

Easy on Energy: Tips for Conserving

Shirley Niemeyer, Extension Specialist Housing and Environment

Goal:

Save energy resources and dollars, and reduce emissions by using energy conservation measures and energy efficient products in the home.

Objectives:

Participants will. . .

- Identify five of ten energy saving measures.
- Choose two of the ten energy saving measures to use in your own home.

Program Resources:

- *Easy on Energy: Tips for Conserving* — Leader Guide, HE Form 564
- *Easy on Energy: Tips for Conserving* — Participant Manual, HE Form 565
- *Easy on Energy: Tips for Conserving* — Power Point available for use as flip chart or for presentation Find it on line at: <http://communityprograms.unl.edu>.

Prior to the Meeting:

Review the activities and resources available. If visuals are used, assemble the needed supplies. You may want to select six of the ten tips to focus on in more detail.

Alternate Activities:

- Ask a representative from a local utility company or a weatherization person from a local community action office to speak about conserving energy in homes.
- Arrange a tour to a lumberyard or home store. Examine the many different types of energy-saving products available. Ask about products such as caulks, weatherstripping, insulation, mastic, foil duct tape, fluorescent lighting, high performance windows, ENERGY STAR labeled products, etc.
- Explore some of the websites listed at the end of this guide or demonstrate the interactive sites.

Introduction:

Ask the participants: What have you done in your own home within the last five years to save energy?

Discussion Questions:

Ask the participants to review the *U.S. Homes Are Large Users of Energy* in their handout.

Discuss:

1. What percent of the total U.S. energy consumption does home use represent? How much of the world's energy does the U.S. use?
2. Homes create about what percentage of the total U.S. carbon dioxide emissions contributing to global warming?

After the discussion, focus on the objectives of the lesson, and proceed with the lesson and activities.

10 Energy Saving Tips for the Home

1. **Dial Down/Dial Up Your Thermostat.**
2. **Select Energy Efficient Products:** Show examples of the labels from your own appliances or electronics. *Explain:* The ENERGY STAR label means the product meets the energy efficiency guidelines set by the U.S. EPA and U.S. Department of Energy for that product line. The EnergyGuide label on appliances indicates the approximate annual operating costs for each model and a scale for use in comparing models.
3. **Seal Air Duct Seams:** *Explain* that typical air ducts leak about 15% to 20% of the heated or cooled air into unconditioned (unheated or non-cooled) spaces such as crawlspaces, attics, walls, basements, and garages.
4. **Select Energy Efficient Windows:** Ask if anyone is planning to replace windows or has a problem with existing windows. *Explain* that windows in cold climates (Nebraska) account for about 25 percent of an average home's heating load.



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5. **Caulk and Weatherstrip:** *Explain* that about 1/3 of the air that infiltrates homes comes in or exits through holes and cracks in ceilings, walls, floors and foundations. Inspect for cracks and holes yearly and especially look for leaks into the attic.
6. **Increase Heating Efficiency:** Ask if anyone has recently replaced or may need to replace a heating or cooling system? Correct sizing of heating and cooling units for the space is essential.
 - Have systems serviced annually and maintain clean filter systems as specified. Maintenance is critical for efficiency.
 - When replacing an older heating system, look for the ENERGY STAR logo and Energy Guide labels and compare other rating systems.
7. **Increase Cooling Efficiency:**
 - Compare cooling efficiency ratings by using the Energy Efficiency Ratio (EER) and the Seasonal Energy Efficiency Ratio (SEER). Select systems with the higher ratings.
 - Place window air conditioners on the north side or in shaded areas. Insulate or store them in winter.
8. **Check Insulation:**
 - Check that the insulation is adequate in your home.
 - In Nebraska, the recommended value for attics is R-49; walls, R-18; floors, R-25; and slab edge, R-8.
9. **Switch Out Light Bulbs:** Show an example of a compact screw-in compact fluorescent light bulb or use a magazine photo. Replacing one traditional incandescent bulb with an ENERGY STAR compact fluorescent will save about \$25 per bulb in energy costs over its lifetime. Although the bulbs may cost more up front, they save over the life of the bulb.
10. **When “Off” is “On”:** Show a remote control or an item that has a clock, lighting or instant on features. Ask what powers the clock or instant-on feature when the item is turned “off.” Explain that household appliances, TVs, and electronics continue to use energy when turned off if they power clocks, remote controls, and other features. About 40 percent of the electricity used to power home electronics is used while the products are turned “off” but continue to power features.

Conclusion:

Ask the participants to choose and to write down two things they will do to reduce energy use and costs in their own homes. Ask them to share their plans.

Ask the participants to fill out the evaluation and return it to the county extension educator or to: S. Niemeyer, Extension Specialist, Housing & Environment, UNL Extension, P.O. Box 830804, Room 205 HE Bldg. Lincoln NE 68583-0804.

Review:

- Manage heat loss and gain in homes through caulking, weatherstripping, insulating, and sealing air ducts.
- Select high performance windows to save energy and dollars.
- Select ENERGY STAR qualified appliances, heating and cooling equipment, lighting, and electronics to save energy and dollars.
- Dial thermostats down in winter and up in summer.
- Shut off appliances or equipment that are not being used, and power electronics completely down if possible.

Websites as Resources:

- *Home Energy Saver Website* Compute your carbon dioxide emissions and make decisions about saving energy. www.homeenergysaver.lbl.gov/
- U.S. Department of Energy (DOE) & U.S. EPA Animated Web Site: www.energystar.gov/index.cfm?c=products.es_at_home
- Energy Savers: Tips on Saving Energy and Money at Home: www1.eere.energy.gov/consumer/tips/
- ENERGY STAR: www.energystar.gov
- U.S. Department of Energy www.eren.doe.gov Click on the subject index.
- For children: www.energyhog.org/childrens.htm and <http://www.eia.doe.gov/kids/>

Other Resources:

Geothermal Heat Pumps—Department of Energy:

http://www.eren.doe.gov/RE/geo_heat_pumps.html

Consumer Information (800) 342-5468

www.eere.energy.gov/consumer

Energy Star® (888) 782-7937 www.energystar.gov

Energy Efficiency and Renewable Energy Clearinghouse

1-800-363-3732 Fax: 1-703-893-0400 http://www1.eere.energy.gov/consumer/tips/pdfs/energy_savers.pdf

Energy Fact Sheets: www.eere.energy.gov/office_eerefactsheets.html

U.S. EPA ENERGY STAR Programs: www.energystar.gov
Save Money & Save Energy—Consumer Federation of America: www.buyenergyefficient.org

For more information, consult the University of Nebraska extension circular EC 02-458-S, Home*A*Syst Heating & Cooling Systems: Saving Energy and Keeping Safe and the companion worksheet, EC 02-459-S, and EC02-463 Energy Savers: Tips on Saving Energy & Money at Home available from a local Extension office.

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Easy on Energy: Tips for Conserving Evaluation Form

Return this portion of the form right after the meeting.

Please return this evaluation to the extension educator or to:

Shirley Niemeyer, Ph.D.
Extension Specialist Housing and Environment
University of Nebraska–Lincoln
P.O. Box 830804
Lincoln NE 68583-0804
email: sniemeyer2@unl.edu

Thank You!

To what extent did your knowledge about the following topics increase?

Energy measures:	No increase	Some increase	Considerable	Greatly increased
Adjusting the thermostat:	1	2	3	4
Buying ENERGY STAR products	1	2	3	4
Using Mastic or foil tape to seal duct seams	1	2	3	4
Buying windows — comparing	1	2	3	4
Heating efficiency comparing products	1	2	3	4
Cooling efficiency — comparing products	1	2	3	4
Caulking and weatherstripping	1	2	3	4
Insulation	1	2	3	4
Lighting to save energy	1	2	3	4
Turning appliances completely off	1	2	3	4

2. Please list 5 new things or ideas you learned as a result of this lesson:

3. Please list two energy saving measures that you plan to do:

CUT HERE TO REMOVE

Return this portion of the form six months after the lesson. What things were changed by the participants and/or by you?

Please list two energy saving measures (or more) that was done as a result of the lesson:

1. _____

2. _____

Please return this evaluation six months after the lesson to the extension educator or to:

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Thank You!