E-Conservation Home Energy Management Series

No-Cost and Low-Cost - Program Curriculum

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| **Program** | **Home Energy Self Assessment** |
| Segment Time |  |
| Purpose | To provide information about how energy is used in the home and ways to reduce energy consumption by changing behaviors, purchasing decisions, and making low-cost changes to a residence. |
| Audience | General consumer audience |
| Learning Objectives | Participants will accomplish the following:* Knowledge: Identify ways to reduce home energy consumption through no-cost and low-cost changes.
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|  | * Comprehension: Recognize specific causes of home energy loss and understand the solution needed to improve energy conservation.
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|  | * Application: Change behaviors, resulting in energy/money savings. Reduce energy consumption by identifying energy conservation needs and making low-cost changes.
 |
| Lesson Materials | * Lesson guide
* PowerPoint with speaker notes
 |
|  | * Handouts
 |
|  | * Pre/Post tests and evaluation forms
 |
|  | * Sign-in sheet, pens
 |
|  | * Energy kits (when ordered/available)
 |
|  | * Display (if available)
 |
| Participant Materials | * Pre/Post tests
* Evaluation
 |
|  | * Pen or pencil
 |
|  | * Fact sheet with references
 |
|  | * Energy kit (1 per household)
 |
| Equipment | * Laptop with PowerPoint and websites loaded
 |
|  | * Internet connection
 |
|  | * LCD projector
 |
|  | * Speakers for computer (if showing video)
 |
|  | * Extension cord and power strip
 |
|  | * Microphone (if you have a large group)
 |
|  | * Energy kits
 |
|  | * Displays (if available)
 |
| Potential Partners | * Local utility company representative
* City or County Sustainability Specialist
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|  | * Certified Home Energy Assessor
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|  | * Energy Star homebuilder
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| Marketing Materials | * Press release
* Workshop announcement
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| Resources | * HEMS No cost low cost handout for powerpoint.pdf
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| **Optional Student Materials and Resources:**(Select most appropriate materials for your audience)E-Conservation **-** HEMS No cost low cost handout for powerpoint.pdfWindows and doors:eXtension Resources: Find the articles below by clicking on them or going to: [http://www.extension.org/category/energy\_efficient\_existing\_homes:\_windows\_and\_doors](http://www.extension.org/category/energy_efficient_existing_homes%3A_windows_and_doors) * [Selecting Energy Efficient Windows for Homes](http://www.extension.org/pages/33334/selecting-energy-efficient-windows-for-homes)
* [Measures of Window Performance for Energy Efficiency](http://www.extension.org/pages/58573/measures-of-window-performance-for-energy-efficiency)
* [New Window Technology for Energy Savings](http://www.extension.org/pages/58546/new-window-technology-for-energy-savings)

HVAC:eXtension Resources: Find the articles below by clicking on them or going to: [http://www.extension.org/category/energy\_efficient\_existing\_homes:\_hvac](http://www.extension.org/category/energy_efficient_existing_homes%3A_hvac) * [Duct leakage tester](http://www.extension.org/pages/25753/duct-leakage-tester)
* [Exhaust Vents for Energy Efficient New Homes](http://www.extension.org/pages/26363/exhaust-vents-for-energy-efficient-new-homes)
* [Installation of Air-to-Air Heat Exchanger](http://www.extension.org/pages/25712/installation-of-air-to-air-heat-exchanger)
* [Why is Home Ventilation a Concern](http://www.extension.org/pages/28058/why-is-home-ventilation-a-concern)
* [Home Heating Safety](http://www.extension.org/pages/28877/home-heating-safety)
* [Home Air Filter Changes and Cleaning for Energy Efficiency](http://www.extension.org/pages/28059/home-air-filter-changes-and-cleaning-for-energy-efficiency)
* [Thermostat Settings for Home Energy Conservation and Energy Savings](http://www.extension.org/pages/27955/thermostat-settings-for-home-energy-conservation-and-energy-savings)
* [Understanding Air Flow in Homes for Energy Efficiency](http://www.extension.org/pages/26407/understanding-air-flow-in-homes-for-energy-efficiency)

Sealing And Insulation:eXtension Resources: Find the articles below by clicking on them or going to: [http://www.extension.org/category/energy\_efficient\_existing\_homes:\_insulation](http://www.extension.org/category/energy_efficient_existing_homes%3A_insulation) * Low-Cost and No-Cost Actions to Save Home Energy and Money
	+ <http://www.extension.org/pages/25638/low-cost-and-no-cost-actions-to-save-home-energy-and-money>
* Questions and Answers about Caulking and Weatherstripping Your Home
	+ <http://www.extension.org/pages/25635/questions-and-answers-about-caulking-and-weatherstripping-your-home>
* Insulating Knee Walls in Homes
	+ <http://www.extension.org/pages/27324/insulating-knee-walls-in-homes>
* [Proper Installation of Home Insulation for Energy Efficiency](http://www.extension.org/pages/26276/proper-installation-of-home-insulation-for-energy-efficiency)
* [Questions and Answers about Home Insulation](http://www.extension.org/pages/25628/questions-and-answers-about-home-insulation)
* [Questions and Answers about Radiant Barriers for Energy Efficient Homes](http://www.extension.org/pages/25626/questions-and-answers-about-radiant-barriers-for-energy-efficient-homes)
* [Understanding Heat Flow in Homes for Energy Efficiency](http://www.extension.org/pages/30798/understanding-heat-flow-in-homes-for-energy-efficiency)
* [Home Insulation Systems with Good “Whole Wall” R-value](http://www.extension.org/pages/26343/home-insulation-systems-with-good-whole-wall-r-value)

Energy Star Resources:* <http://www.energystar.gov/index.cfm?c=diy.diy_locating_leaks>
* <http://www.energystar.gov/index.cfm?c=home_sealing.hm_improvement_insulation_table>

Water Conservation:E-Conservation Pinterest:* Landscaping to Save Energy Board - <http://pinterest.com/econservation/landscaping-to-save-energy/>

EPA Resources:* Water Efficient Landscaping - <http://www.epa.gov/WaterSense/docs/water-efficient_landscaping_508.pdf>
* Water Sense - <http://www.epa.gov/watersense/outdoor/landscaping_tips.html>

State of North Carolina:* Save Water NC - <http://savewaternc.org/homeindex.php>

Appliances and Electronics:* eXtension Resources: Find the articles below by clicking on them or going to: [http://www.extension.org/category/energy\_efficient\_existing\_homes:\_appliances\_and\_electronics](http://www.extension.org/category/energy_efficient_existing_homes%3A_appliances_and_electronics)
* [EnergyGuide Label](http://www.extension.org/pages/26067/energyguide-label)
* [ENERGY STAR® Rating and Home Appliances](http://www.extension.org/pages/25645/energy-star-rating-and-home-appliances)
* [Considerations for Buying Home Appliances](http://www.extension.org/pages/27066/considerations-for-buying-home-appliances)
* [How to Recycle Your Old Home Refrigerator](http://www.extension.org/pages/61151/how-to-recycle-your-old-home-refrigerator)
* [Questions and Answers about Saving Energy in the Home Laundry Area](http://www.extension.org/pages/25625/questions-and-answers-about-saving-energy-in-the-home-laundry-area)
* [Energy Efficient Home Clothes Dryers](http://www.extension.org/pages/25766/energy-efficient-home-clothes-dryers)
* [Household Laundry Tips for Saving Money and Home Energy](http://www.extension.org/pages/26856/household-laundry-tips-for-saving-money-and-home-energy)
* [Basic Information to Consider for Home Water Heating](http://www.extension.org/pages/28782/basic-information-to-consider-for-home-water-heating)
* WxTV Video: <http://wxtvonline.org/2011/09/baseload/>

 Lighting:eXtension Resources: Find the articles below by clicking on them or going to:* [http://www.extension.org/category/energy\_efficient\_existing\_homes:\_lighting](http://www.extension.org/category/energy_efficient_existing_homes%3A_lighting)
* [Passive Solar Energy for Homes: Daylighting](http://www.extension.org/pages/29081/passive-solar-energy-for-homes%3A-daylighting)
* [Lighting for Southern Homes (to save money and stay cool)](http://www.extension.org/pages/31656/lighting-for-southern-homes-to-save-money-and-stay-cool)
* [Safe Disposal of Fluorescent Lamps in Homes](http://www.extension.org/pages/28062/safe-disposal-of-fluorescent-lamps-in-homes)
* [Energy Efficient Home Lighting Using Layers of Light](http://www.extension.org/pages/29956/energy-efficient-home-lighting-using-layers-of-light)
* [Compact Fluorescent Lighting -- CFL](http://www.extension.org/pages/27170/compact-fluorescent-lighting-cfl)
* [Questions and Answers about Fluorescent Lighting for Your Home](http://www.extension.org/pages/25630/questions-and-answers-about-fluorescent-lighting-for-your-home)

Energy Star: <http://www.energystar.gov/index.cfm?c=cfls.pr_cfls_savings>Landscaping:eXtension Resources: Find the articles below by clicking on them or going to: * [http://www.extension.org/category/energy\_efficient\_existing\_homes:\_landscaping](http://www.extension.org/category/energy_efficient_existing_homes%3A_landscaping)
* [Using Greywater Systems for the Home](http://www.extension.org/pages/25629/using-greywater-systems-for-the-home)
* [Using Landscaping Shade to Reduce Home Energy Costs](http://www.extension.org/pages/27420/using-landscaping-shade-to-reduce-home-energy-costs)
* [Landscaping Your Home for Energy Efficiency](http://www.extension.org/pages/25639/landscaping-your-home-for-energy-efficiency)
* [Using Landscaping Vines and Structures to Reduce Home Energy Costs](http://www.extension.org/pages/29080/using-landscaping-vines-and-structures-to-reduce-home-energy-costs)
* [Questions and Answers about Shading Your Home for Energy Efficiency](http://www.extension.org/pages/25624/questions-and-answers-about-shading-your-home-for-energy-efficiency)
* [Questions and Answers about Efficient Home Irrigation Systems](http://www.extension.org/pages/25634/questions-and-answers-about-efficient-home-irrigation-systems)

Rebates and Incentives: Energy.gov Resources:* <http://energy.gov/savings?rebate_eligibility=435541&rebate_savings_for=769465&rebate_provider=0&rebate_state=2689>

eXtension Resources: Find the articles below by clicking on them or going to: * [http://www.extension.org/category/energy\_efficient\_existing\_homes:\_tax\_credits\_and\_incentives](http://www.extension.org/category/energy_efficient_existing_homes%3A_tax_credits_and_incentives)
* [ENERGY STAR® Rating and Home Appliances](http://www.extension.org/pages/25645/energy-star-rating-and-home-appliances)
* [Payback and Savings on Your Energy-Related Home Improvements](http://www.extension.org/pages/28769/payback-and-savings-on-your-energy-related-home-improvements)
* [Tax Credits for Home Energy Efficiency](http://www.extension.org/pages/61152/tax-credits-for-home-energy-efficiency)
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| Helpful videos and websites | U.S. Department of Energy:Energy 101: Lighting Choices <http://www.youtube.com/watch?v=lP_KcsVtng0> Energy 101: Lumens <http://www.youtube.com/watch?v=kZWiT_NVouA> Energy 101: Home Energy Assessment <http://www.youtube.com/watch?v=YolBP0-vkBU> Maine Cooperative Extension:How Do I Do A Home Energy Audit? <http://www.youtube.com/watch?v=Mn3hSOtbDcQ> How to Seal Windows for Winter and Summer <http://www.youtube.com/watch?v=Jvyp5e1rJMc> How Do I Insulate my Attic? <http://www.youtube.com/watch?v=GdkDY0xnjXg>  |

**Extended Activity:**

Have participants list 10 low-cost and no-cost things they plan to do to lower their utility usage. Discuss lists, setting of priorities, materials needed, total cost vs monthly savings to estimate pay-back projection, and have each participant leave workshop with a “to do” list, including materials needed.

**Potential Partners:**

Local utility company representative

Professional Home Energy Assessor

County or City Sustainability Director/Coordinator

Homeowner who has conducted a home assessment

North Carolina Weatherization Program Leader (for low-income audiences)

**Preparing for this Lesson:**

Promotional Materials

Promotion Strategies

**Several Weeks Prior to Workshop:**

* Secure location and set time for workshop
* Identify and book guest speakers or subject matter experts
* Promote workshop
* Request Home Energy Kits from E-Conservation
* Request home assessment materials from E-Conservation (caulking and insulation, tools, etc)

**One Week Prior to Workshop:**

* Create handouts and reference materials
* Review handouts and reference materials – ensure all web links work properly
* Select videos you will use and watch them, noting the best way to use them to enhance learning
* Read the lesson guide and powerpoint materials
* Review powerpoint speaker notes and become comfortable with the content
* Make/Add notes if applicable
* Familiarize yourself with demonstration tools, Home Energy Kit, and other teaching aids
* Confirm speaker(s) and be sure they are clear about their role in the presentation
* Send e-mail to participants, reminding them of the upcoming workshop and ask them to do any prep work you choose to enhance learning (ie: note certain things about their house like lighting choices, bring their utility usage history for the past several months, notes on energy issues they believe exist in their home.

**One Day Prior to Workshop:**

* Confirm with participants
* Confirm with speakers
* Confirm room reservation
* Assemble snacks, materials, etc.
* Assemble hands-on materials and other materials
* Review the presentation and have any links already uploaded and ready to share