

BTU Usage Chart

Energy consumption for an average U.S. family of four in 1990

Gasoline	47.4 %	125,000,000 BTU/yr.	Average American uses 6 gallons of oil per day
Space heating (gas)	26.6 %	70,000,000 BTU/yr	Average German uses 3.5 gallons per day
Water heating (gas)	10.4 %	27,500,000 BTU/yr.	Average African uses 0.25 gallons per day
Central Air-conditioning	4.6 %	12,200,000 BTU/yr.	
Refrigerator	3.0 %	7,700,000 BTU/yr.	
Freezer	2.3 %	6,100,000 BTU/yr.	
Other appliances	5.7 %	15,000,000 BTU/yr.	
Total	100 %	263,500,000 BTU/yr.	

Cars

U.S. cars and trucks use 114,000,000,000 gallons of gas each year.

Raising the fuel efficiency of U.S. cars and trucks by 1 mpg for one year would save the amount of all of the oil that could be produced in the Arctic National Wildlife Refuge.

- How to reduce gasoline use:
1. Buy a fuel efficient car.
 2. Drive less! (walk, bike, bus, carpool, combine trips, no joy in "joy rides")
 3. Drive efficiently.
 4. Maintain your car.

Home Heating

1. Insulate your house/apartment/room (prevent conductive and convective heat loss).
2. Turn the heat down (dress warmly inside during winter).

Hot Water Heating

Uses:	Shower	3 - 5 gallons per minute
	Laundry	20 - 40 gallons per load (depending on load setting)
	Dishwasher	12 gallons per load
	Sink	3 gallons per minute

- How to cut down?
1. Take shorter showers
 2. Use lower water pressure
 3. Take cooler showers
 4. Shower less often
 5. Wash laundry in cooler water
 6. Run washing machine and dishwasher with full loads only
 7. Don't let water run while doing dishes, shaving, etc.
 8. Buy efficient appliances

Electricity (not including space heating and hot water heating)

Biggest users: Refrigerator/freezer
Washer/dryer
Stove/oven

Other users: TV, stereo, lights, computer, answering machine (even when these appliances are turned off they use electricity), fan, humidifier, hair dryer, bread machine, ETC!

- How to cut down?
1. Buy efficient appliances
 2. Do you really *need* that dorm fridge with only one diet coke in it?
 3. Use microwave instead of stove or oven
 4. Use oven for several things at once (i.e. lasagna *and* garlic bread!)
 5. Try studying without the TV or stereo
 6. Turn off lights when leaving the room
 7. Try fluorescent light bulbs (bring them with you when you move)
 8. "Roompool"
 9. Avoid batteries

Water use

The average American uses 143 gallons per day for personal use. Compare this to 36 gal/day in Belgium.

Total consumptive use:	82.5% irrigation and livestock	Household use*:	38% toilet flushing
	5.3% industrial and mining		31% bathing
	4.7% electrical cooling		20% laundry and dishes
	7.5% public use		5% brushing teeth, etc.

* does not include lawn/garden watering

How much water does it take to...?

Produce 1 egg	40 gallons	take a shower	3-5 gallons per minute
1 ear corn	80 gallons	flush the toilet	6 gallons per flush
1 pound potatoes	24 gallons	run the sink	3 gallons per minute
1 loaf bread	160 gallons	run the dishwasher	12 gallons per load
1 pound beef	2,500 gallons	run the washing machine	40 gallons per load
1 pound chicken	815 gallons	take a bath	40 gallons
1 pound pork	1630 gallons		
1 Sunday paper	280 gallons		
1 pound steel	32 gallons	1 pound aluminum	1,000 gallons
1 pound rubber	300 gallons	1 automobile	100,000 gallons

How can you save water?

1. Take shorter showers, use lower water pressure, shower less often. Reducing your daily showering time from 15 minutes to 8 minutes will save 245 gal/week, 1,050 gal/month, and 12,775 gal/year. This will also save 5,621,000 BTU of energy required to heat the water. This is equivalent to driving a car 1,200 miles.
2. Put a full bottle of water in the toilet tank
3. Go vegetarian, or at least avoid beef
4. Do laundry and run the dishwasher only with full loads
5. Don't let the water run when shaving, brushing teeth, or doing dishes
6. Fix leaky faucets and toilets
7. Water the lawn and garden judiciously; plant drought resistant varieties, mulch, use drip irrigation

Garbage - The average American produces 4.5 pounds per day!

What are we throwing away?	<u>By volume</u>	<u>By weight</u>
Paper products	50%	35%
Organic wastes	13%	30%
Plastics	10%	5%
Metals	6%	10%
Misc.	20%	5%

How can you cut down?

1. Reduce, reuse, recycle!
2. Only buy what you need
3. Buy long-lasting products, avoid disposable products
4. Buy in large quantities or in bulk
5. Use Tupperware and plastic mugs for food and drinks to go
6. Bring your own bags
7. Get off junk mailing lists
8. Use cloth napkins and towels
9. Buy products made from recycled materials
10. Reuse paper, bags, plastic bottles and containers
11. Learn the rules of recycling in your area
12. Try composting

Food

Most of our food originates from farms. Problems with farming?

Massive water consumption

Pesticides/herbicides/chemical fertilizers 80% of U.S. crops are fed to livestock, 20% fed to people

Soil erosion

1. Eat lower on the food chain (reduce meats, especially beef)
2. Buy locally grown, seasonal produce
3. Chose non-processed or minimally processed foods
4. Buy organically-grown products whenever available, this promotes more sustainable farming practices

Consumerism

Most of the environmental problems discussed above are related to the production of goods:

Energy consumption (mining, manufacturing, processing, shipping)

Water consumption

Mining, logging

Use of petroleum products

Creation of wastes

What to do? 1. Buy less stuff! 2. Buy long-lasting products 3. Avoid trends