

# **“Top Ten” What to Do NOW!**

**Effective Low-Cost/  
No-Cost Savings Measures**

**1. Dust/Clean Lighting Lenses**

**2. Repair/ Replace door sweeps**

**3. Repair/Replace Door Closers**

**4. Repair/Replace Window Gaskets**

**5. Vacuum/Wash/Replace  
Air-Handler Filters**

**6. Clean Exhaust Registers of  
Rooftop Equipment**

**7. Check/Tighten/Replace Drive Belts**

**8. Turn Down Hot Water  
Heater to 140 F°**

**9. Replace Showerheads &  
Faucet Diffusers with Low-flow**

**10.  
Track bills and  
??????????**

## Resources and Tools



## ENERGY STAR Overview



- Voluntary labeling program sponsored by the U.S. Department of Energy (DOE) and the U.S. Environmental Protection Agency (EPA).
- ENERGY STAR label helps businesses and consumers easily identify highly efficient products, homes, and buildings

## Benefits of Energy Star

- Refrigerators – At least 15% more efficient than federal standards
- Dishwashers – Use 25% less energy than minimum standards
- Compact Fluorescent Lights (CFLs) – Use 2/3 less energy and last 6-10 times longer.
- Furnaces - About 15% more efficient than standard
- New Homes – 15% more efficient than 2004 International Energy Conservation Code

## Appliances

- ENERGY STAR appliances are clothes washers, dishwashers, refrigerators, room air conditioners and dehumidifiers.
- Clothes dryers are not included:  
The clothes washer criteria includes dryer energy savings and energy efficient dryers are not technologically feasible at this time.

## Refrigerators

- Minimum of 15% more efficient than the Federal standard
- Greatest savings when comparing new models to models produced before 1993
- Also includes freezers (min. 10% more efficient) and compact refrigerators (min.20% more efficient)



## Cost Benefits

ENERGY STAR Product	Percent Better	Savings per Year	Price Premium	Payback Period
Clothes Washers	50%	\$50	\$300	4-6 years
Dishwashers	25%	\$15	\$0	0 years
Refrigerators	15%	\$6	\$30-\$50	2-6 years

## Cost Benefits

ENERGY STAR Product	Percent Better	Savings per Year	Price Premium	Payback Period
Room ACs	10%	\$7	\$30-\$50	5 years
Central AC	N/A	N/A	N/A	Criteria revised
Dehumidifiers	10-20%	\$20	\$0	0 years
CFLs	75%	\$5	\$5	1 year
Windows	10-20%	\$125-\$340	5-15%	3 years or more

***How To Get Best Pricing  
and Purchase ENERGY  
STAR Products?***

## **ENERGY STAR - Bulk Purchasing Pilot**

- **Developed by DOE and HUD**
- **Web-based, user friendly application**
- **Multiple ENERGY STAR products and appliances**
- **Multiple participating manufacturers**
- **Competitive, bulk purchase pricing**

**[www.bulkpurchase.net](http://www.bulkpurchase.net)**

## Overview of Process

- Purchasers choose an ENERGY STAR product type.
- Purchasers complete product requirement questionnaire.
- ENERGY STAR partner suppliers are notified via email.
- Suppliers have the opportunity to respond to purchaser requests.

## Overview of Process

- Purchasers are notified via email of response to request.
- Purchasers log into this Web site and check Supplier responses.
- Purchasers decide whether or not to follow up with any of the ENERGY STAR Supplier responses.

## ENERGY STAR On The Web

ENERGY STAR Bulk Purchasing

Home About **SUBMIT A PURCHASE REQUEST** Purchase Requests Profile

Logged in as

ENERGY STAR Bulk Purchasing Request Form

**Step 1: Choose a product from the list below**  
You can only select one product at a time. You will have the opportunity to request a quote for another product at the end of the process.

- ENERGY STAR Qualified CFLs
- ENERGY STAR Qualified Refrigerators
- ENERGY STAR Qualified Light Fixtures
- ENERGY STAR Qualified Dehumidifiers
- ENERGY STAR Qualified Room Air Conditioners
- ENERGY STAR Qualified Dishwashers
- ENERGY STAR Qualified Clothes Washers

**SELECT ENERGY STAR PRODUCT OFFERINGS**

***How To Identify  
Energy Efficiency  
Opportunities?***

# www.rehabadvisor.net

The screenshot shows the homepage of the Energy Efficient Rehab Advisor. At the top, there is a navigation bar with "HOME" and "ABOUT" links. Below this is a "WELCOME TO THE ENERGY EFFICIENT REHAB ADVISOR!" section. The main content area contains introductory text about the U.S. Department of Housing and Urban Development's (HUD) guidelines for energy efficient housing rehabilitation. It mentions that the Advisor's recommendations are based on ENERGY STAR specifications and that incorporating energy efficiency is a significant step toward achieving High Performance Housing. A "Get Started" button is visible. Below the text is a "BUILD YOUR PROFILE" section with four dropdown menus: "YOUR BUILDING" (set to Multifamily), "YOUR ROLE" (set to Building Owner), "YOUR CLIMATE" (set to Northeast), and "YOUR BUILDING AGE" (set to Pre-1960s). A "SUBMIT" button is located to the right of these menus. At the bottom of the page, there is a row of icons representing various energy efficiency topics: Comfort, Durability, Maintenance, Indoor Air Quality, Operating Costs, Quiet Operation, Control, Environment, Water Use, and Freezing Problems.

Replaced HUD's 1996 Rehabilitation Energy Guidelines

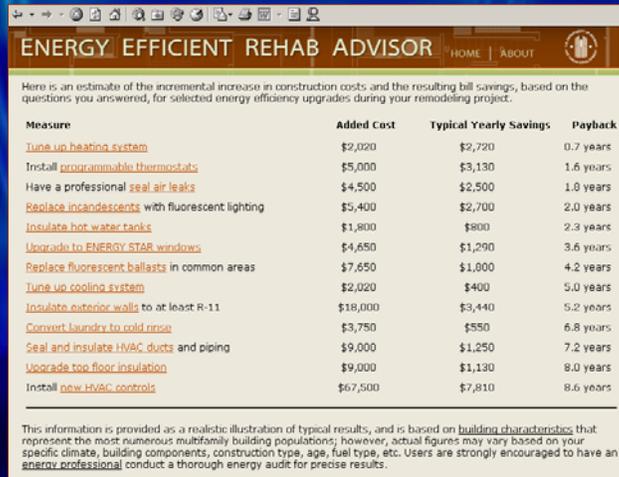
# Input: Property Characteristics

The screenshot shows the "Multifamily Building Calculator" form. The form is titled "Multifamily Building Calculator" and includes a brief description of its purpose: to provide representative incremental costs and savings for rehab projects. It asks for various property characteristics and energy prices. The form fields are as follows:

Square footage of building	<input type="text" value="45000"/>
Number of floors	<input type="text" value="5"/>
Number of units	<input type="text" value="50"/>
Climate zone	<input type="text" value="Northeast"/>
Building age	<input type="text" value="Pre-1960s"/>
When was structure last remodeled?	<input type="text" value="Don't Know / Hasn't Been"/>
When was HVAC last replaced?	<input type="text" value="1990s"/>
Heating system type?	<input type="text" value="Gas Furnace (central system)"/>
Cooling system type?	<input type="text" value="Electric Heat Pump (central system)"/>
Domestic hot water type?	<input type="text" value="Central system, Domestic hot water only"/>
Domestic hot water fuel?	<input type="text" value="Electricity"/>
Your energy prices:	
Natural gas:	<input type="text" value="1.00"/> \$/therm
Electricity:	<input type="text" value="0.085"/> \$/kWh
Heating oil:	<input type="text" value="1.30"/> \$/gallon

At the bottom of the form, there is a "Submit" button and a link to "Contact us | PATH | Privacy Policy".

## Output: List of Measures



ENERGY EFFICIENT REHAB ADVISOR

Here is an estimate of the incremental increase in construction costs and the resulting bill savings, based on the questions you answered, for selected energy efficiency upgrades during your remodeling project.

Measure	Added Cost	Typical Yearly Savings	Payback
<a href="#">Tune up heating system</a>	\$2,020	\$2,720	0.7 years
Install <a href="#">programmable thermostats</a>	\$5,000	\$3,130	1.6 years
Have a professional <a href="#">seal air leaks</a>	\$4,500	\$2,500	1.0 years
<a href="#">Replace incandescents</a> with fluorescent lighting	\$5,400	\$2,700	2.0 years
<a href="#">Insulate hot water tanks</a>	\$1,800	\$800	2.3 years
<a href="#">Upgrade to ENERGY STAR windows</a>	\$4,650	\$1,290	3.6 years
<a href="#">Replace fluorescent ballasts</a> in common areas	\$7,650	\$1,800	4.2 years
<a href="#">Tune up cooling system</a>	\$2,020	\$400	5.0 years
<a href="#">Insulate exterior walls</a> to at least R-11	\$18,000	\$3,440	5.2 years
<a href="#">Convert laundry to cold rinse</a>	\$3,750	\$550	6.8 years
<a href="#">Seal and insulate HVAC ducts</a> and piping	\$9,000	\$1,250	7.2 years
<a href="#">Upgrade top floor insulation</a>	\$9,000	\$1,130	8.0 years
Install <a href="#">new HVAC controls</a>	\$67,500	\$7,810	8.6 years

This information is provided as a realistic illustration of typical results, and is based on [building characteristics](#) that represent the most numerous multifamily building populations; however, actual figures may vary based on your specific climate, building components, construction type, age, fuel type, etc. Users are strongly encouraged to have an [energy professional](#) conduct a thorough energy audit for precise results.

**Where To Find Information  
on Efficient Technologies  
and Building Practices?**

## Partnership to Advance Technologies in Housing

**Mission:** *Speed the development and use of advanced technologies that improve affordability, energy efficiency, durability, environmental performance, disaster resistance, and the safety of our housing stock . . .*

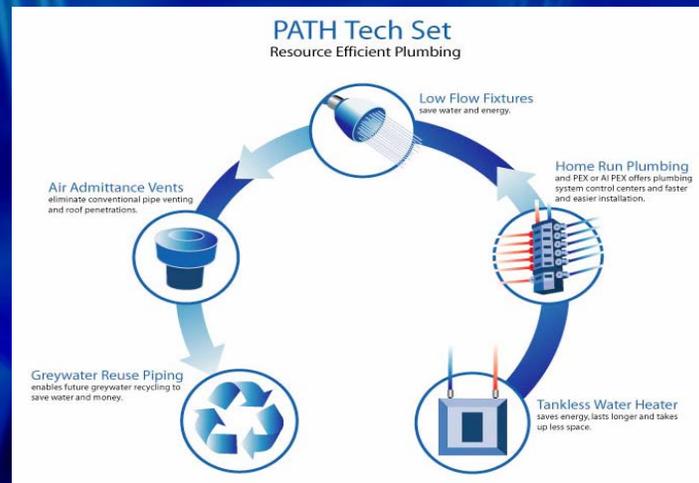


## PATH – TOOLBASE

- Tool Base Services provides technical information on building products, materials, and new technologies
- 174 technologies in inventory
  - Everything from Aerosol Duct Sealing to Xeriscaping
- Technologies classified based on stage of commercialization

[www.toolbase.org](http://www.toolbase.org)

## PATH - TECH SETS



## PATH - TECH SETS

- Integrates several related technologies;  
Promotes systems design approach
- Leverage technologies enhance benefit  
by using technologies together
- New Tech Sets announced each quarter

[www.pathnet.org](http://www.pathnet.org)

## ***Where To Find Information on Efficiency Programs and Incentives?***

### **ENERGY STAR - *Change A Light Resources***

- National Clearinghouse promoting lighting change outs
- Technical support for *Change A Light* Events



**[www.energystar.gov/changealight](http://www.energystar.gov/changealight)**

# www.dsireusa.org

## Database for State Incentives for Renewables and Efficiency

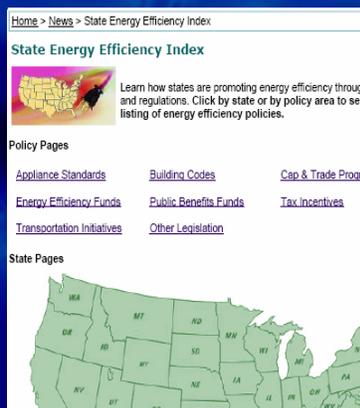


# Alliance to Save Energy

## State Energy Efficiency Index

- Energy Efficiency Funds
- Tax Credits
- Public Benefit Funds

www.ase.org



## Tax Incentives Assistance Project



[www.energytaxincentives.org](http://www.energytaxincentives.org)

Information on Federal Energy Tax Credits  
enacted by Energy Policy Act of 2005

– IRS Forms and Guidance

## Additional National Sites

### Department of Energy

- Energy Savers – [www.energysavers.gov](http://www.energysavers.gov)
- Building America - [www.eere.energy.gov](http://www.eere.energy.gov)

### Environmental Protection Agency

- Energy Star - [www.energystar.gov](http://www.energystar.gov)
- WaterSense - [www.epa.gov/watersense/](http://www.epa.gov/watersense/)

***Who Can I Contact  
for Assistance?***

**For a list of HUD Regional  
Energy Coordinators**

**[www.hud.gov/energy](http://www.hud.gov/energy)**