

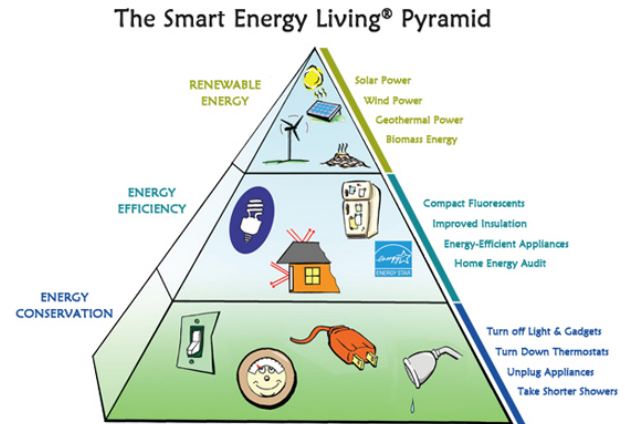
## ENERGY IS A TERRIBLE THING TO WASTE!

**“The cheapest energy is the energy you don’t have to purchase in the first place”**

What I found out about energy I’m wasting at home – and how you can find out too!

Alabama currently ranks quite poorly – 41<sup>st</sup> among the states – in our efficient use of energy.<sup>1</sup> Both energy efficiency and energy conservation are important for our comfort, our pocket books and our planet.

- **Energy efficiency means using less energy to produce the same amount of output** – for example, replacing an incandescent bulb that wastes energy as heat with a LED bulb that use less energy to produce the same amount of light – getting the most out of each unit of electricity we use.
- **Energy conservation refers to reducing or eliminating a good or service to save energy** - for example, turning off the light when you leave the room or adjusting thermostats warmer/colder.



**When planning our energy future, our electric utilities can count on decreased demand from energy efficiency but not on our personal decisions about conservation.**

- **Both energy conservation and efficiency can save customers money but only energy efficiency can reduce greenhouse gases** from burning fossil fuels by avoiding the need for electricity generation.
- **Only energy efficiency can generate jobs at the same time.** Efficiency is a valuable “demand-side” resource, which reduces demand for electricity and results in energy savings that usually cost 1/3 of new generation resources and creates local jobs that can’t be outsourced.

**What’s this about greenhouse gases?** (According to the U.S. Energy Information Administration, only 14 states emit more greenhouse gases than Alabama.<sup>2</sup>)

- **One result from conserving energy resources is cleaner air and a healthier environment, which also helps protect the climate by reducing greenhouse gases.**
- **Our atmosphere acts like a blanket to keep the sun’s heat in.** Burning fossil fuels like coal, oil and natural gas adds extra heat-trapping gases, mainly carbon dioxide, which is like adding more blankets. As a result, the atmosphere holds in more heat.
- **More retained heat changes our weather patterns.** We get less predictable rains with floods and droughts. Sea level rises, both because of the warmer water and melting ice. Most of the extra carbon dioxide goes into the ocean. The heat and acidification damage the ability of oceans to support life.
- **Religious leaders, like Pope Francis, see that these changes cause hardship,** especially for the poorest and those least responsible for the changes. They are pointing out our moral responsibility and our duty to care for creation by cutting back on carbon emissions. Energy efficiency and conservation can help do that.

**Why is residential energy efficiency especially important at home, in the community, the US and the world?**

(According to the U.S. Energy Information Administration, only twelve states use more energy per person than Alabama.<sup>3</sup>)

- **Our 115 million residences in the US use between 20 and 25% of the country’s energy.** A lot of it is wasted through leaky windows or ducts, old appliances, or inefficient heating and cooling systems.
- **The typical U.S. family spends at least \$2,200 a year on home utility bills.** According to energysaver.gov, it’s possible to save up to \$550 by using less energy. When we use less energy, we not only save money, but also produce fewer greenhouse gases and help keep the world from overheating.
- Industry matters, too: According to the Alabama Department of Economic and Community Affairs, **Alabama’s industrial sector leads State energy consumption,** accounting for nearly one-half of total energy use. The Alabama SAVES program (<http://www.alabamasaves.com/>) can assist larger energy users.

<sup>1</sup> <http://database.aceee.org/state/alabama>

<sup>2</sup> <http://www.eia.gov/state/?sid=AL>

<sup>3</sup> Ibid.



### What are some resources I can use to help me figure out how to save energy?

- **The U.S. Department of Energy, Energy Efficiency & Renewable Energy** has an Energy Saver booklet full of recommendations, Energy Saver: Tips on Saving Money & Energy at Home. ([http://energy.gov/sites/prod/files/2014/09/f18/61628\\_BK\\_EERE-EnergySavers\\_w150.pdf](http://energy.gov/sites/prod/files/2014/09/f18/61628_BK_EERE-EnergySavers_w150.pdf))
- **The U.S. Green Building Council** has a website on how green building reduces energy use and conserves water. (<http://www.usgbc.org/articles/green-building-facts>)

### What are some energy efficiency steps I can take?

- **Alabama Power offers a Personalized Energy Checkup** using your actual electricity bills and answers you provide about the characteristics of your living arrangement. Based on your answers, you are given energy-saving suggestions. (<http://www.alabamapower.com/residential/save-money-energy/energy-checkup.asp>)
- **A more general estimate of energy savings** which requires you to have your bills is Energy Star's Home Adviser (<https://www.energystar.gov/campaign/assessYourHome>)
- **A more thorough Energy Audit or Performance Evaluation** could identify further steps to take and point toward resources like contractors or installers to help. (Local companies like [www.eco-three.com](http://www.eco-three.com) can help)

### Easy, no-cost ways energy conservation can save energy

- Turn things off when you are not in the room such as lights and your computer and monitor. Plug home electronics, such as TVs and DVD players and electronics, into power strips; turn the power strips off when the equipment is not in use – [these devices in standby mode still use several watts of power](#).
- Air dry dishes instead of using your dishwasher's drying cycle.
- [Lower the thermostat on your water heater](#) to 120°F. For an average family, heating water uses more electricity per year than the clothes dryer and refrigerator combined.
- Take short showers instead of baths.
- Wash only full loads of dishes and clothes or air-dry loads. (about \$10 for a clothesline - and some labor to hang clothes).
- If you have a fireplace, [be sure to close the flue](#).

### Easy, low-cost ways energy efficiency can save energy

- Install a [programmable thermostat](#) to lower utility bills and manage your heating and cooling systems efficiently (starts at about \$25) – and set it to 78 in summer and 68 in winter.
- Look for the [ENERGY STAR® label on light bulbs](#) (\$3 to \$15), home appliances, electronics, and other products. ENERGY STAR products meet strict efficiency guidelines set by the U.S. Environmental Protection Agency and the U.S. Department of Energy.
- Install low-flow showerheads and sink aerators for water savings that include energy savings.
- Install an insulation blanket to your water-heater. (about \$25).

### Some investments that will save energy with good pay back

- If you need more [insulation in your attic](#) you can add it for \$.40 to \$2.00 a square foot and recoup your expenditure from energy savings in 5 years
- [Sealing ductwork](#) and any leaks in your walls or roof and caulking around windows can save money – just don't make it too air tight. A professional can be helpful here.
- Incandescent bulbs waste 90% of their energy in heat. Compact fluorescent bulbs (CFLs) are more efficient but contain a little mercury so need to be recycled properly (many places that sell them will recycle them) and light emitting diodes (LEDs) are the most efficient of all. Just replacing the 5 most used bulbs can save \$75 a year.
- When new heating/air conditioning or appliances are needed, check out [Energysaver.gov](http://energysaver.gov) for advice on most efficient replacements and be sure to look for the EnergyStar logo.

### You can also save energy by generating some of your own electricity with renewable resources, like wind and solar, or paying your utility company extra to buy electricity from those sources.

- **Tennessee Valley Authority** has these programs to support residential solar installations in their territory <http://www.tva.com/greenpowerswitch/providers/>
- **Alabama Power** has this Solar Power FAQ: <http://www.alabamapower.com/environment/renewable-energy/faqs.asp> Alabama Power also has this program to purchase RECs that are associated with energy generated from renewable sources, such as wind: <http://www.alabamapower.com/residential/products-programs/renewable-energy.asp>.

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