



*Presented
by...*



Why the Concern?

Is there really an energy problem?

Even if there is ...

I am just one person!



YOU Can Make A Difference!

What you can do to make a real
impact on the energy used in
your...

workplace...



YOU Can Make A Difference!

What you can do to make a real
impact on the energy used in
your...

workplace...

and in your home



Energy in the News



Energy in the News

**U.S. Face
An Energy
Shortfall,
Bush Says**
President Seeking
Overhaul of Policy

*California Orders Blackouts
For a Second Straight Day*

550,000 Lose Power Up to 90 Minutes Each

-The Los Angeles Times

**Customers
Prepare for
Shock of
Rate Hikes**

The Los Angeles Times

**Energy Costs
Hitting Casinos
on Both
Revenue and
Expense Sides**

**Feeling the heat: With
Summer on Horizon,
Power Crisis Could
Worsen**

-The Las Vegas Review-Journal

*In Search of the
Energy Fairy*

-The Washington Post



Power CHECK

Low or
No Cost Tips
to Save Energy



...your
WORKPLACE



Calculating Your Annual Savings

Usage: Determine the number of hours of use
Determine the watts used by the electrical equipment
Divide the watts by 1000

No. of hours per week x No. of weeks = Annual hours

Annual hours x No. of watts ÷ *1000 = No. of kWh

No. of kWh x **Cost per kWh = **Savings per year**

* 1000 watts=1kWh

** Based on location



Space Heater



Just one...

No big deal,
right?



Remove Space Heater

Data:

Operation: 2000 watts of electricity (typical)

Assumptions:

Usage: mid Oct. - end of Feb.

40 hrs./week x 20 weeks = 800 hrs.

$(800 \text{ hrs.} \times 2000 \text{ watts}) \div 1000 = 1,600 \text{ kWh}$

$1,600 \text{ kWh} \times \$0.12 =$

Saves \$192.00/yr.



1 Remove Space Heaters



Lights and Equipment Left ON!



Copy room -
no one is
using it ,
but...

All lights and
equipment
are on!



Use Energy Star Copiers



Make your home more energy-efficient

Measure the energy performance of your organization

About

Find Products

Find Labeled Homes

Find Labeled Buildings

News

OPERATING COSTS FOR 1 HIGH SPEED COPIER(S)

Electricity Rate (\$/kWh): 0.070 - Discount Rate (%): 0.00

	ENERGY STAR- Labeled Unit	Non-ENERGY STAR- Labeled Unit
<u>Annual Operating Costs</u> †		
Energy consumption, kWh	1,701	1,843
Energy cost	\$119	\$129



Turn Off Lights in Copier Room

Data:

(3) 3-lamp, 2' x 4' luminaires: 34W lamps, ES magnetic ballasts,
(*309 watts total)

Assumptions:

Unoccupied 50% of time (20 hours/week, 52 wks./yr.).

20 hrs./week x 52 weeks = 1040 hrs./ year

(1040 hrs. x 309 watts) ÷ 1000 = 321.3 kWh

321.3 kWh x \$0.12 = **Saves \$38.56/yr.**

* Includes ballast losses



2 Turn Lights Off in Unoccupied Copier/Storage Rooms



Conference Rooms



**Just six
fixtures...**

**How much
can they use
use?**



Turn Off Conference Room Lights

Data:

4- lamp luminaire: 34W lamp, ES magnetic ballast (*576 watts total)

Assumptions:

Unoccupied 50% of time (20 hours/week, 50 wks./yr.).

20 hrs./week x 50 weeks = 1000 hrs.

(1000 hrs. x 576 watts) ÷ 1000 = 576 kWh

576 kWh x \$0.12 =

Saves \$69.12/yr.

* Includes ballast loss



3 Turn off Lights When Leaving Conference Room



Windows, Lights, Monitors



**Shades are
closed...**

**Lights and
monitor are
on...**

**No one is
there!**



Use Available Daylighting

Data:

(3) 3-lamp, 2' x 4' luminaires: 34W lamps, ES magnetic ballasts
(*309 watts total)

Assumptions:

Daylighting available 70% of time (28 hrs./wk., 50 wks/yr.)

28 hrs./week x 50 weeks = 1400 hrs./yr.

(1400 hrs. x 309 watts) ÷ 1000 = 432.6 kWh

432.6 kWh x \$0.12 = **Saves \$ 51.92 /yr.**

* Includes ballast losses



Activate Computer Standby Mode

Data:

Full-on computer mode uses 400 watts. Standby uses 45 watts.

Assumptions:

Standby mode is used 50% of time (20 hrs./wk, 50 wks./yr.)

20 hrs./week x 50 weeks = 1000 hrs./yr.

(1000 hrs. x 355 watts) ÷ 1000 = 355 kWh

355 kWh x \$0.12 = **Saves \$ 42.60 /yr.**

* Includes ballast losses



**# 4 Use Available
Daylighting**

**# 5 Activate Computer
Standby Mode**



Excess Lighting in Training Room



**Turn Lights off when
room is unoccupied**

**Lights at full level-
one person using
computer...**

**Reduce lighting
by 50% for computer
usage**



Turn Lights Off When Unoccupied

Data:

(9) 4-lamp, 2' x 4' luminaires: 34W lamps, ES magnetic ballasts, (*1296 watts total). Dual switching.

Assumptions:

Unoccupied 20% of time (8 hrs. wk, 52 wks./yr.).

$8 \text{ hrs./week} \times 52 \text{ weeks} = 416 \text{ hrs./yr.}$

$(416 \text{ hrs.} \times 1296 \text{ watts}) \div 1000 = 539.1 \text{ kWh}$

$539.1 \text{ kWh} \times \$0.12 = \$ 34.70 \text{ savings/yr.}$

Continue...

* Includes ballast losses



Reduce Lighting for Computer Work

Data:

(9) 4-lamp, 2' x 4' luminaires: 34W lamps, ES magnetic ballasts, (*1296 watts total). Dual switching.

Assumptions:

Lighting reduced by 50% via dual switching (648 watts), ½ of occupied time (16 hrs., 52 weeks/yr.).

$$16 \text{ hrs./week} \times 52 \text{ weeks} = 832 \text{ hrs./yr.}$$

$$(832 \text{ hrs.} \times 648 \text{ watts}) \div 1000 = 539.1 \text{ kWh}$$

$$539.1 \text{ kWh} \times \$0.12 = \$ 34.70 \text{ savings/yr.}$$

Continue...

* Includes ballast losses



Savings for Both Measures

Turn lights off when unoccupied	+	\$ 64.70
Reduce light for computer work		<u>\$ 64.70</u>

Saves \$ 129.40 /yr.



**# 6 Turn Lights Off When
Space is Unoccupied**

**# 7 Reduce Light for
Computer Work**



Workplace Savings Summary

Facility: 201,476 sq. ft.

250 Space Heaters	\$ 192.00	\$ 48,000.00
25 Copier Rooms	\$ 38.56	\$ 964.00
200 Offices with Daylighting	\$ 51.92	\$ 10,384.00
500 *Computers & Monitors	\$ 42.60	\$ 21,300.11
1 Training Room	\$ 129.40	\$ 129.40
7 Conference Rooms	\$ 69.12	\$ 483.84

\$ 81,261.24
Per Yr. Savings

* Energy Star



Lots of money saved:

What it really means is:

Energy Savings of about 8% of the total electrical bill are possible to achieve.....

And that is all from No-Cost measures that you can do in your own work space!



Power CHECK

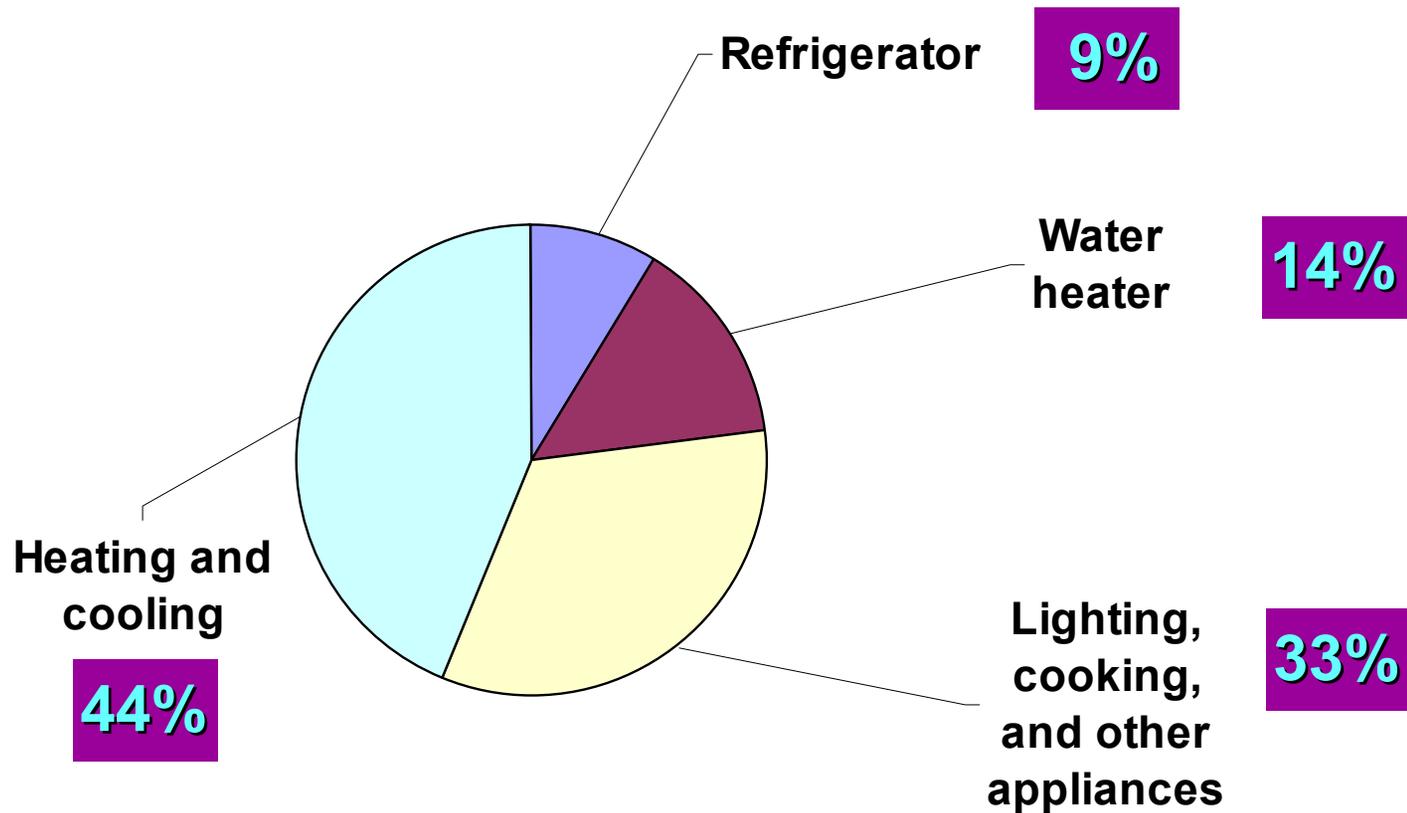
Low or
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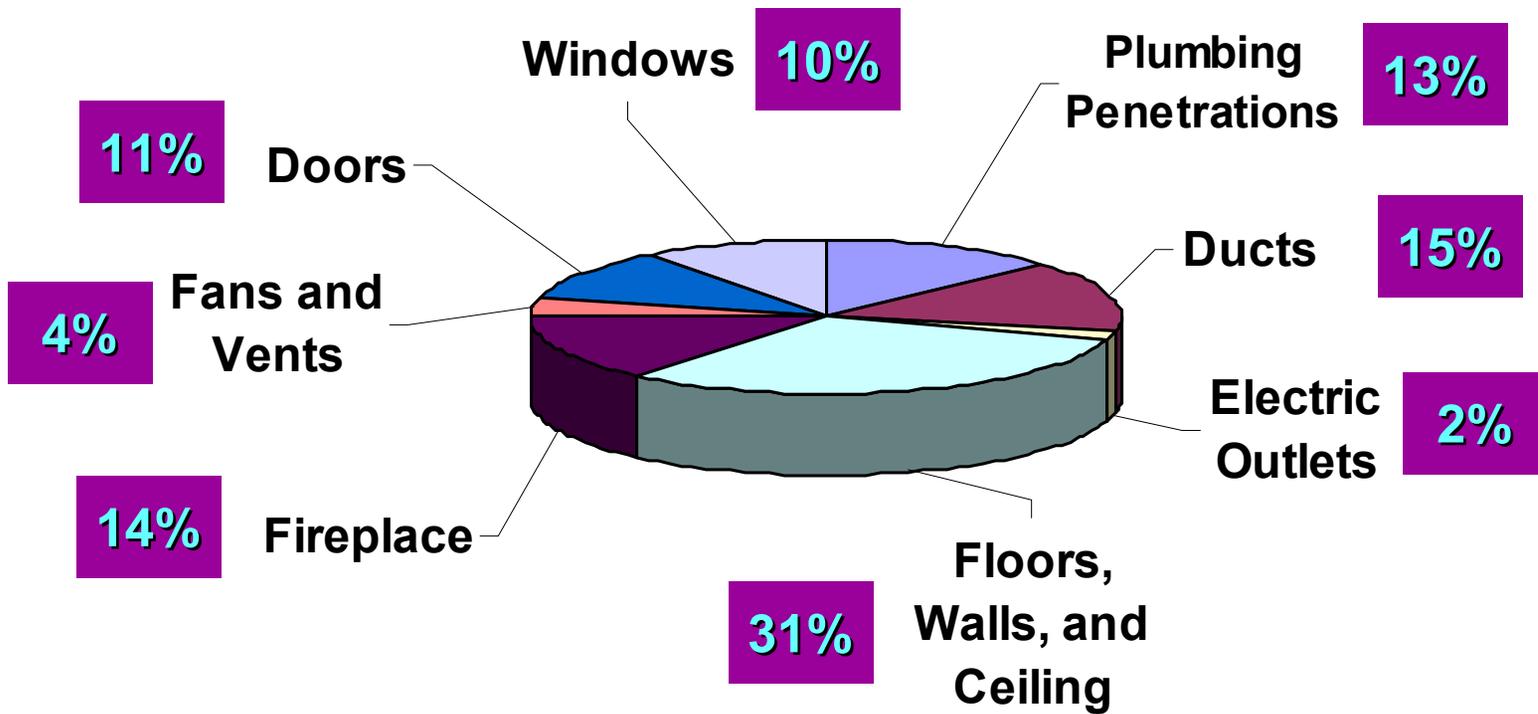
...your
Home



How We Use Energy in Our Homes



How Does the Air Escape?



Lighting



**Replace four 100
Watt
incandescents**

**... with four 25
Watt compact
fluorescents**

**Saves 6% of monthly
energy usage**



1 Replace Incandescent lamps with Compact Fluorescent Where Appropriate



Compact Fluorescent Torchieres



Available in
Compact
Fluorescent
quads, flat
lamps &
circlines

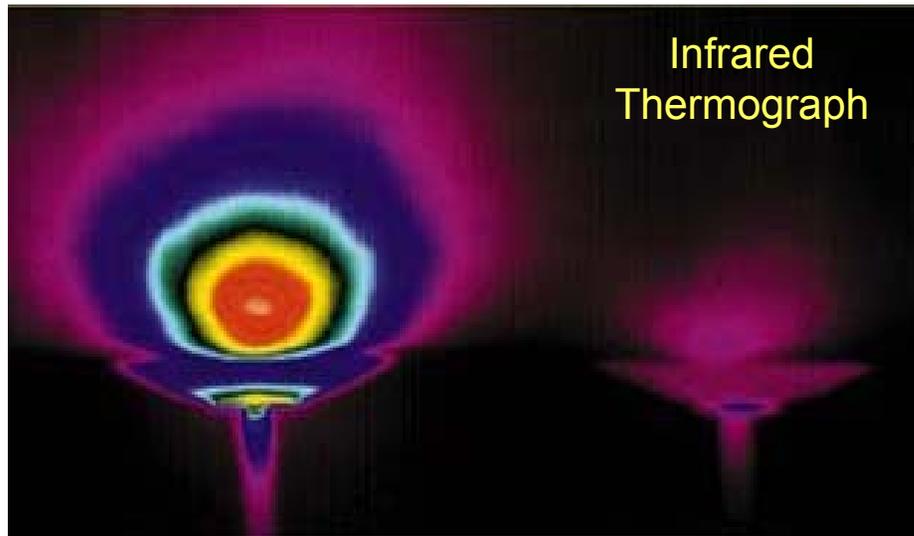
Saves 2% of monthly
energy usage



Compact Fluorescent Torchieres

300W
Halogen

36W
Compact
Fluorescent



**2/3 energy
wasted in heat!**



2 Use Compact Fluorescent Torchieres



Heating



Programmable thermostats save energy if they are correctly adjusted

Turn settings down to 68° F daytime and 63 °F at night

Saves 5% of heating costs for each degree



**# 3 Use a Programmable
Thermostat**

4 Lower the heat setting



Windows



Install window coverings to insulate rooms from cold air in the winter and hot air in the summer.

Saves 5% of monthly energy usage



5 Use Window Coverings



Fans



**Use a room fan
instead of air
conditioning**



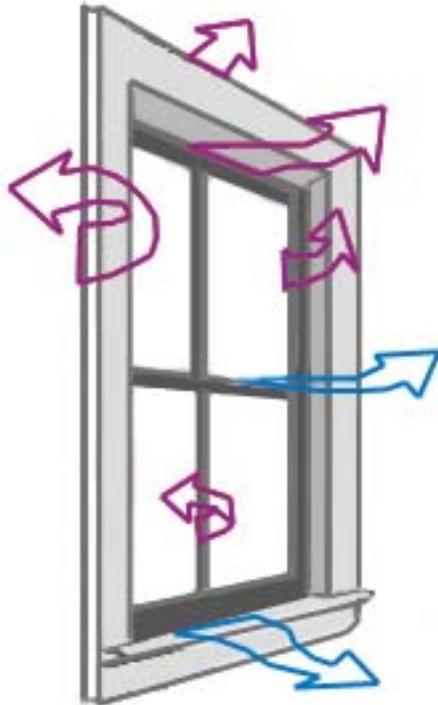
**Saves 5% of monthly
energy usage**



6 Use Room Fans



Windows



Caulk between non-moving parts of window panes, trim and sill

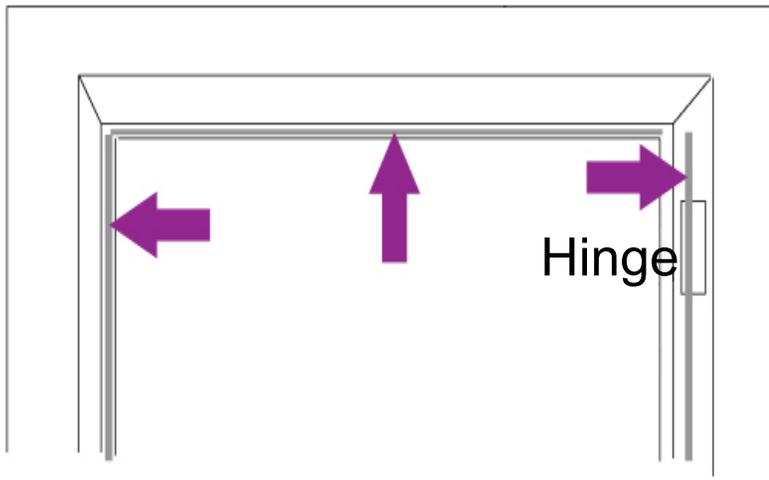
Weatherstrip between moving parts of window and sash

Saves 5% of monthly energy usage



Exterior Doors

**Weatherstripping applied
to door jambs**



**Use the right thickness
so you can still close the
door**

**Saves 5% of monthly
energy usage**



7 Insulate Windows & Doors



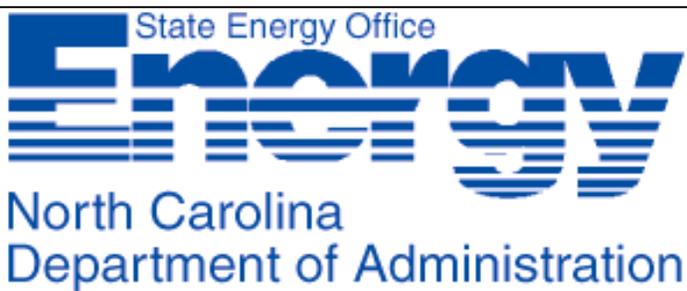


YOU have the Power!

Let the people in NC government

“Lead By Example”

Save Energy in State Buildings



www.energync.net

