



Energy 2002

Energy Efficiency and Indoor Air Quality

Julio Rovi – The Cadmus Group, Inc.



Conundrum

Save Energy:

- Close windows, tighten building
- Avoid air exchanges

Improve Air Quality:

- Increase ventilation



ENERGY STAR® is ...

Managed by the US Environmental Protection Agency (EPA) with assistance from the US Department Energy (DOE)

EPA's Focus: energy efficiency in the residential and commercial sectors

DOE's Focus: energy efficiency for consumer appliances. Contributes with other programs like Rebuild America

ENERGY STAR Overview



Also from EPA: I-BEAM

Indoor Air Quality Building Education and Assessment Model

Interactive software that integrates air quality, energy efficiency, and building economics into a unique building management tool



I-BEAM

With I-BEAM You Will Be Able To:

- Troubleshoot problems using I-BEAM's search capabilities
- Diagnose and resolve IAQ-related health problems
- Train management and staff on IAQ issues
- Access library of various IAQ issues and resources
- Establish IAQ program and compute its impact on your bottom line
- Set up IAQ management program including maintenance, housekeeping, renovation, and energy efficiency protocols to ensure good IAQ practices in your building
- Document IAQ activities to reduce liability
- Market your IAQ program to tenants and higher management



Indoor Air Quality Tools for Schools

A proactive look at indoor air quality issues, with practical checklists and a comprehensive methodology



Indoor Air Quality Tools for Schools

- Improve indoor air quality (IAQ)
- Refine your maintenance program
- Better manage housekeeping services
- Conduct indoor air quality building audit
- Train management and staff
- Reduce liability exposure to complaints
- Provide documentation that building is following best IAQ building practices



Indoor Air Quality Tools for Schools

Implementing IAQ Management Plan

- Getting Started
 - ✓ Obtain *IAQ TFS* Kit
 - ✓ Appoint IAQ Coordinator
 - ✓ Identify other key Team members
 - ✓ Establish communications plan
- Assess Current Status
 - ✓ Distribute checklists and establish checklist log
 - ✓ Summarize completed checklists
 - ✓ Perform school walkthrough(s)
 - ✓ Assess status of radon, lead, pest management programs
 - ✓ Identify recent changes that potentially affect IAQ



Indoor Air Quality Tools for Schools

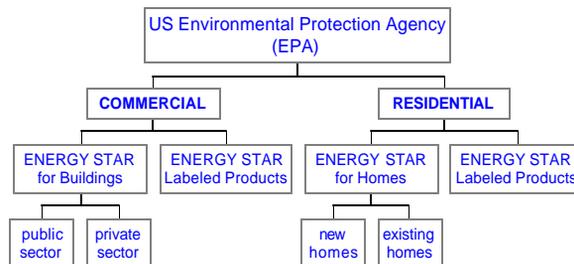
Implementing IAQ Management Plan

- Perform Repairs and Upgrades
 - ✓ Prioritize upgrades
 - ✓ Gain management approval and funding
 - ✓ Perform repairs and upgrades
 - ✓ Conduct follow-up inspections
 - ✓ Distribute status report
- Final Steps
 - ✓ Develop proactive schedule for prevention/maintenance
 - ✓ Communicate successes and status of program to students, staff, administration, and community



ENERGY STAR

At a glance . . .



ENERGY STAR Overview



ENERGY STAR

PARTNERS

PUBLIC SECTOR

- K-12 schools
- community colleges
- state universities
- city and county governments
- state governments
- federal government

PRIVATE SECTOR

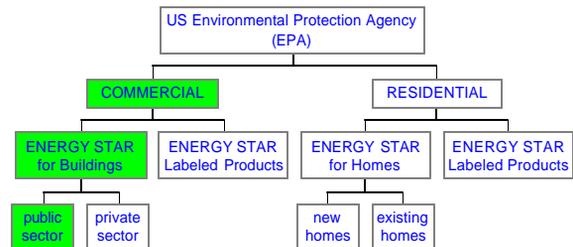
- manufacturers, utilities, builders, raters, lenders
- retailers, groceries, restaurants
- small businesses and home-based businesses
- lodging and hospitality
- religious congregations

ENERGY STAR Overview



ENERGY STAR

Today's focus . . .



ENERGY STAR Overview



ENERGY STAR

Provides resources for staff across your organization to implement and promote energy efficiency:

- Management and Administration
- Operations and Maintenance (O&M)
- Finance and Budgeting
- Purchasing
- Communications and Public Relations
- Tactical Opportunities & Promotions

ENERGY STAR for Public Sector Buildings



ENERGY STAR

Offers resources for decisionmakers and implementers:

- Strategic, technical, and educational *support* for improving building energy performance
- Technical and implementation *tools*
- Outreach *materials* that communicate success
- Links to other initiatives

ENERGY STAR for Public Sector Buildings



ENERGY STAR

Management & Administration

- One-2-Five® Energy Management Diagnostic
 - CD-based software provided to partners
 - A series of yes/no questions that guide organizations in:
 - ✓ assessing energy management practices
 - ✓ identifying opportunities
 - ✓ assigning priorities
 - ✓ defining an action plan
 - ✓ measuring progress toward sustainable reductions in operating costs and associated emissions

ENERGY STAR for Public Sector Buildings



ENERGY STAR

One-2-Five® Energy *(cont'd)*

- Introductory presentation via Internet and conference call
- Onsite facilitations offered to partner decisionmakers

ENERGY STAR for Public Sector Buildings



ENERGY STAR

Operations & Maintenance

- Portfolio manager
 - Web-based tool for benchmarking tracking energy performance of office or K-12 buildings
 - Helps you:
 - ✓ Manage energy in your facilities portfolio on an ongoing basis
 - ✓ Set building performance goals
 - ✓ Prioritize upgrade work
 - ✓ Track progress over time; ensure continuous improvements

ENERGY STAR for Public Sector Buildings



ENERGY STAR

O&M: Portfolio Manger *(cont'd)*

- The national building energy performance rating system
 - Compares energy performance to similar buildings from national data set
 - Provides score from 1 to 100
 - Buildings in the top 25 percent nationwide eligible to apply for ENERGY STAR label
 - Introductory presentation delivered via Internet and conference call

ENERGY STAR for Public Sector Buildings



ENERGY STAR

O&M (cont'd)

- The Five-Stage Approach

- Integrated, comprehensive strategy for planning and implementing profitable energy efficiency upgrades
- Technical assistance in developing roadmap for building upgrades
- *Building Upgrade Manual*, provided to partners & available online
- Online Energy Service Provider Directory
- Introductory presentation delivered via Internet and conference call

ENERGY STAR for Public Sector Buildings



ENERGY STAR

O&M (cont'd)

- Monitor Power Management

- Educates end-users on virtues of monitor power management
- Provides centrally administered software program to implement monitor power management
- Encourages you to publicize successful efforts through PR campaign
- Introductory presentation delivered via Internet and conference call

ENERGY STAR for Public Sector Buildings



ENERGY STAR

Finance and Budgeting

- Group Working Sessions
 - Explore options in detail for financing performance improvements in public sector, tailored to your local needs
 - Assess which financing options are most appropriate for your organization
 - Assist in developing your energy and investment plan
- Access to Financing Experts
- Introductory and intermediate presentations delivered via Internet and conference call

ENERGY STAR for Public Sector Buildings



ENERGY STAR

Purchasing

- Purchasing Tool Kit
 - Helps organizations identify, specify, and purchase ENERGY STAR labeled products as part of overall energy management strategy
 - Includes templates for modifying procurement language and educating employees
 - Introductory presentation delivered via Internet and conference call

ENERGY STAR for Public Sector Buildings



ENERGY STAR

Communications & Public Relations

- Demonstrate to your staff and community your organization's commitment to energy, financial, and environmental performance
- Be a role model by sharing your successes
- Tailor ENERGY STAR Web PR resources
- Introductory presentation delivered via Internet and conference call

ENERGY STAR for Public Sector Buildings



ENERGY STAR

Your information sources:

- www.energystar.gov
- 1-888-STAR-YES (1-888-782-7937)
- Katy Hatcher
ENERGY STAR
National Manager Public Sector
hatcher.caterina@epa.gov

ENERGY STAR Overview