



Emerson Environmental

Tune Up Your HouseSM

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Warm at Home: Practical Tips to Combat the Cold

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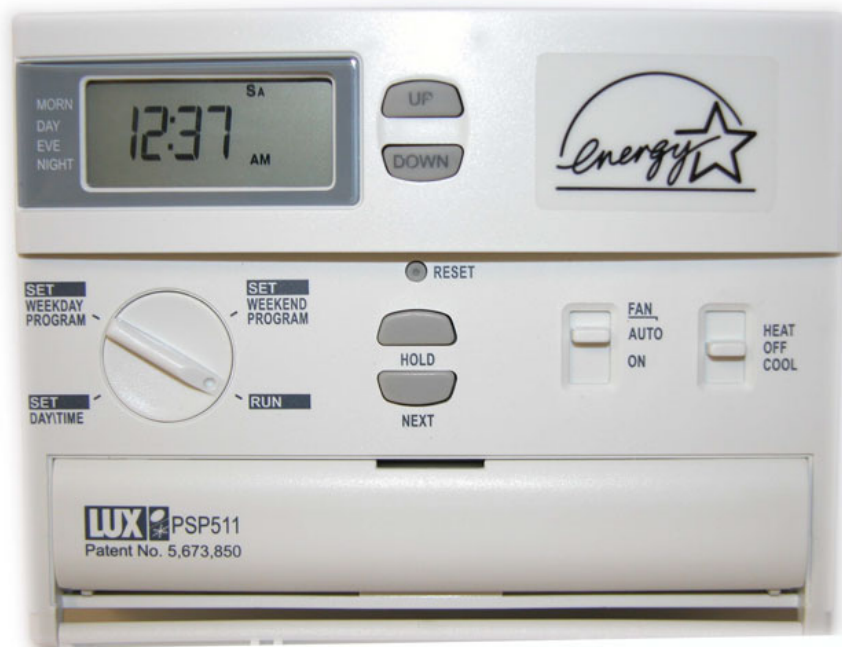


The Challenge: Staying Warm

- Warm home in winter
- Without being uncomfortable
- Without spending too much money
- Without producing too many greenhouse gasses

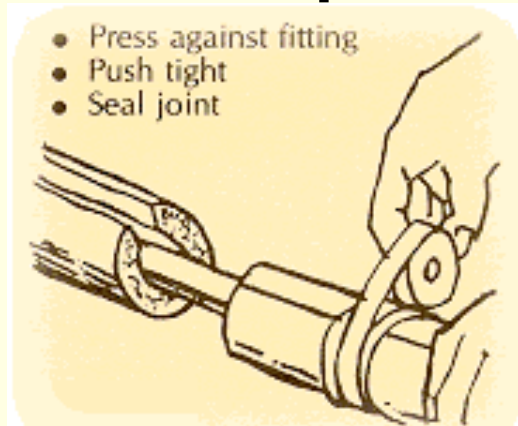


Top Tips for a **Low-cost** Winter: Turn Down Thermostat



- Turn down thermostat to 68° when you are at home and awake, and 55° when you are away or asleep
- Will reduce your heating bill by keeping you **colder**
- So, really is a tip for saving money, not for keeping you warmer

Top Tips for a Warm Winter: Insulate Hot Water Pipes



Top Tips for a Warm Winter: Insulate Hot Water Tank



Top Tips for a **Low-Cost** Winter: Turn Down Water Heater

- Turn down water heater until water at closest tap is 120°
- If you don't have enough hot water for everyone to shower, turn it back up a bit



Top Tips for a Warm Winter: Seal Holes in Walls Under Sinks

- Seal gaps where pipes enter wall under each sink
- Use caulk or expanding foam



Top Tips for a Warm Winter: Seal Register Boots



- Seal each heat register "boot" at its seams and to the floor or wall
- Use Mastic



Top Tips for a Warm Winter: Make Your Furnace's Job Easier

- Clean or change furnace air filter
- Don't use "ultra-filtration" filters
- Open register grills all the way
- Clear furniture and clutter from 1' around grills



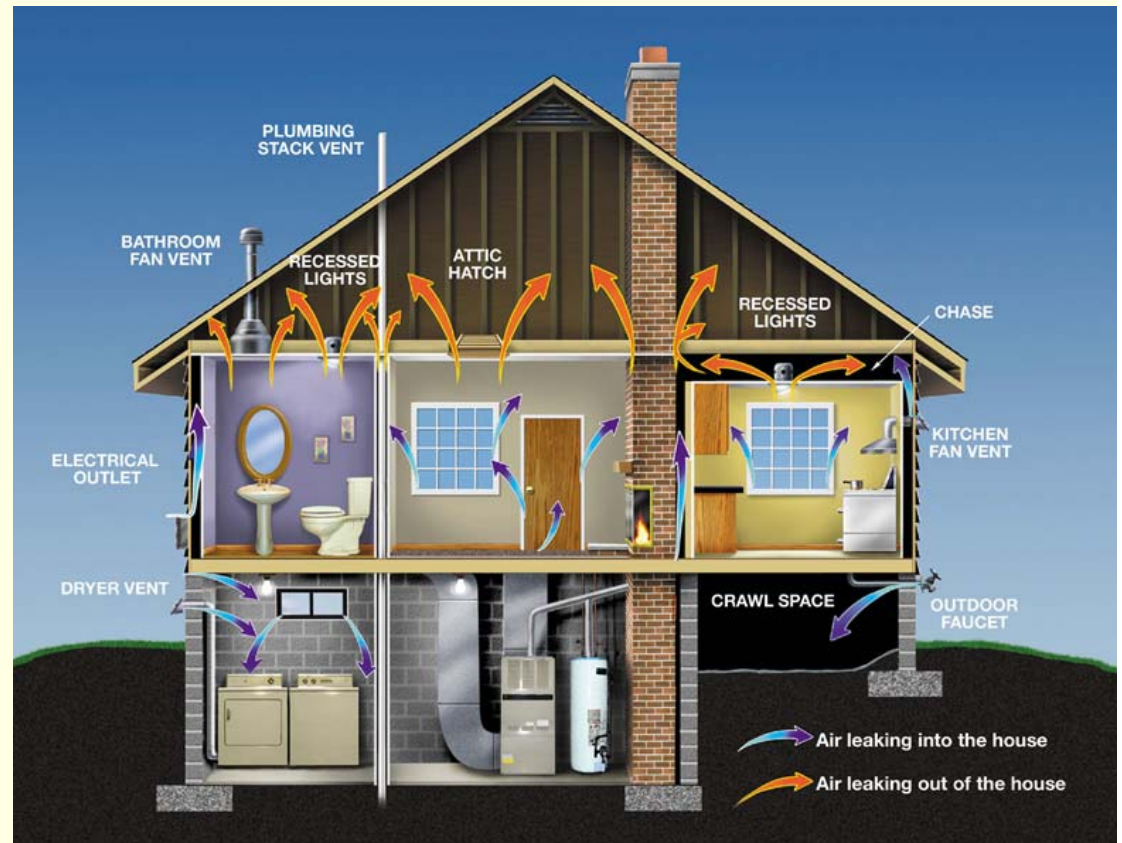
Top Tips for a Warm Winter: Close Drapes

- Confirm windows are latched closed
- Close drapes after sunset
- Install insulating shades or curtains

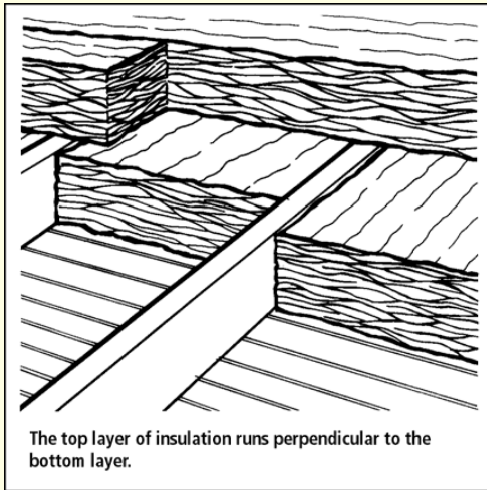


Top Tips for a Warm Winter: Seal Air Leaks

- Seal air leaks in attic floor and crawl space ceiling, especially around chimney, pipes, and vents
- Caulk edges where floor meets wall
- Caulk edges of window molding



Top Tips for a Warm Winter: Insulate Attic to R-38



- Preferably blown-in cellulose.
- Bury air ducts
- Needs to come into contact with all 5 sides of the joist bay to work effectively -- make sure no gapping or compression

Top Tips for a Warm Winter: Insulate Attic to R-38

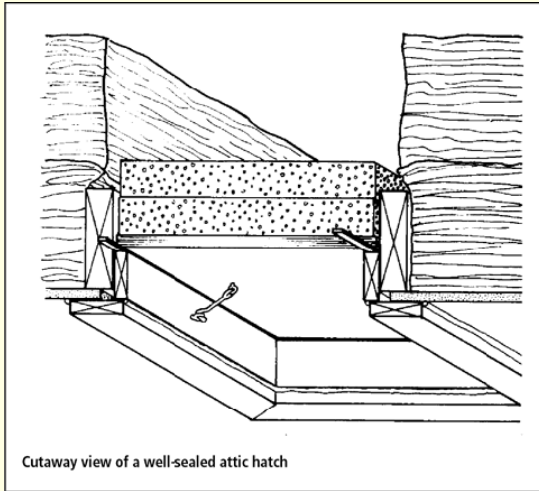


“One of the most cost-effective ways to make your home more comfortable year-round is to add insulation to your attic.”

U.S. Dept. of Energy, *Energy Saver\$: Tips on Saving Energy & Money at Home* (Jan. 2006)



Top Tips for a Warm Winter: Seal and Insulate Attic Entrance



Cutaway view of a well-sealed attic hatch



Not-So-Easy, but Cozy

- Retrofit insulation into walls
- Insulate under first floor
- Seal and insulate heat ducts



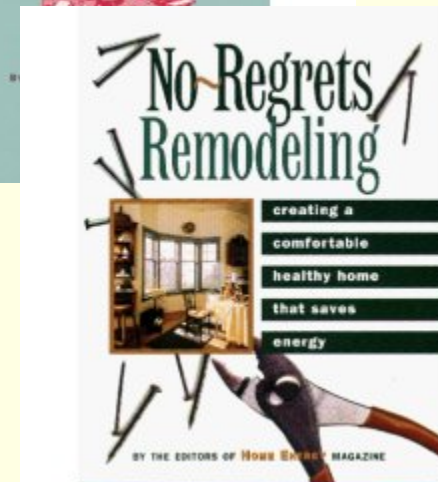
Resources

- Home Energy Saver on-line audit:
<http://hes.lbl.gov/>
- Local Rebate Info:
pge.com
- Federal Tax Info:
<http://www.emersonenvironmental.com/residentialflyer1.pdf>

The screenshot shows the homepage of the 'HOME ENERGY SAVER' website. The header features the title 'HOME ENERGY SAVER' in large white letters on a dark green background, with the tagline 'The first web-based do-it-yourself energy audit tool' below it. A navigation menu on the left lists various sections: About this Site, What's New?, Testimonials, Librarian, Glossary, FAQ, Ask An Expert, No/Low-Cost Tips, Remodeling, Local Resources, Awards & Accolades, Press Information, Demo Movie, Developers, Students & Teachers, Search, and Help. The main content area includes a central image of a house with 'ENERGY EFFICIENCY' overlaid. To the right, there is a 'CALCULATOR' section with a 'Go!' button and a 'Save \$\$\$' callout. At the bottom, there are logos for various partners including PIER, PATH, and the Air Resources Board.

Resources

- Web sites, including Energy Star
- Books:
 - *No-Regrets Remodeling: Creating a Comfortable, Healthy Home That Saves Energy*
 - Richard Heede, *Homemade Money*
- Professional Energy Auditors, such as
Suzanne Emerson,
Emerson Environmental





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The average California home energy usage emits 10,600 lbs. (5.3 tons) CO₂ per year.

PG&E Climate Smart™ "Together we can fight climate change" (2007).

Questions?

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The average CA household is responsible for 1 lb/hr CO₂ emissions, almost exclusively from fossil fuels for energy.

Max Sherman, Lawrence Berkeley National Laboratory, *Green Living Forum* (Aug. 30, 2007)