GREEN

GEORGIA RESIDENTIAL ENERGY EFFICIENCY NETWORK

FORT VALLEY STATE UNIVERSITY • COOPERATIVE EXTENSION PROGRAM

The Greener Homes and Energy Manual

1895

FORT VALLEY STATE UNIVERSITY

EMPOWER *the* POSSIBLE.

FVSU extension

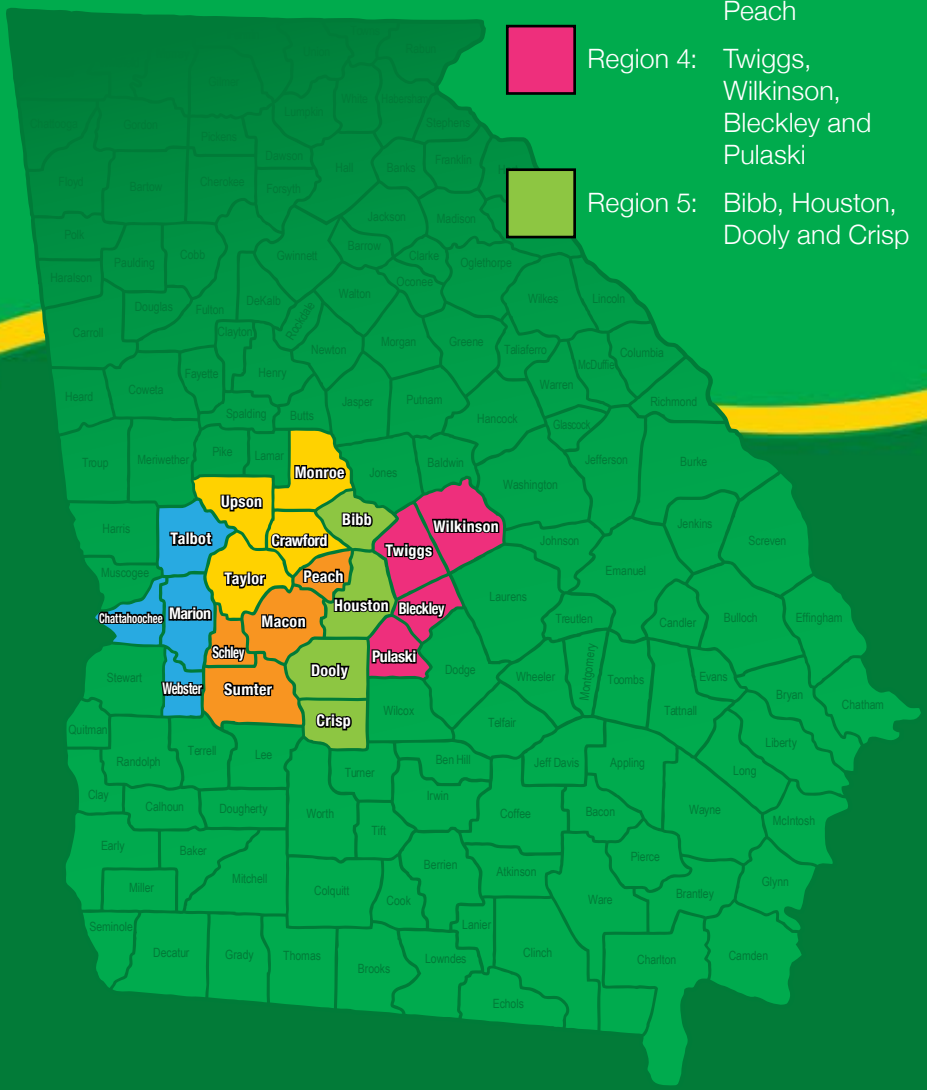
Knowledge for Inspiring Lives!

GREEN Objectives

Fort Valley State University's Cooperative Extension Program wants to change the way Georgians use home energy through the Georgia Residential Energy Efficiency Network (GREEN) Project. Through the GREEN Project, FVSU Cooperative Extension personnel offer workshops and resources designed to help consumers make informed energy efficiency and conservation decisions for their homes. The project also teaches consumers how to be proactive in energy usage which can result in energy and monetary savings.

Georgia's GREEN Counties

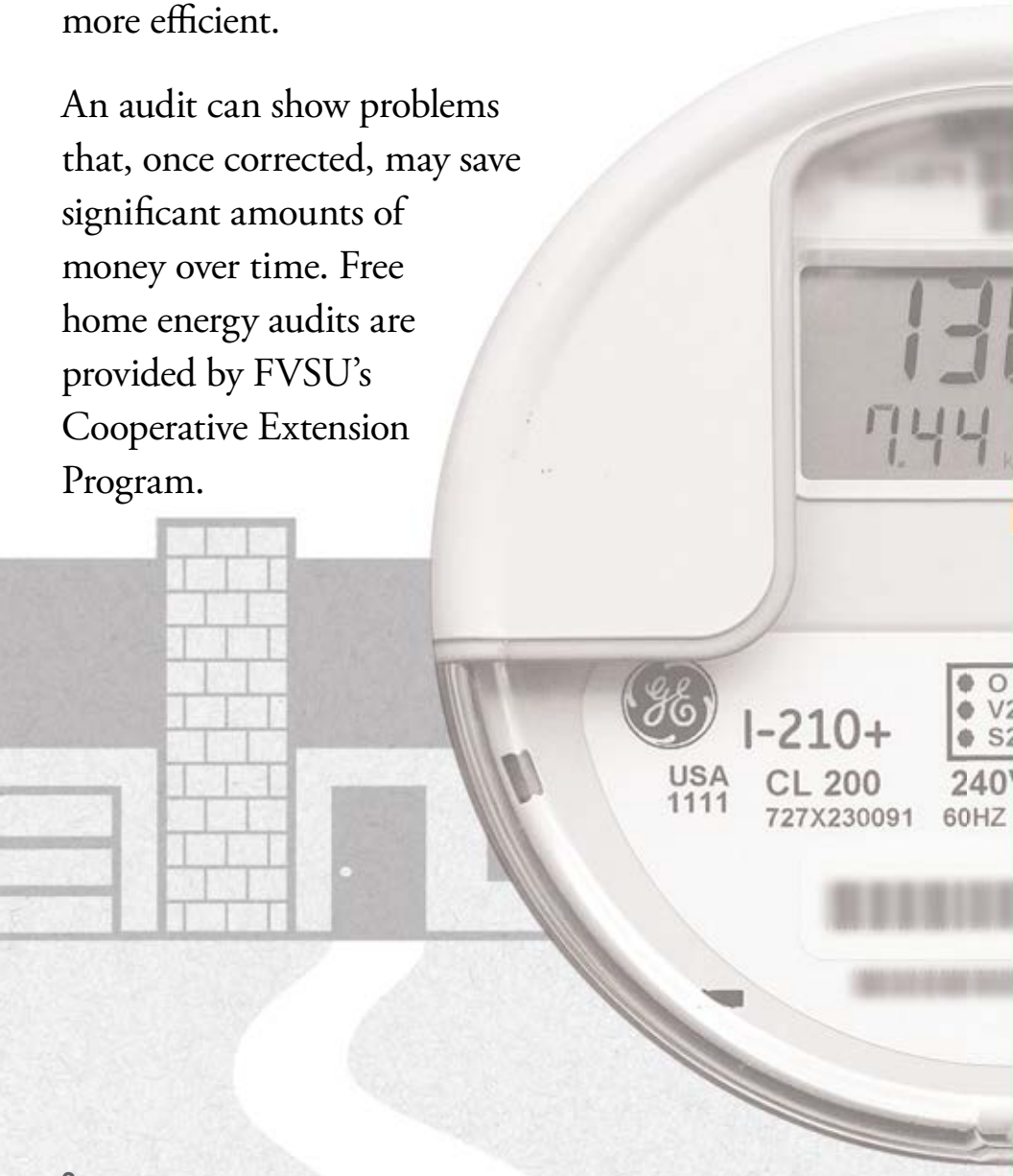
- Region 1: Chattahoochee, Talbot, Marion and Webster
- Region 2: Upson, Monroe, Crawford and Taylor
- Region 3: Schley, Sumter, Macon and Peach
- Region 4: Twiggs, Wilkinson, Bleckley and Pulaski
- Region 5: Bibb, Houston, Dooly and Crisp



Home Energy Audits

A home energy audit is the first step in assessing home energy consumption. Energy audits help to evaluate measures that can be taken to make home energy usage more efficient.

An audit can show problems that, once corrected, may save significant amounts of money over time. Free home energy audits are provided by FVSU's Cooperative Extension Program.



If you have any questions or would like to have an energy audit conducted, please contact the FVSU Cooperative Extension Program Energy Educator at 478-825-6368 or brownb@fvsu.edu to schedule an appointment.

Appliances and Electronics

Household Appliance Energy Quiz

Below is a list of common household appliances. Rank the appliances from 1 (lowest) to 10 (highest) according to the amount of energy usage. For example, if the refrigerator uses the most energy, rank it 10. Next, determine how each household appliance uses energy by filling in letters in the column "How Do I Use Energy?" from the key on the right.

Appliance	Ranking	How Do I Use Energy?
Television		
Stereo		
Refrigerator		
Washing Machine		
Water Heater		
Range Top (Stove)		
Ceiling Fan		
Toaster		
Iron		
Microwave		

A. I use energy to spin and keep you cool.

B. Even though I am always plugged into an outlet energy is consumed only when I am turned on to heat food.

C. I use energy to produce picture on a screen.

D. I use energy to rinse and spin.

E. I use energy when I am plugged in and turned to a certain temperature.

F. I use a large amount of energy derived from electricity or gas to cook food.

G. I use energy to receive radio waves in your home.

H. I use a lot of energy because I am always cooling and freezing.

I. I use a large amount of energy so that you can take warm showers and have hot water.

J. I use energy to heat coils that cook your food.

When purchasing new appliances and electronics, look for the Energy Star label.

Energy Star qualified devices generally use 20-30% less energy which helps to reduce energy costs, improve comfort and protect the environment.

Smart power strips also help to conserve energy when using appliances and electronics.

Answers - Television: 3, C; Stereo: 1, G; Refrigerator: 8, H; Washing Machine: 4, D; Water Heater: 10, I; Range Top (Stove): 9, F; Ceiling Fan: 2, A; Toaster: 7, J; Iron: 5, E; Microwave: 8, B

Lighting

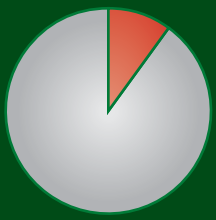
A new lighting standard took effect in 2012 that required light bulbs sold in the United States to be more energy-efficient. The 3 main types of light bulbs are:

- Energy-saving incandescents
- CFLs (compact fluorescent lamps)
- LEDs (light emitting diodes).

Bulb type comparison

Incandescent

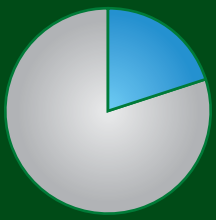
60 Watt. . . . 800 Lumens
75 Watt. . . .1100 Lumens
100 Watt. . 1600 Lumens
Rated Life . . . . . .1 year
Price: $2.98/2 pack



10% Light
90% Heat

CFL

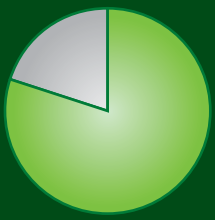
13 Watt. . . . 800 Lumens
20 Watt. . . .1100 Lumens
23 Watt. . . 1600 Lumens
Rated Life . . . . 6-10 years
Price: $7.97/2 pack



20% Light
80% Heat

LED

12 Watt. . . . 800 Lumens
17 Watt. . . .1100 Lumens
20 Watt . . 1600 Lumens
Rated Life . . . 15-20 years
Price: $14.97/2 pack



80% Light
20% Heat

Energy-saving incandescents: These new bulbs are about 25% more efficient and can last up to three times longer than traditional incandescent bulbs. They are available in a wide range of shapes and colors, and can be used with dimmers. This bulb has an energy savings of 25%.

CFLs: Compact fluorescent lamps last 10 times longer, use ¼ the energy of a traditional incandescent bulb and have an energy savings of 75%. Due to the small amount of mercury in CFLs, place old CFLs into two plastic bags before disposal.

LEDs: Light Emitting Diodes last 25 times longer, use 20-25% the energy of a traditional incandescent bulb and have an energy savings of 75%-80%.

HVAC Systems

(Heating and Cooling)

Heating and cooling account for half of the typical home energy bill. Proper operation and maintenance of a home's Heating Ventilation and Air Conditioning system is critical in ensuring it's longevity.

- Change air filters every 30-60 days.
- Have the HVAC system serviced by a professional at least once a year.
- Install a programmable thermostat.
- Seal the heating and cooling ducts.

Water Conservation

Did you know?

A typical household uses 260 gallons of water per day. This amount can be reduced and money can be saved. Some methods of water conservation include:

- Using water more efficiently
- Detecting and repairing water leaks
- Installing water efficient appliances and fixtures

Toilets:

Replace older, inefficient toilets with newer, water-saving low-flow toilets, preferably with dual flush options and 1.28-1.6 gallons per flush.

Faucets:

Replace older, inefficient faucets with newer, water-efficient faucets and aerators.

Showerheads:

Replace older, inefficient showerheads with newer, water-efficient, low-flow rate showerheads.

Appliances:

Look for the WaterSense label when purchasing washing machines and dishwashers.

Hot Water Systems:

Hot water heaters account for 13 percent of the typical utility bill and can use as much as a quarter of the total energy consumed in the home. The easiest way to reduce this usage is to insulate the hot water heater and the pipes. If the hot water heater is very old or leaks, replace it with a newer, Energy Star qualified model.

Reducing Your Carbon Footprint

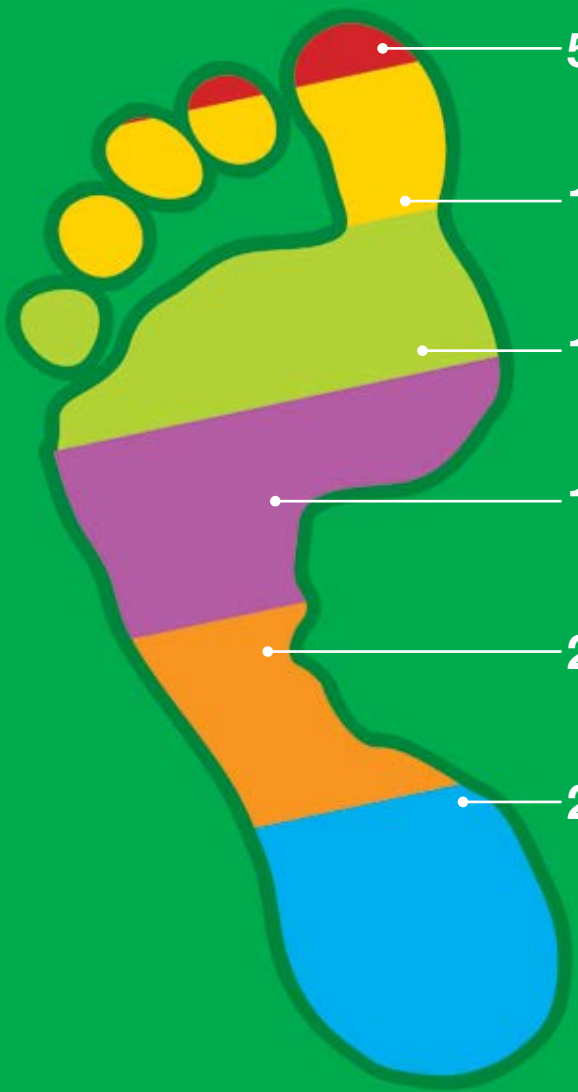
What is a carbon footprint?

A carbon footprint is the amount of carbon dioxide and other carbon compounds emitted due to the consumption of fossil fuels by a particular person or group. Therefore, the GREEN Project has provided several examples of how to reduce your household carbon footprint:

- Insulate and seal your home properly to prevent leaks and drafts.
- Purchase energy-efficient, Energy Star qualified appliances.
- Replace incandescent light bulbs with compact fluorescent or LED bulbs.
- Install a programmable thermostat.
- Install solar panels to generate free, renewable electricity.
- Purchase WaterSense qualified, low-flow showerheads, faucets and toilets.

The average American household's carbon footprint

Home energy use is the largest component of the average American household's carbon emmissions. Reducing home energy use has the greatest savings potential in limiting greenhouse gases and protecting the environment.



GREEN Resources

United States Department of Energy

energy.gov

Energy Star

energystar.gov

United States Environmental Protection Agency

epa.gov

Georgia Environmental Finance Authority

gefa.georgia.gov

Southface

southface.org

Carbon Offsets To Alleviate Poverty

cotap.org

ag.fvsu.edu

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