

PROJECT PLUG-IN: “Plug-in to your Community” **Energy and Water Conservation Project**

Project Plug-In is a way for your church, organization or other group to “*plug-in*” to the community and help a family in need. Energy and water conservation measures reduce environmental impacts, save money and create a healthier and more comfortable home.

Sustainable Sandhills created “Project Plug-In” to aid community organizations in providing “lite” weatherization and energy and water conservation assistance to deserving families. The following checklist and guidelines are provided to support volunteers as they work directly with families in their community.



Let's get started in 10 easy steps!

1. Identify a minimum of FIVE families in need of assistance.
2. Assemble a group of volunteers from your organization.
3. All volunteers should review the educational material provided by Sustainable Sandhills (SS). Call the SS office with questions prior to your home visits.
4. Send a volunteer or two from your group to talk with each homeowner about the changes you can make to their home. Cover each point on the checklist. Explain how that item works and how it can save them energy/water and money. Obtain the homeowner's approval for each item prior to purchasing or requesting materials from SS.
5. Complete a checklist for each home you visit. The checklist will serve as a “material take-off list” where you can record quantities and measurements during the home visit.
6. Select the materials that SS will provide and determine which materials your group is willing to purchase. SS will provide up to \$40 worth of materials for each home. While it is not required, if you can provide some of the materials, this program will be able to serve more families in need.
7. Submit the “SS Material Request Form” and SS will provide the materials to your organization.
8. Purchase any additional materials not provided by SS and coordinate your “Project Plug-In” event. Homes can be completed one at a time with a small group or multiple homes can be completed in a single day with a larger group.
9. Install all products according to directions and make sure the homeowner is aware of all the materials you are installing.
10. Leave “Energy and Water Conservation Tips” sheet with the homeowner so they can continue to save energy, water and money by improving their everyday habits.

PROJECT PLUG-IN: “Plug-in to your Community” **Energy and Water Conservation Guide and Checklist**



Use this guide to conduct your initial walk through of each home. Please use the checklist to identify the items that you and the homeowner agree to replace prior to ordering materials.

Replace faucet aerators in kitchens and bathrooms

- | | | | |
|--------------------------|--|-----------------|----------------|
| <input type="checkbox"/> | Provided by Sustainable Sandhills: | Kitchen | Quantity _____ |
| | | Bathroom | Quantity _____ |
| <input type="checkbox"/> | Provided by volunteer organization: | Kitchen | Quantity _____ |
| | | Bathroom | Quantity _____ |

Replace shower heads in bath/showers

- | | | |
|--------------------------|--|----------------|
| <input type="checkbox"/> | Provided by Sustainable Sandhills: | Quantity _____ |
| <input type="checkbox"/> | Provided by volunteer organization: | Quantity _____ |

Tip: Explain the water and energy-saving benefits of low flow faucet aerators and shower heads to the homeowner and obtain their permission to replace. If faucet or shower head looks fairly new, use flow meter bag to gauge water flow prior to replacement. When removing an aerator or showerhead, place a small rag on the end of the aerator or shower head between it and your wrench to avoid scratching the finish. If possible, take the old aerators with you if you are going to purchase new ones. This will help ensure that you purchase ones that will fit your faucet. Use “gentle force” to remove old aerators and shower heads. Excessive force can cause permanent damage to the faucet or shower. The cost to repair that damage will exceed the benefits of the rest of the work you will perform!

Add insulating water heater blanket

- | | | |
|--------------------------|--|----------------|
| <input type="checkbox"/> | Provided by Sustainable Sandhills: | Quantity _____ |
| <input type="checkbox"/> | Provided by volunteer organization: | Quantity _____ |

Tip: Check the R-value of the water heater insulation. If the water heater insulation has an R-value of R-24 or greater there is no need to add an insulating blanket. If it is lower, install a water heater insulation blanket. This will reduce standby heat losses by 25% - 45%, saving the homeowner 4% - 9% in water heating costs. If you are unsure of the R-value of the water heater insulation, touch the side of the water heater. If it feels hot to the touch, an insulation blanket will help. **Additional Tip:** Turn down the setpoint temperature on the water heater. By reducing the setting by 10°F, you can save 3% -5% in energy costs. Most water heaters are set around 135°F, but a good setting for energy efficiency is 115°F - 120°F.



Replace HVAC filters

Provided by volunteer organization: Quantity _____

Note size and quantity of each filter: _____

Tip: These filters should be changed/cleaned every 90 days under normal circumstances. During periods of heavy use (summer and winter), they should be changed/cleaned more often. Replace disposable filters and clean reusable filters. Proper HVAC filters maintenance leads to better energy efficiency and improved indoor air quality. SS recommends purchasing additional sets of filters to leave with the homeowner for future use.

Replace incandescent light bulbs with compact fluorescent light (CFL) bulbs

Provided by Sustainable Sandhills (13 watt = 60 watt, medium base): Quantity _____

Provided by volunteer organization: Quantity _____

Note size and wattage: _____

Tip: As you walk through the home, note the size and wattage of bulbs in use. There may be certain fixtures that require bulbs with a smaller base. A medium base bulb is typical. It is wise to bring along a 60W and 75W-equivalent CFL so that the homeowner can confirm which fixtures can be changed out and which size CFL is appropriate. Remind the homeowner that compact fluorescent light bulbs cut energy use by 75 percent!

Seal air leaks throughout the home

Provided by volunteer organization: Quantity (in feet) _____

Note size and total length: _____

Tip: Begin by identifying doors and windows that require weather stripping. With doors and windows closed, gaps where daylight is visible should be sealed with weather stripping. It is important that volunteers know how to apply weather stripping and caulking (read the directions!), and that the homeowner approves. Start by applying weather stripping to door and window frames. Then caulk oversized plumbing, ducting, and electrical wiring penetrations between conditioned and unconditioned spaces through exterior walls, floors, ceilings, and soffits over cabinets. Spray foam insulation is another way to seal these penetrations. Penetrations through the floor may be easier to locate and seal from the crawl space.

Install rubber gaskets behind switch plates located on exterior walls

- | | | | |
|--------------------------|--|-----------------|----------------|
| <input type="checkbox"/> | Provided by Sustainable Sandhills: | Outlets | Quantity _____ |
| | | Switches | Quantity _____ |
| <input type="checkbox"/> | Provided by volunteer organization: | Outlets | Quantity _____ |
| | | Switches | Quantity _____ |

Tip: Prevent air leaks by installing foam gaskets behind electrical outlet and switch plates on exterior walls. If the exterior walls are not well-insulated around outlets and switches, air can leak in and out around electrical boxes. Count the number of outlets and switch plates on all exterior walls. Foam gaskets are installed by removing the cover plate, adding gasket and replacing the cover plate. The power does not need to be turned off. But NEVER touch exposed wires while cover plates are off!

Inspect insulation in the attic and crawlspace

- Provided by volunteer organization:** Quantity (in feet) _____

Note R-value and amount: _____

Tip: First, look for dirty spots in your insulation. These dirty spots often indicate where air leaks into and out of your attic and crawl space. You can seal the holes by stapling sheets of plastic over the holes and caulking the edges of the plastic. Then look for areas with no insulation or where the insulation has fallen. Replace/add as needed. R-19 insulation is recommended for crawlspaces and R-30 for attics. But adding ANY insulation is better than having no insulation at all!

Check for working smoke detectors

- | | | |
|--------------------------|--|----------------|
| <input type="checkbox"/> | Provided by Sustainable Sandhills: | Quantity _____ |
| <input type="checkbox"/> | Provided by volunteer organization: | Quantity _____ |

Tip: Free smoke detectors are given at most local fire departments. If the homeowner is in need of a smoke detector or additional smoke detectors, Sustainable Sandhills will work with your organization to obtain smoke detectors from a local source.

Conclusion

After concluding your walk through of each home, submit a material list to SS using the "Materials Request Form". SS will provide materials for your "Project Plug-In" event up to an average of \$40 per home. For example, if your organization identified five homes in your community, SS will provide \$200 worth of materials for your event ($\$40 \times 5 = \200). While not required, your group can provide additional materials for each home that are not provided by SS.



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Materials Request Form to Sustainable Sandhills



Please provide total material requests for your “Project Plug-In” event on the form below. Total material cost should not exceed the total amount from the below calculation.

Sustainable Sandhills will provide \$40 per home x _____ (# of homes) = \$_____ (SS materials)

Item Requested	Cost		Quantity	Total Cost
Low flow faucet aerators for kitchens:	\$2 each	X	_____	= \$_____
Low flow faucet aerators for bathrooms:	\$2 each	X	_____	= \$_____
Low flow shower heads:	\$10 each	X	_____	= \$_____
Insulating water heater blanket:	\$10 each	X	_____	= \$_____
Compact fluorescent light bulbs (13 watt = 60 watt)	\$8 (4 pack)	X	_____	= \$_____
Foam gaskets for switches & outlets	\$5 (10 pack)	X	_____	= \$_____
Smoke detectors	FREE	X	_____	= \$ <u>FREE</u>
TOTAL COST OF ALL MATERIALS PROVIDED BY SS:				\$_____

Please include a list of materials that your group plans to provide - if applicable.
