

**2009 TECHNOLOGY
IN THE WORKPLACE
EXPO & SEMINAR**



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**Energy Opportunities for
You**

In This Presentation



- Introduction
- Energy knowledge will change your lifestyle
 - Energy savings opportunities
 - Simple suggestions
 - Energy Mythbusters
- Cost adjusted for Hilo, HI

Your Ride



- 80% of workers drive to work alone
 - Telecommute: \$750/Year savings
 - Carpool: \$400/year savings
- Maintenance
 - Filters/Tires: \$150/Year savings
- Clean your car
 - Eliminate extra weight: \$50/Year savings
 - Remove luggage rack: \$30/Year savings
- Be cool
 - No A/C (under 45mph): \$200/Year savings
- Drive Calm
 - Heavy breaking and accelerating uses more energy

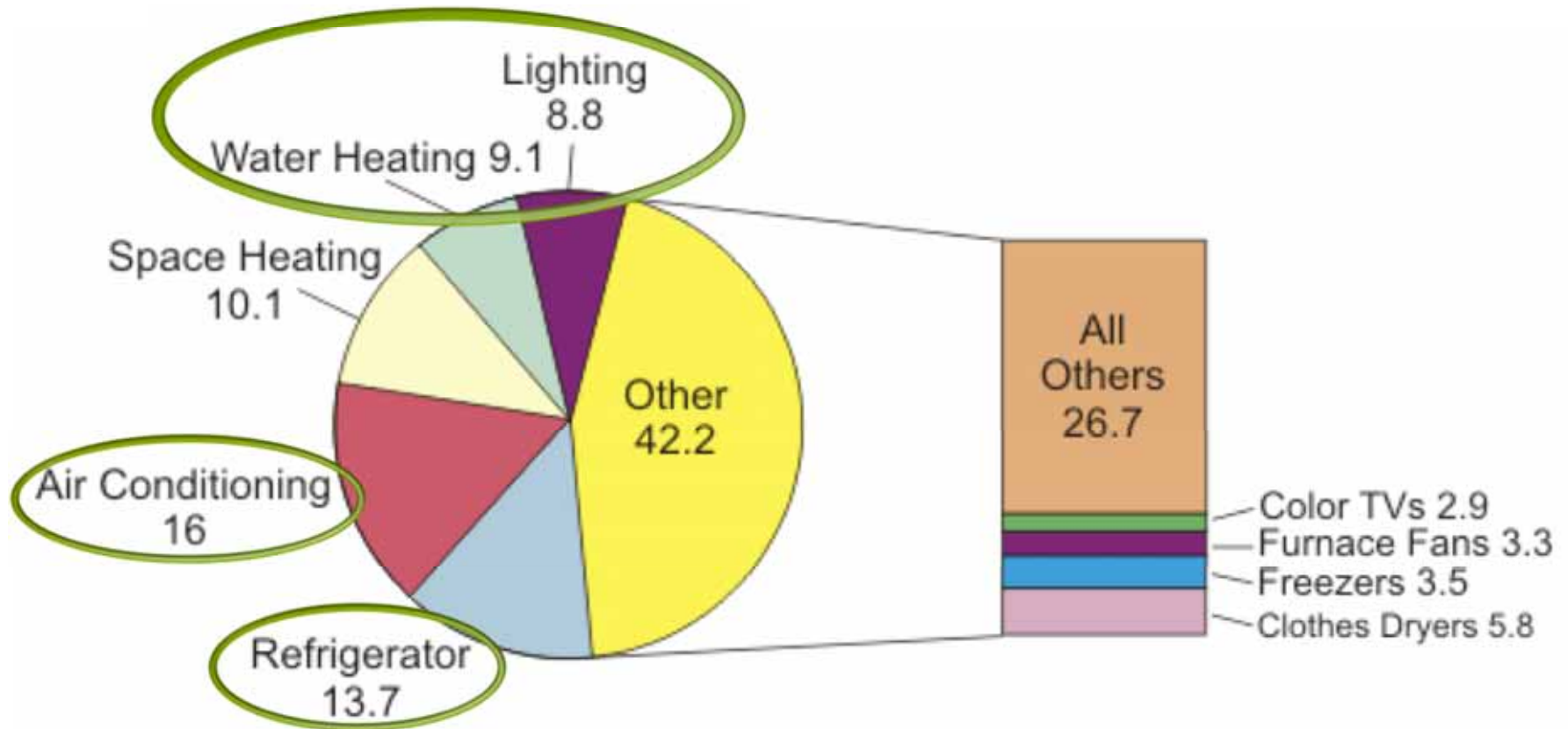
Upgrade to Green

Average Hybrid
payback: 5 years

Buy a hybrid and save \$1,500/year



Energy use in your home



Source: Energy Information Administration, Form EIA-457A, B, C, E, and H of the 2001 Residential Energy Consumption Survey.



Cooling your home

- 6 hours/day Air Conditioning: \$800/year

Tip: Reduce A/C use

Tip: Reduce A/C Temperature (3 deg Save \$100/year)

Tip: Install Ceiling Fan (Save \$600/year)

Tip: Clean filters monthly



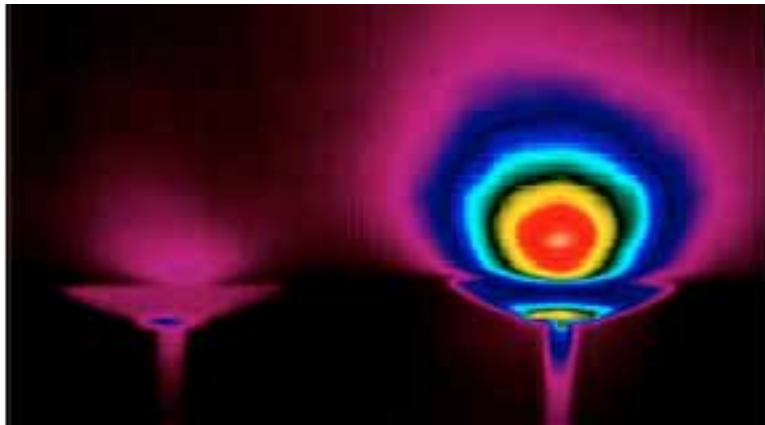
Mythbusting: Cooling a house through out the day is more efficient than cooling the house in the afternoon

Washing/Drying your clothes



- 1 Hot Water Clothes Wash Cycle: \$.80
Tip: 1 Cold Cycle: \$.20/wash
Save: **\$120/Year**
Tip: Wash only when full load
Tip: Use water level control (if you have one)
- 1 load/day Clothes Dryer: \$400/year
Tip: Hang dry – **Save \$400/Year**
Tip: partial dry

Your Living Area



Mythbusting: It takes more energy to turn a light off then on so just leave it on

- 6 hours/day Table Lamp: \$30/year
- 6 hours/day Touchier Lamp: \$200/year
- 6 hours/day Room Light: \$50/Year
- 6 hours/day LCD TV: \$400/Year
Note: PLASMA 2x LCD energy
Note: TVs use over 5% of all energy in USA

Your Bathroom



- 30 min/day Hot Hair Dryer: \$150/year
Tip: Dry hair on cool

- Vanity lamps: 30 min/day \$200/year



Your Study/Home Office



- 24 hours/day Computer/Monitor (w/ standby): \$200/Year
 - GE Saved \$6.5 Million/Year just by changing settings on their computers
 - Myth: Constant Start/Shutting off the computer will use more energy
- Phantom Plug Loads: \$90/year
Note: American spend over \$2 billion in energy annually on Phantom energy

Your Kitchen



In 2007 Americans saved \$16 billion in energy by switching to energy star and avoided greenhouse emissions of an equivalent 27 million cars

- 30 min/day Microwave/Toaster: \$60/Year
- 24 hours/day Refrigerator: \$600/Year
- 1 hour/day Heater Dishwasher: \$300/Year
 - Non-Heated Dishwasher: \$100/Year
- 2 hours/day Coffee Pot: \$170/Year
- 1 hour/day Range: \$100/Year



Your Lawn

- Leaks

Note: Average home loses 90 gallons of water per day on leaks = \$130/year

- Grass

Note: Americans use 7 billion gallons of water per day but 50% is lost due to evaporation!

Tip: Water early morning or late evening



Your Roof



- Solar Hot Water – Thermal energy is the most efficient use of solar
 - Save \$400/year
 - Tax Credits
 - Payback around 5 Years
- Skylights
 - Save \$40/year
- Solar Attic Fans
 - Save \$30/year



Your Windows



- Energy efficient windows
 - Save \$60/Year
 - Reduce mold
 - Payback: 3 Years
- Window film
 - Save \$50/Year
 - Fade protection
 - Reduce glare/heat
 - Payback: 2 Years



Your Work



- LED Exit Signs
- Lighting Retrofits
- Mirrored Reflectors
- Efficient A/C
- Turn things off
- Recycle
- Average energy upgrade = 2 year payback!

Mahalo!



- Over 8 years of this talk and by implementing some of the measures here the average homeowner has saved **\$800/year**
 - Estimated: \$7.2M saved
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