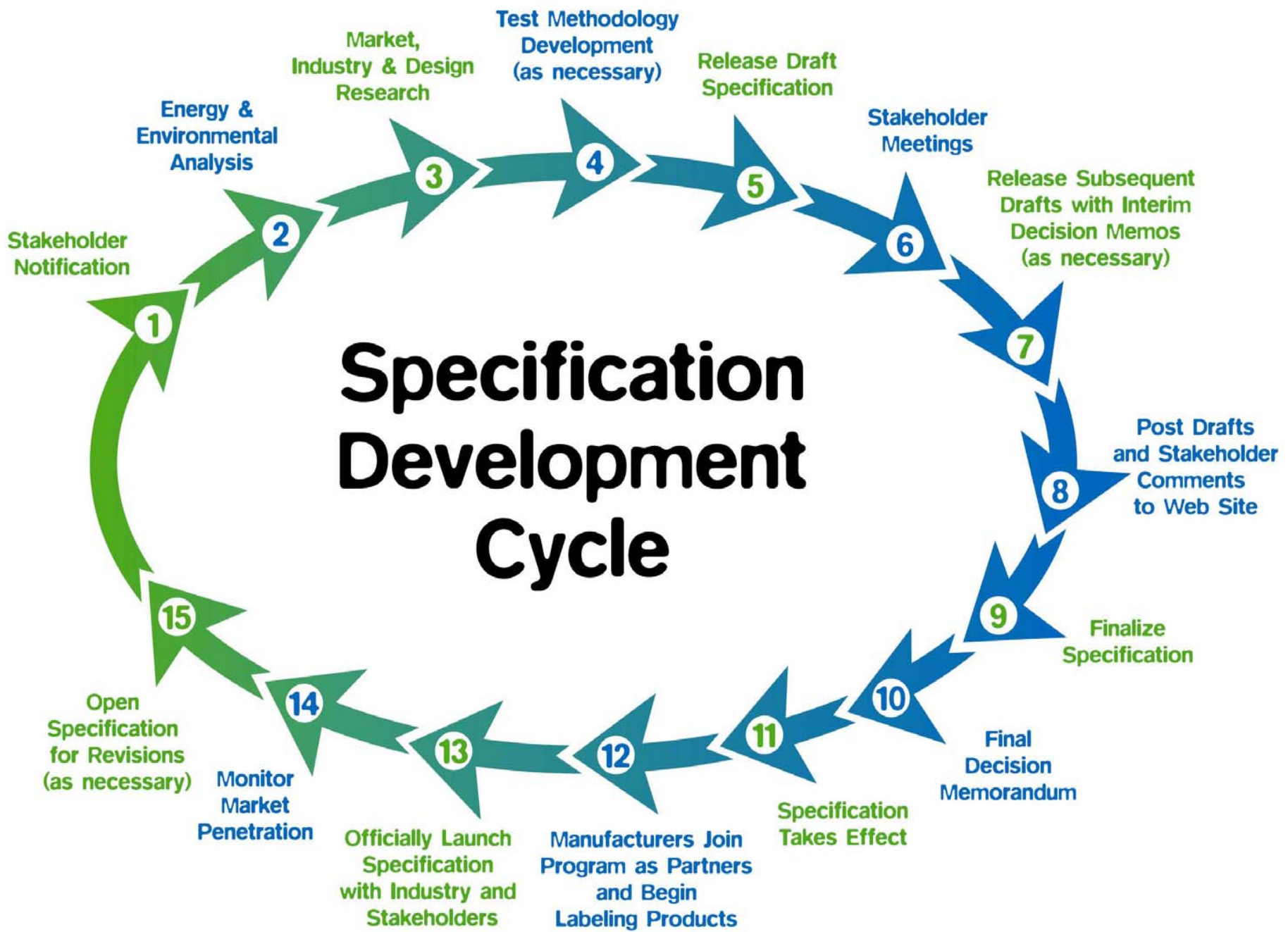
- Cost-effective efficiency
- Performance maintained or enhanced
- Significant energy savings potential
- Efficiency is achievable with non-proprietary technology
- Product differentiation and testing are feasible
- Labeling can be effective in the market

# Developing an Effective Specification



- ① Energy and environmental analysis
- ② Market research and design analysis
- ③ Specification development (with significant stakeholder involvement)

# Specification Development Cycle



Stakeholder Notification

Energy & Environmental Analysis

Market, Industry & Design Research

Test Methodology Development (as necessary)

Release Draft Specification

Stakeholder Meetings

Release Subsequent Drafts with Interim Decision Memos (as necessary)

Post Drafts and Stakeholder Comments to Web Site

Finalize Specification

Final Decision Memorandum

Specification Takes Effect

Manufacturers Join Program as Partners and Begin Labeling Products

Officially Launch Specification with Industry and Stakeholders

Monitor Market Penetration

Open Specification for Revisions (as necessary)



# Important Process Elements



- Consistency
- Transparency
- Inclusiveness
- Responsiveness
- Clarity

# ENERGY STAR Stakeholders

