

Energy Wise

Working Together for Energy Efficiency

Ameren

Association of Illinois Electric
Cooperatives

ComEd

Energy Education Council

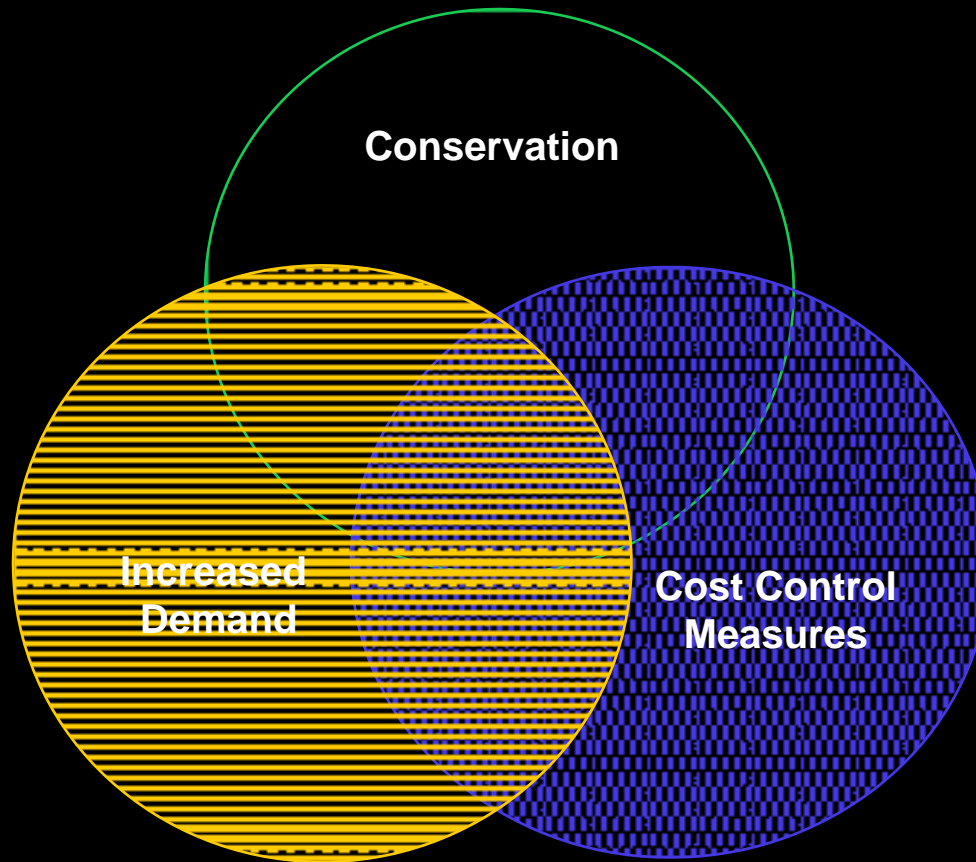
University of Illinois

Illinois Municipal Electric Agency



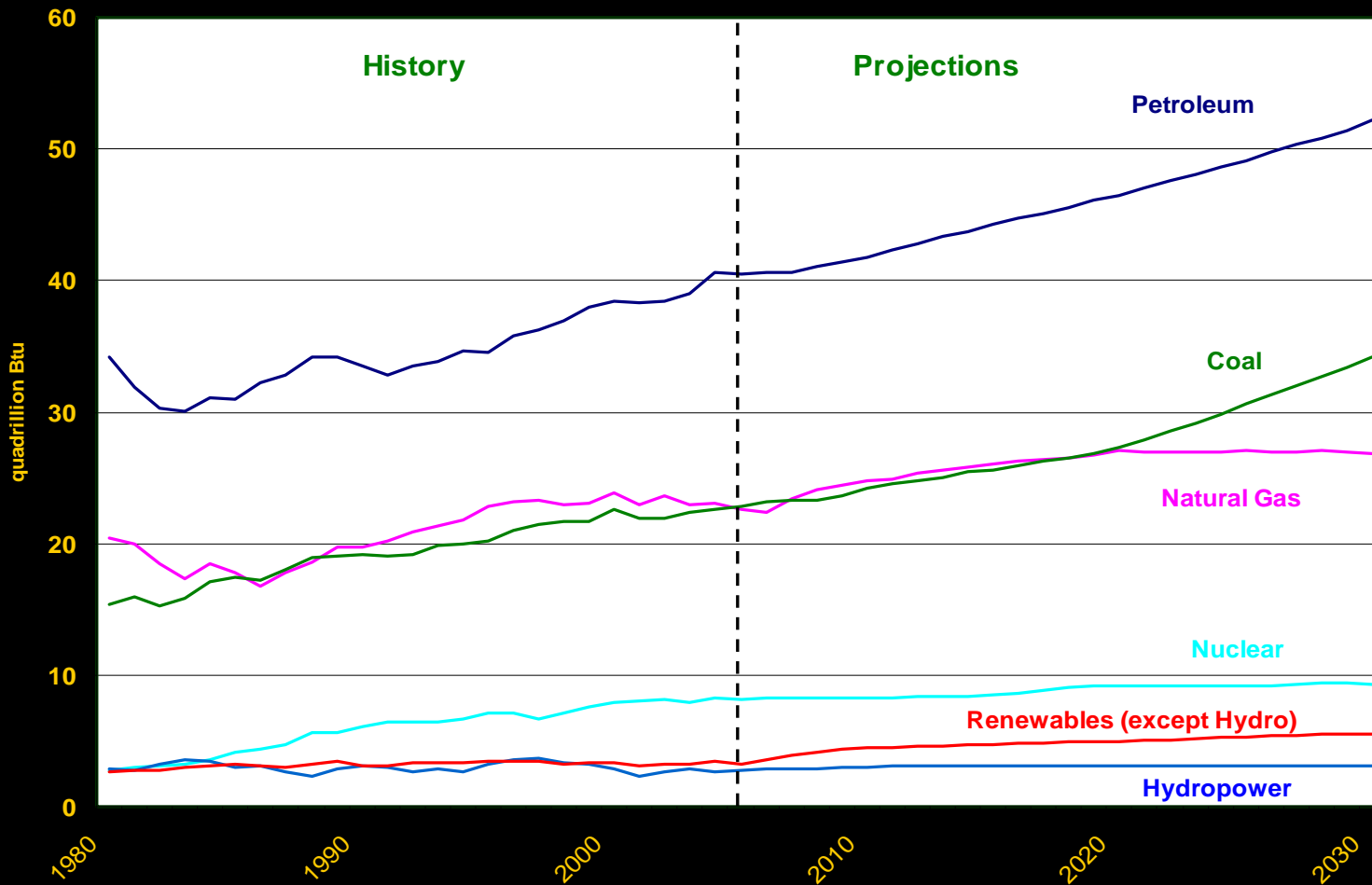
Created by the: EEC
Consumer Efficiency
Education Task Force

Why Energy Efficiency?



Energy efficiency is the quickest, cheapest, cleanest way to extend our world's energy supplies.

World & National Energy Picture



Source:
eia/doe

Understanding Your Bill



- Customer charge
 - ◆ Covers some costs of providing service
- Energy charge
 - ◆ Reflects electricity used during billing period
 - ◆ Rate set by ICC
- Public utility tax
- Regulatory tax
- Kilowatt hour
 - ◆ One thousand watts used for one hour
- Therm
 - ◆ One hundred cubic feet of natural gas

Where Do We Start?

- “Silver Bullet?”
- Assessment
- Efficiency via Management
 - ◆ A series of several small improvements
- Efficiency via Investment
 - ◆ A few major improvements



Assessment



- What is your energy use now?
- Current management strategies
- What is the condition of your structure?
 - ◆ Old or new windows?
 - ◆ Adequate insulation?
 - ◆ Doors?
- What changes will have an impact on energy use?

Tools To Assess Your Energy Use

- Energy audit
 - ◆ Professional
 - ◆ Do-it-yourself audit
- Websites and other tools can help this:
 - ◆ Energy Star - energystar.gov
 - ◆ Home Energy Saver - <http://hes.lbl.gov/>



Energy Audit

Before

After

Home Energy Saver Making It Happen

About HES What's New Energy Librarian Glossary FAQ Search Help

General Info Heating & Cooling Water Heating Major Appliances Small Appliances Lighting

Energy Bill for Houses in Savoy, Illinois

Based on the zip code you entered, here is a comparison of the energy costs (in \$/year) of an average home and an energy-efficient home in your area.

Category	Average House (\$/year)	Efficient House (\$/year)
Heating	~\$1000	~\$100
Cooling	~\$200	~\$50
Water Heating	~\$150	~\$50
Major Appliances	~\$100	~\$50
Lighting	~\$50	~\$50
Small Appliances	~\$50	~\$50
Total	\$1515	\$350

Potential Savings: \$1165

See greenhouse gas emissions and energy consumption | What should I do next?

Start Calculation

1. Which city has the most similar climate to your house?

2. Year your house was built:

3. What is the conditioned floor area: sq ft

[Home Energy Saver –http://hes.lbl.gov/](http://hes.lbl.gov/)

Major Energy Use Categories

- Heating
- Cooling
- Water heating
- Major appliances
- Lighting
- Small appliances



Putting an Audit Analysis to Work

- Management
 - ◆ Free or Low Cost Strategies
 - Lifestyle changes
 - Maintenance
- Investment
 - ◆ Cost Recovery Improvements
 - Insulation, reducing air infiltration
 - Energy efficient appliances



Exhaust Fan Timer

Efficiency Via Management

Free or Low Cost Strategies



Programmable Thermostat

- Lifestyle changes
 - ◆ Controls
 - ◆ Doors & Windows
 - ◆ Ventilation
 - ◆ Dress Appropriately
- Maintenance

Lifestyle Changes

- Set thermostat
 - ◆ 68° when heating on cold days
 - ◆ 78° when cooling on hot days
- Close doors and vents to unused rooms
- Wear appropriate clothing inside
- Adjust thermostat
 - ◆ When you're gone more than 4 hrs.
 - ◆ At night when sleeping



Maintenance

- Change heater/ac filter
 - ◆ Keep lint out of the heat exchange unit.
- Caulk around windows/doors
- Replace worn or missing door and window sills.
- Foam gaskets in electrical outlets



Efficiency via Investment

- Insulation
- Air infiltration
- Energy efficient appliances

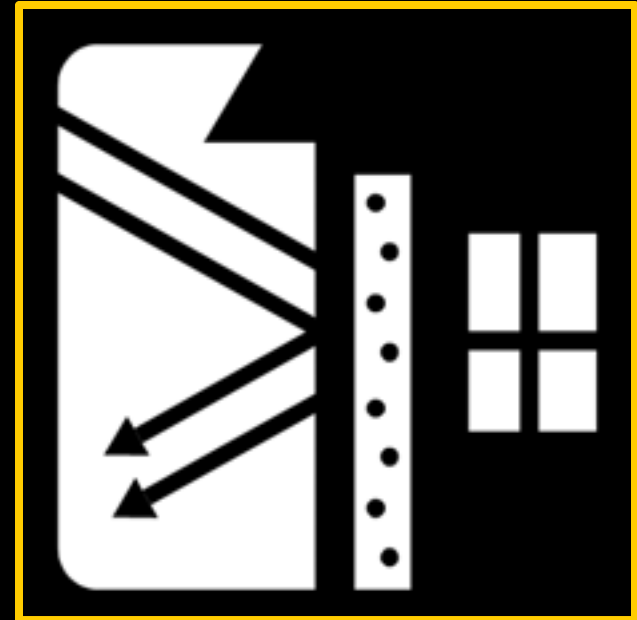
energystar.gov



Use a cohesive, consistent
sealing plan

Insulation

- Proper R values
- Attic Insulation
- Window/door U value
- Attention to details



General information and resources: www.eere.energy.gov/consumer
Zip Code Insulation program: www.ornl.gov/~roofs/Zip/ZipHome.html

Ceiling/Attic

- Attic insulation
 - ◆ Can be high impact area
- Attic access points
- Reduce attic air leaks
 - ◆ Electrical wiring
 - ◆ Recessed lighting
 - ◆ Plumbing
 - ◆ Heating and AC ducts



Heating & Cooling



A well sealed home
may consume 1/3 less
heating & cooling
energy than
“conventional”
construction (*DOE*).

Update Units

- Heating
- Air Conditioners
- Water heating
- Lighting
- Appliances



Water Heating

- Reduce the temperature
 - ◆ 120 degrees F
- Insulate the water heater tank and pipes
- Conserve water
 - ◆ Fix leaks
 - ◆ Low flow aerators
 - ◆ Water saving showerheads
- Replacement with high efficiency
 - ◆ Size for your family and house
- Consider point-of-use heaters



Lighting

- Compact fluorescent lamps
 - ◆ Compare bulbs on basis of watts, lumens, & lamp life
- Dimmers
- Motion detectors in high traffic areas
- Consider lighting needs during remodeling
- Look for the ENERGY STAR logo on lamp fixtures



Are You Too Plugged In?

- Turn off idle appliances/equipment
 - ◆ TV/VCR's
 - ◆ DVD/CD's
 - ◆ Computers
 - ◆ Cordless Phones
 - ◆ Extra refrigerator
 - ◆ Hot Tub



General Efficiency Tips

- Turn down the temp of your water heater to 120 degrees
- Clean/replace filters
 - ◆ Furnace
 - ◆ air-conditioner
 - ◆ heat pump
- Buy low-flow showerheads, faucet aerators, and compact fluorescent bulbs.
- If fiberglass water heater – use water heater blanket
- Unplug when not in use



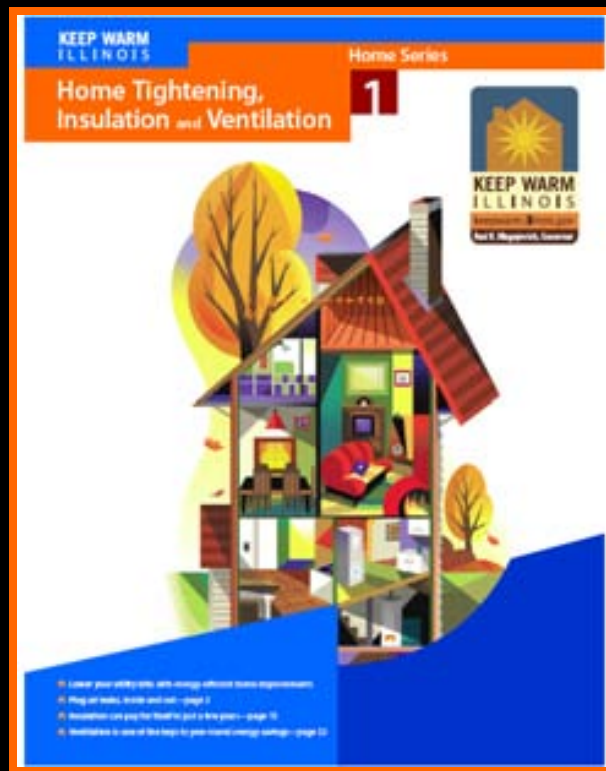
Appliances

- Consider replacing older appliances with more efficient units
- Clean coils and fans
- Look for ENERGY STAR logo on new appliance purchases
- Compare energy usage
- Select the appropriate size for *your* use



Air Infiltration

- Air infiltration
 - ◆ Consider the entire envelope
 - ◆ Door/windows
 - ◆ Electrical outlets
 - ◆ Plumbing penetrations
 - ◆ Basement walls
 - ◆ Sill plate and band joist ductwork
- Ventilation



Indoor Air Quality & Energy Conservation

- Moisture
- Mold
- Radon
- Carbon Monoxide



Tax Incentives

Energy Efficiency:
Improving your energy use and your tax bill.



- The Alliance to Save Energy's [New Energy-Efficiency Home](#)

EPACT 05 – Tax Credits

- Legislation effective 2005
- Consumers eligible for up to \$500 of tax credits per home.
- ***Eligible measures***
 - ◆ Adding insulation to walls, ceilings, other parts of building
 - ◆ Replacing windows, skylights & external doors
 - ◆ Sealing cracks in building shell & ducts to reduce infiltration and heat loss.
 - ◆ Pigmented metal roofs



Source: energytaxincentives.org

Energy Star

Check out helpful resources:

Source: energystar.gov



INVESTING IN OUR FUTURE
ENERGY STAR® and Other Voluntary Programs
2004 Annual Report

ENERGY STAR

PROTECT OUR ENVIRONMENT FOR FUTURE GENERATIONS
ENERGY STAR® is a government-backed program helping to protect the environment through superior energy efficiency.

ENERGY STAR

PRODUCTS
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[ENERGY STAR Partner List](#)

EPA
United States Environmental Protection Agency

EEEC
Energy Education Council

Keep Warm Illinois



The image shows a screenshot of the Keep Warm Illinois website. The website header includes the logo and the text "KEEP WARM ILLINOIS" and "Governor Rod Blagojevich CONSERVE ENERGY. SAVE MONEY. KEEP WARM." Below the header, there are navigation links: "keepwarm.illinois.gov", "Tips to Save Money & Energy", "Special Feature: Weatherization Video", "State Energy Assistance Programs", and "Find a Warming Center". The main content area is titled "Tips to Save Money & Energy" and lists several tips: "Check out the tips below to find out ways that you can help reduce utility bills!", "No-Cost Ways to Save Energy & Money", "Low-Cost Ways to Save Energy & Money", "Comprehensive Ways to Save Energy This Winter", "Conduct an Energy Audit of Your Home", and "Tips for Saving Energy and Keeping Warm brochure". Below the tips, there is a section for "factsheets" and a Spanish translation of the same information.

KEEP WARM ILLINOIS
Governor Rod Blagojevich
CONSERVE ENERGY. SAVE MONEY.
KEEP WARM

keepwarm.illinois.gov
HOTLINE: (877) 411-WARM 5276

Tips to Save Money & Energy

Check out the **tips** below to find out ways that you can help reduce utility bills!

- [No-Cost Ways to Save Energy & Money](#)
- [Low-Cost Ways to Save Energy & Money](#)
- [Comprehensive Ways to Save Energy This Winter](#)
- [Conduct an Energy Audit of Your Home](#)
- [Tips for Saving Energy and Keeping Warm brochure](#)

The **factsheets** below provide do it yourself steps to help you improve your home's energy efficiency and reduce your utility bills.

La siguiente **información** le proporciona pasos que puede seguir para mejorar el rendimiento energético en su hogar



The image shows the cover of a brochure titled "Home Tightening, Insulation and Ventilation" from the "Home Series" of "KEEP WARM ILLINOIS". The cover features a colorful illustration of a house with a cutaway view showing the interior rooms. The text on the cover includes "KEEP WARM ILLINOIS Home Series 1 Home Tightening, Insulation and Ventilation" and "KEEP WARM ILLINOIS Home Series 1". At the bottom, there are three numbered tips: "1. Lower your utility bills with energy efficient home improvements", "2. Plug air leaks, insulate and seal... page 2", and "3. Weatherize can pay for itself in a few years... page 10".

KEEP WARM ILLINOIS
Home Series
1
Home Tightening, Insulation and Ventilation
KEEP WARM ILLINOIS
Home Series 1
1. Lower your utility bills with energy efficient home improvements
2. Plug air leaks, insulate and seal... page 2
3. Weatherize can pay for itself in a few years... page 10

Source: keepwarm.illinois.gov



Efficient Windows Collaborative

YOUR GATEWAY TO INFORMATION ON HOW TO CHOOSE ENERGY-EFFICIENT WINDOWS

What's New	Membership	Resources	Publications	Audience	FAQ	Contact Us	Search
WINDOW SELECTION TOOL		WINDOW TECHNOLOGIES			BENEFITS		

Efficient Windows Collaborative (EWC) members have made a commitment to manufacture and promote energy-efficient windows.

Take a look to learn more!

The Efficient Windows Collaborative is excited to announce the launch of a new database of efficiency initiatives including tax incentives, building code changes and legislative initiatives. [See what's going on in your state?](#)

This site provides unbiased information on the benefits of energy-efficient windows, descriptions of how they work, and recommendations for their selection and use.

This site is sponsored by the EWC with support from the U.S. Department of Energy's Windows and Glazings Program and the participation of industry members.



[What's New](#) | [Membership](#) | [Resources](#) | [Publications](#) | [Audience](#) | [FAQ](#) | [Contact Us](#) | [Search](#)
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This site was developed jointly by the University of Minnesota, Alliance to Save Energy, and Lawrence Berkeley National Laboratory.

Source: efficientwindows.org



Address <http://payments.acca.org/ContractorLocator/>



Air Conditioning Contractors of America

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Contractor-friendly HVAC





Still accurate.
Still powerful.

Contractor Locator

Search for zip

Find all contractors

Type of Work Performed

<input checked="" type="checkbox"/> Air Conditioning	<input checked="" type="checkbox"/> Heating	<input type="checkbox"/> Refrigeration
<input type="checkbox"/> Controls	<input type="checkbox"/> Insulation	<input type="checkbox"/> Sheet Metal
<input type="checkbox"/> Duct Cleaning	<input type="checkbox"/> Indoor Air Quality	<input type="checkbox"/> Ventilation
<input type="checkbox"/> Electrical	<input type="checkbox"/> Plumbing & Piping	
<input type="checkbox"/> Energy Management		

Type of Markets Served

<input type="checkbox"/> Design / Build	<input type="checkbox"/> Institutional	<input type="checkbox"/> Commercial / Industrial
<input checked="" type="checkbox"/> Residential	<input type="checkbox"/> Government	<input type="checkbox"/> Industrial
<input type="checkbox"/> Light Commercial		

Source: acca.org



RESNET

Residential Energy Services Network

2006 Mortgage Industry National Home Energy Rating Systems Standards



Source: natresnet.org

Resources

- Dept of Energy- Energy Efficiency and Renewable energy- eere.energy.gov/consumer
- Illinois Electric Council – iecouncil.org
- Keep Warm Illinois - keepwarm.illinois.gov
- ENERGY STAR - energystar.gov
- Home Energy Saver – hes.lbl.gov

More Resources

- Air Conditioner Contractors of America
acca.org
- Efficient Windows Collaborative
efficientwindows.org
- Residential Energy Services Network
(RESNET) - natresnet.org

BE ENERGY WISE

- YOU can make a difference
- Management & Lifestyle choices
- Investment & Improvement
- Working together, we can all become more energy efficient.

Your Local Utility can Help

- Contact your local utility for more information about energy efficiency.

Special Thanks to Those Who Gave Their Time to ENERGY WISE



[Ameren](#)



[Illinois Municipal Electric Agency](#)



[Energy Education Council](#)



[ComEd](#)



[Sangamon County Zoning and Building Safety](#)



[Association of Illinois Electric Cooperatives](#)



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of Illinois
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Created By: The EEC Consumer Efficiency Education Task Force
