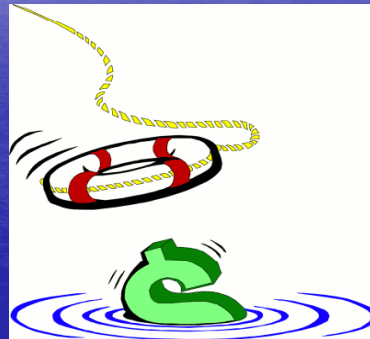


Energy Conservation for the Homeowner

Roger Doherty – Michigan
Department of Energy, Labor &
Economic Growth

Overview

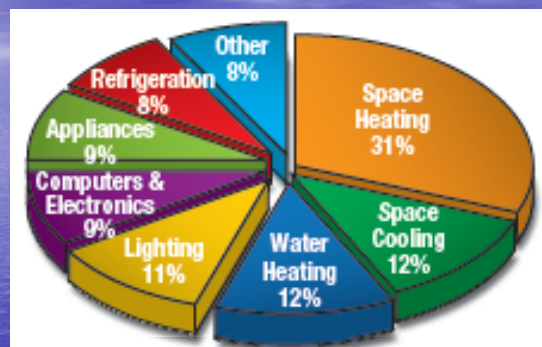
- Energy Basics
- Energy Audit
- Energy Efficiency Tips
- Renewable Energy
- Financial Incentives
- Resources
- Questions



Where to Begin?

- Utility Bill Basics
- Energy Units
- Whole House Energy Efficiency
- Energy Audit
 - Home Energy Rater (HERS)
 - Do-It-Yourself

Typical House



How We Use Energy in Our Homes

Heating accounts for the biggest chunk of a typical utility bill.

Source: 2007 Buildings Energy Data Book, Table 4.2.1., 2005 energy cost data.

Insulation



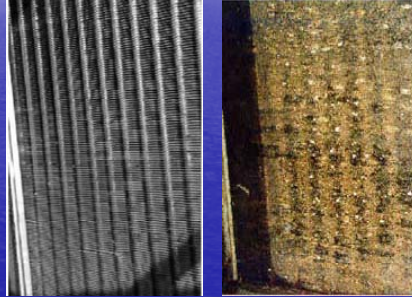
Air Leaks



- Sources of Air Leaks In Your Home
Areas that leak air into and out of your home cost you lots of money. Check the areas listed below.
- | | | |
|-------------------|---------------------------|------------------------------------|
| 1 Dropped ceiling | 5 Water and furnace flues | 9 Window frames |
| 2 Recessed light | 6 All ducts | 10 Electrical outlets and switches |
| 3 Attic entrance | 7 Door frames | 11 Plumbing and utility access |
| 4 Sill plates | 8 Chimney flashing | |

Heating & Cooling

- Temperature Control
- Proper Maintenance
 - Filters & Coils
 - Professional Service
 - Repair Ductwork
- Replace Equipment
 - AFUE
 - SEER
 - Energy Star



Water Heating

- Use Less Hot Water
 - Low Flow Faucets & Showerheads
 - Repair Leaks
 - Efficient Appliances
- Lower Thermostat (120°F)
- Insulate Tank & Pipes
- Consider Efficiency When Replacing

Windows

- Control Sunlight
- Properly Sealed
- Energy Star Label
- Cold-Climate Vs Warm-Climate
- Energy Savings Typically Small Compared to Cost of New Windows

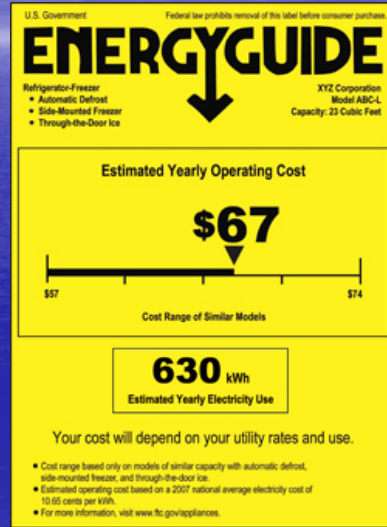
Lighting

- Efficient Lighting
 - Energy Star
 - CFL
- Light Level
- Turn Lights Off
- Clean Fixtures
- Use Daylight
- Proper Controls



Appliances & Electronics

- Refrigerator
- Washing Machine
- Freezer
- Oven/Stove
- Dishwasher
- Computer
- Well Pump
- Dehumidifier
- Television



Driving

- Reduce Idling
- Aggressive Driving Wastes Fuel
- Slowdown
- Remove Extra Weight
- Routine Maintenance
- Combine Errands
- Telecommuting, Carpooling, & Public Transportation

Renewable Energy

- Solar
 - Passive
 - Water Heating
 - Photovoltaic
- Wind
- Geothermal
- Biomass



Financial Incentives

- Federal Tax Credits
- Weatherization Assistance Programs
- Utility “Energy Optimization Programs”

General Recommendations

- Themes
 - Turn Off Unused Appliances & Lights
 - When Replacing Consider Energy Efficiency (Energy Star)
 - Don't Neglect Maintenance



Resources

- Websites - See Handout