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green

NAR's Green Designation  
[www. GreenREsourceCouncil.org](http://www.GreenREsourceCouncil.org)

# ecofamily

It's a team sport  
to save the planet,  
our money,  
and our health...

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## What's the big deal about a burger?

The greenhouse gas emissions arising every year from the production and consumption of cheeseburgers is roughly the same as the emissions from the 16 million SUVs currently on the road in the US.

It takes 6 gallons of water to produce a head of lettuce—but it takes over 1,000 to produce a cheeseburger with lettuce, because the feed for the cows is so inefficient to grow, plus the emissions for the tractors are very high. Consider trying a ‘veggie’ burger or a salad in place of a regular burger...













**GREENandSave.com**

This guide has been developed in conjunction with GREENandSAVE.com, one of America's leading free ‘Green’ resources for anyone who wants to save money and the environment as well as create a healthier home and overall lifestyle.

# Offset the pollution of your family car

10 great ways you and your parents can reduce CO<sub>2</sub> emissions

 = 200 lbs/year CO<sub>2</sub> emissions

Action	Eco-Impact	Savings on CO <sub>2</sub> lbs/year
Recycle half your household waste		2,400
Adjust your thermostat two degrees		2,000
Turn off electronic devices		2,000
Eat one less quarter pound burger a month		1,800
Reduce packaging garbage by 10%		1,200
Switch 6 light bulbs to energy efficient ones		900
Install two water efficient shower heads		700
Wash your clothes in cold or warm water		500
Check your tire pressure		250
Drive two miles less each week		100
Total Carbon Savings in Pounds		11,850



**11,850 pounds CO<sub>2</sub> = 5.9 tons CO<sub>2</sub>**  
**5.9 tons CO<sub>2</sub> = taking one midsize SUV off the road!**



**US vs the World**

How does the United States compare to other countries when it comes to CO<sub>2</sub> emissions? Well, take a look for yourself!

## Per Household/Year

United States	27.3 tons
Germany	13.8 tons
Sweden	7.3 tons
Mexico	5.3 tons
Kenya	.2 tons

## Per Person/Year

North America	14 to 20 tons
Europe	10 tons
Worldwide	4 tons

## Why is ours so high?

Breakdown of the Average US CO<sub>2</sub> emissions per person/year:

Auto Travel	6.8 tons
Diet	3.8 tons
Home Energy	1.8 tons
Air Travel	1.5 tons
<b>Total</b>	<b>14 tons</b>

**BONUS!** Sign up with your utility company for "clean, renewable, or wind" electricity. You'll pay about 10% more, but save an average of four tons of CO<sub>2</sub> emissions per household each year!

# Want to do more?

## Simple ways **kids** can help out!



### In your room

- Ask your parents if there is a plant that you can keep in your room, decorate the pot, and water it when it's thirsty.
- Turn off the TV, lights, and stereo before leaving a room to save electricity. When it comes to music, many musicians support environmental causes, so check out the performers and bands that help the planet.
- Use rechargeable batteries in electronics and toys whenever possible. Ask for a 'solar-charger' as a present and recharge your batteries from the sun!
- Remember to turn off the faucet while you are brushing your teeth. You can save a couple of gallons every day. Americans use 100 gallons of water each day, twice the rate of other industrialized nations.

### With your family and friends

- Make a weekend project with family and friends to plant trees in your yard or in the community. Trees help the air, water, soil and habitats, plus they add shade.
- Go for an easy green gift. Give your friends or colleagues a birthday card or book made from post consumer 'recycled' paper.
- Help your parents pack groceries in reusable shopping bags rather than using disposable plastic or paper bags.
- Adopt a favorite environmental cause with your friends. The cause could be an existing organization or something as simple as a fundraiser for landscaping at the local library.



### At your table

- If you don't already have a filtration system on your refrigerator or kitchen sink, encourage your parents to get one. Drink water from home filters or pitchers. Since the 1980s we have increased annual plastic bottled water consumption from 1.5 to 9 billion bottles.
- Go for more veggies all around. Farmers need about 6 gallons of water to grow a head of lettuce, but it takes over 1,000 gallons of water to produce a serving of beef, because the feed for the cows is so inefficient to grow.
- Eat more local food. Keep your eyes out for local farmers markets and encourage your parents to buy local produce as well as 'natural' and organic foods that are not grown with chemical pesticides.
- Go for the most local of all and plant some tomatoes in your backyard or a container garden for herbs inside or outside of your home. You'll taste the difference.



## Around your house

- Help your parents set the timing on your thermostat to save money. Programmable thermostats automatically adjust based on your family's lifestyle, but over 70% of them in homes are not programmed. You can do it!
- Convince your parents to try out a few LED bulbs, or at least switch to Compact Fluorescent Lamps (CFLs). On average, CFLs use 66% less energy and last 10 times longer than incandescent bulbs.
- Encourage your parents to buy an ENERGY STAR® qualified appliance the next time that they make a purchase. High efficiency appliances save on electricity, natural gas, and water. You save money and the environment.
- Encourage your parents to get a Home Efficiency Check-Up. Green home health check-ups for a few hundred dollars now can save you thousands in energy bills. Learn more at the 'Energy Audit' section of [greenandsave.com](http://greenandsave.com).

## In your yard

- Use a bucket to collect rain water, and then help out by watering a few plants.
- Get your parents to test out facial tissues made from recycled content. We could team up to save over 150,000 trees, if each US household replaced just one typical box of 175 sheets.
- Get your parents to test out toilet paper made from recycled content. We could team up to save over 400,000 trees, if each US household replaced just one typical roll of 500 sheets.
- Get your parents to test out paper napkins made from recycled content. We could team up to save over 1 million trees if each US household replaced just one package of 250 napkins.
- Get your parents to test out paper towels made from recycled content. We could team up to save over 500,000 trees, if each US household replaced just one roll of 70 sheets.



## At school

- Look for school supplies made from recycled materials. Ask your teacher to purchase recycled classroom supplies.
- Go for an eco-friendly lunch with less packaging and waste. Help plan a 'trash-free' lunch day at school, and then make it a regular seasonal or monthly event. You can buy forks and spoons that look like plastic but are actually made from materials like corn starch that biodegrade instead of clogging up the landfills.
- Look for water containers and bottles that are not just disposable. You can find ones that actually have a filter built right into the top, so that you can re-use it by filling it up with tap water. You help save the planet and your parents' money.
- Carpool. Boosting US rush hour from 1 to 2 people per car, would save 40 million gallons of gasoline a day; over 15% of daily US gas consumption.

## Around town

- Bike instead of asking for a ride whenever it is safe.
- Encourage your parents to 'cluster errands'. A quick one-mile trip to the shop emits up to 70 percent as much pollution as a ten-mile excursion with several stops.
- Encourage your parents to look into a Carbon offset program until they are ready to buy a new more efficient car. You can learn more on the 'Lifestyle' section of [greenandsave.com](http://greenandsave.com).
- For their next vehicle purchase, encourage your parents to seriously look into high mileage cars, hybrids, and plug-in hybrids. American manufacturers are coming out with innovative new lines of vehicles.
- When you are old enough to drive, look into buying a used car as your first car. Hybrids have better mileage, but all new cars require manufacturing and about 39,000 gallons of water each.



# Over 40% of our national energy consumption comes from homes and offices.

reduce, reuse, recycle...**RE-THINK** your home as an energy  
saving Eco-Friendly 'Organism' not just an 'Object'



NAR's Green REsource Council has teamed up with GREENandSAVE.com, one of America's leading free 'Green' resources for anyone who wants to save money, the environment, and create a healthier home and lifestyle. This partnership team continues to research the data from a broad range of public and private sector reports as well as manufacturer specifications and feedback from families. Major organizations, like the American Institute of Architects, link into our site to educate their members, and The National Association of Realtors uses portions of the content in the green designation training. Clear Channel Radio's Great Green Home Show also picked GREENandSAVE.com as, "The BEST user-friendly site for Homeowners." The company is the first to offer comprehensive Return on Investment (ROI) rankings and Take Action recommendations on multiple ways to 'Go Green.'

# what is a green HOME?



Green homes incorporate technology, smart design, construction, and maintenance elements to greatly reduce the negative impact of the home on the environment. This is often done through increasing energy efficiency, conserving water, recycling products, using sustainable materials and improving indoor air quality.

Green homes use less energy, water and natural resources than typical homes, and they create less waste and are healthier for those living inside. They are also ideally near public transportation and amenities.

Building materials often come from sustainable resources and the homes are built to minimize impact on the surrounding environment. According to the U.S. Building Council, green homes not only save the owner operating costs, but also benefit owners by reducing waste, conserving natural resources, improving air and water quality, minimizing the strain on local infrastructure and contributing to an overall better quality of life.

More and more builders are building green homes, but existing homes can also be converted into green homes.

Green makeovers can happen all at once or through gradual changes.

According to the 2006 Residential Green Building SmartMarket Report published by McGraw-Hill Construction, Green homes are expected to make up more than 10% of new home construction by 2010.

Many local and state governments, utilities and other companies offer rebates, tax breaks and other incentives for green home owners.

Green homes benefit you, your family, your community and the world! Now, with this guide, you'll have the answers to "When is the payback?" This guide is a trusted resource for both the American Institute of Architects and the Green REsource Council. It will help provide the foundation for you to begin saving energy, money and the environment.

Photo: Green Homes can come in surprising shapes, sizes, and locations. This one looks traditional from the front but it is actually solar powered from the backyard roof panels. It was converted from an existing nineteen fifties house, includes over 50 eco-initiatives, and it is less than ten houses away from the local commuter train. See [greenandsave.com](http://greenandsave.com)

payback  
comes  
in year

1



Why pay for heat and AC  
when you're not using it?  
Why pay for conventional  
lighting that uses more  
power to create heat than  
light? Why let your water  
heater work harder than  
necessary to keep your  
water hot? Why waste  
money with anything  
that leaks?

	Additional Cost	Annual Savings	10 Year Savings	Return on Investment
Programmable Thermostat	\$115	\$180	\$1,800	156%
Compact Fluorescent Light bulbs	\$60	\$80	\$800	133%
Standby Power Reduction	\$20	\$24	\$240	120%
Hot Water Heater "Blanket"	\$25	\$20	\$200	120%
Shower Heads	\$180	\$200	\$2,000	111%
Heating System Tune-up	\$200	\$180	\$1,800	90%
Seal Duct Leaks	\$450	\$300	\$3,000	66%
Dishwasher	\$20	\$13	\$130	65%
Water Filters	\$200	\$104	\$1,040	52%
Water Efficient Toilets	\$50	\$25	\$250	50%

*Certain initiatives factor in multiples to cover the US average 2,500 sq. ft. home, and 'Additional Cost' is based on factors over and above the 'Non-Green-Products'. See the calculation breakdowns at [greenandsave.com](http://greenandsave.com)*



payback  
comes  
in years

2-4

	Additional Cost	Annual Savings	10 Year Savings	Return on Investment
Solar Path and Garden Lights	\$375	\$176	\$1,760	47%
Windows	\$700	\$300	\$3,000	43%
Skylights	\$70	\$30	\$300	43%
Insulated Walls	\$750	\$300	\$3,000	40%
Insulated Basement Walls	\$750	\$300	\$3,000	40%
Insulated Ducts	\$450	\$180	\$1,800	40%
Solar Attic Fan	\$500	\$200	\$2,000	40%
Replacement Light Fixtures	\$108	\$40	\$400	37%
Toxic Free Paints	\$70	\$25	\$250	36%
Faucets	\$300	\$100	\$1,000	33%
Water Heater Replacement	\$150	\$48	\$480	32%
Sealed Air Leaks	\$554	\$180	\$1,800	32%
Whole House Water Filters	\$1,000	\$312	\$3,120	31%
On Demand Hot Water Heater	\$450	\$120	\$1,200	27%
Furnace Replacement	\$1,145	\$300	\$3,000	26%
Trees	\$1,200	\$300	\$3,000	25%
Clothes Washer	\$300	\$72	\$720	24%
Recycled Mulch	\$172	\$38	\$380	22%

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Why pay for power?  
Why not replace your old  
windows with energy  
efficient ones? Why not  
use technology to reduce  
summer heat? Why waste  
power with inefficient light  
fixtures? Why paint a room  
with harmful chemicals that  
risk your health?

payback  
comes  
in years

5-6



Why not let natural light enhance rooms? Why not use the latest technology to help heat your house? Why let all the water go down the drains and out of your house? Why let kids roll around on chemically processed carpeting?

	Additional Cost	Annual Savings	10 Year Savings	Return on Investment
Ceiling Fans	\$300	\$60	\$600	20%
Insulate Attics and Ceilings	\$600	\$120	\$1,200	20%
Refrigerator	\$30	\$6	\$60	20%
Light Sharing	\$50	\$10	\$100	20%
Heat Pumps/AC	\$1000	\$200	\$2,000	20%
Greywater	\$300	\$60	\$600	20%
Bamboo Floors	\$300	\$60	\$600	20%
Cork Floors	\$525	\$105	\$1,050	20%
Carpeting	\$280	\$50	\$500	18%
Rain Water Collection	\$120	\$20	\$200	17%
Composting	\$325	\$50	\$500	15%
Decking	\$899	\$138	\$1,380	15%
Thru Wall Room to Room Fans	\$66	\$10	\$100	15%
Air Quality by Room	\$250	\$38	\$380	15%
Sun Tubes	\$300	\$45	\$450	15%
Dual Flush Toilets	\$150	\$23	\$230	15%
Smart Roofs	\$2,000	\$300	\$3,000	15%

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payback  
comes  
in years

7-10

Why not position new windows or check the direction of breezes to maximize air flow? Why not check your site plan to see if there is a better way to orient an addition to get southern exposure?

	Additional Cost	Annual Savings	20 Year Savings	Return on Investment
Radiant Floors	\$4,000	\$550	\$11,000	14%
Insulated Double Walls	\$900	\$120	\$2,400	13%
Thermal Mass Floors	\$3,000	\$400	\$8,000	13%
Southern Overhangs	\$1,440	\$180	\$3,600	13%
Solar Hot Water	\$2,500	\$280	\$5,600	11%
Geo-Thermal	\$30,000	\$3,000	\$60,000	10%
Cross Ventilation	\$1,200	\$120	\$2,400	10%
Southern Orientation	\$1,200	\$120	\$2,400	10%
Green Roofs	\$8,000	\$800	\$16,000	10%
Water Conservation/Retention	\$2,200	\$216	\$4,320	9%
Solar Electric	\$13,000	\$1,200	\$24,000	9%

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# Earth Day Special Offer:

As a way to thank our clients, real estate agents and Green REsource Council members across the country are offering homeowners like you a great way to go green and start saving money.

Since you have received this guide from a real estate agent or Green REsource Council member, you are eligible to receive a \$100 gift certificate on a Home Efficiency Check-up through 2009. The Check-ups typically cost \$395 and save homeowners \$500 or more each year on their utility bills. Go to [GREENandSAVE.com](http://GREENandSAVE.com) to learn more.

## **GREENandSAVE.com Data Source:**

The Return on Investment (ROI) calculations included in this guide are intended to serve as a fast and easy way to help you see the hierarchy of performance and payback. Given variations in energy consumption and house size, results will naturally vary. The calculations are based on comprehensive local and national research and a combination of reports from the U.S. Department of Energy, the EPA, ENERGY STAR® for Homes Program, US Green Building Council's LEED for Homes Program, American Council for an Energy-Efficient Economy (ACEEE), International Energy Conservation Code, PLUS information directly from University Studies, Architects, Manufacturer Specifications, Distributors, seasoned Builders and Installers, and Homeowners with actual Performance Feedback.