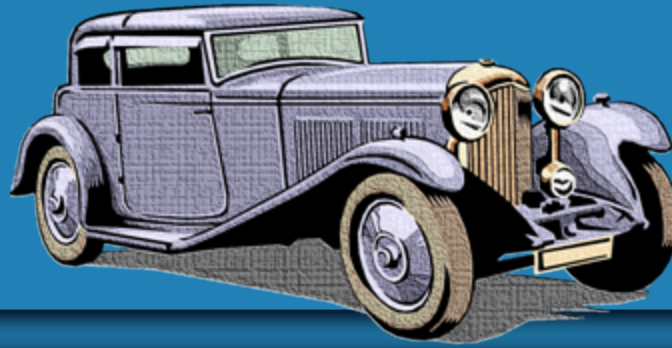




# 50 Ways to Reduce Your Energy Consumption

Roxie Rodgers Dinstel  
Tanana District Extension Home  
Economist



If you don't want to buy a more efficient car, try driving more efficiently.



# Mechanical



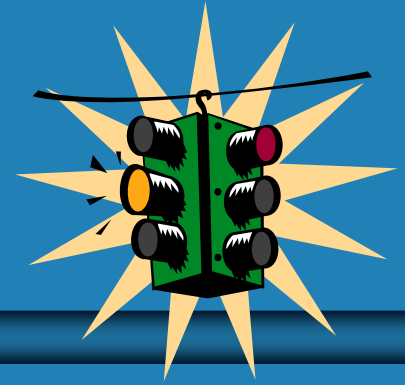
- Keep engine properly tuned—4% to 40%
- Check and replace air filters—up to 10%
- Keep tires properly inflated—3.3%
- Use the recommended grade of oil—1-2%
- Use the octane level recommended

# Driving



- Observe speed limit
- Stop aggressive driving
- Use cruise control when appropriate
- Remove excess weight
- Avoid packing on top of car
- Drive at a steady pace

# Idling



- Avoid unnecessary idling
- Pay attention to the stoplights

For really painstaking advice on reducing idle time, refer to *RunABot.com*

# Planning



- Combine errands
- Buy gas during the coolest hours
- Avoid traffic, go at less congested times

# Myth vs. Reality



- Aggressive driving vs. moderate driving
- Lower speeds save gas
- Use Cruise control
- A/C on, windows up vs. A/C off, windows down
- Check your tire pressure

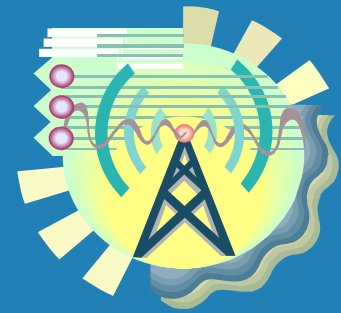
Tests by [Edmunds.com](http://Edmunds.com)

# Make Other Choices



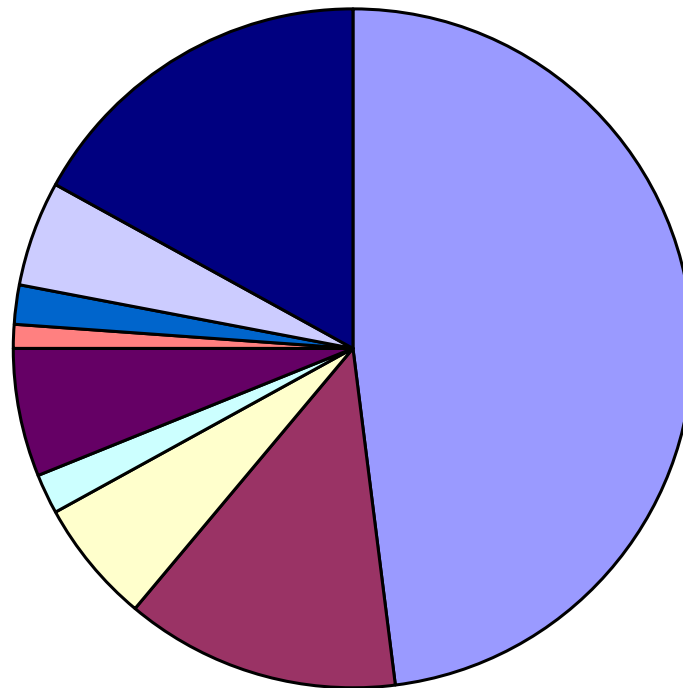
- Don't go
- Walk, bike, take a bus, carpool

# Energy Conservation Facts



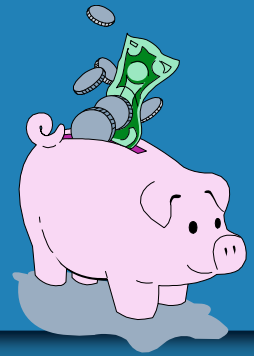
- Though accounting for only 5 percent of the world's population, Americans consume 26 percent of the world's energy. (*American Almanac*)
- In 1997, U.S. residents consumed an average of 12,133 kilowatt-hours of electricity each; almost nine times greater than the average for the rest of the world. (*Grist Magazine*)
- Worldwide, some 2 billion people are currently without electricity.
- Total U.S. residential energy consumption is projected to increase 17 percent from 1995 - 2015. (*U.S. Energy Information Administration*)
- World energy consumption is expected to increase 40% to 50% by the year 2010, and the global mix of fuels--renewables (18%), nuclear (4%), and fossil (78%)--is projected to remain substantially the same as today; thus global carbon dioxide emissions would also increase 50% to 60%.
- Among industrialized and developing countries, Canada consumes per capita the most energy in the world, the United States ranks second, and Italy consumes the least among industrialized countries.
- America uses about 15 times more energy per person than does the typical developing country.
- Residential appliances, including heating and cooling equipment and water heaters, consume 90% of all energy used in the U.S. residential sector.
- The United States spends about \$440 billion annually for energy. Energy costs U.S. consumers \$200 billion and U.S. manufacturers \$100 billion annually.

# How is energy used in a typical household?



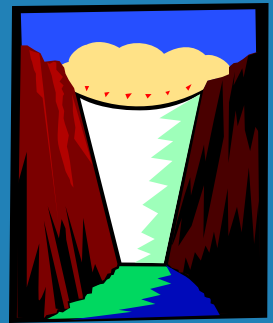
- heating/cooling
- water heater
- refrigerator
- dishwasher
- washer/dryer
- computer
- TV, VCR, DVD
- lighting
- other

# As a Share of Earnings?



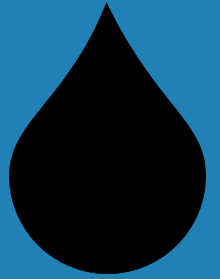
- 7% of expenditures from 1990-2004
- 11% in the early years 1980s
- 9% throughout the 80s
- Estimated in 2005 at 8.5%
- Falls disproportionately on the poor, working poor, and the elderly
- As income increases, the share of energy cost go down

# Utilities



- Electricity
- Fuel Oil
- Natural Gas
- Water

# Water

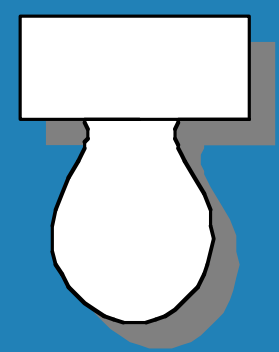


- In 1900, we used on average about 5 gallons of water per day
- Now almost 70 gallons per day



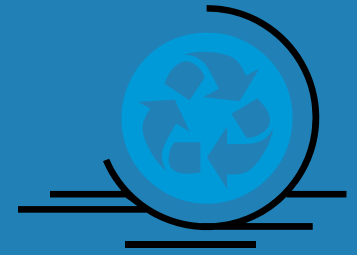
# Where does water go?

• Toilet	18.5
• Clothes washer	15.0
• Shower	11.6
• Faucets	10.9
• Leaks	9.5
• Other	1.6
• Bath	1.2
• Dishwasher	<u>1.0</u>
TOTAL	69.3 per person per day



Toilets use the most water,  
but this is lower since low  
flush toilets 1.6 gallons vs.  
5 or 6 gallons

# Water Saving Toilets



- Low flush (1.6 gallons vs. 5 to 6 gallons)
- Air assisted units
- Composting toilets
- Dual flush toilets

# Clothes Washing



Regular washer uses 40-50 gallons per load

- Only wash full loads
- For most efficiency, warm water wash, cold water rinse
- Check high efficiency, front loading washers

# Showers



Showers are always more efficient than baths

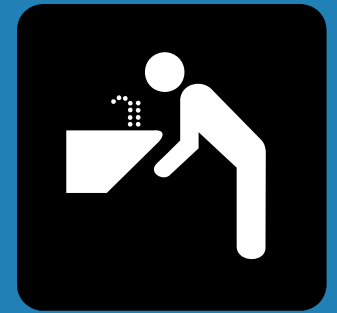
Switch to a low volume showerhead

- Restrict water's flow through showerhead from 3-8 to 2 gallons per minute
- Water temperature may need to be slightly higher because the smaller droplets cool

Replacing will save 1000 gallons of water per year per person in your home.



# Faucets



Most faucets deliver from 3 – 7 gal per  
minute

Can save 2000 gallons of water per year per  
person

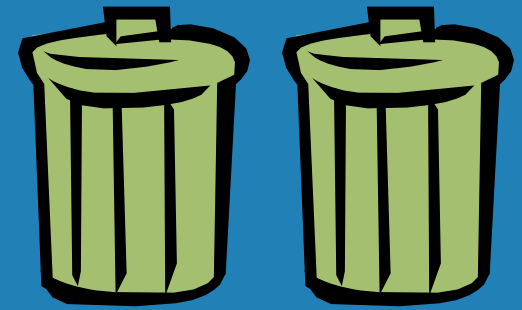


Leaks—



Fix them!

	Frequency of us	Without Water Saving Device	With Water saving devices	Savings in gal. Per person	Annual Water Savings	Energy Savings Kilowatt-hrs
Low-flush toilets (1.6 gpf)	5.1 flushes/day	20.4 gal/person	8.2 gal/person	12.2	4,453	0
Low vol. Showerhead (2.5 gpm)	5.3 min/day	15.9	13.3	2.6	949	123
Low-vol. Faucet (1.5 gpm)	4 minutes/day	12	6	6	2,190	125
Front loading Washer (27 gpl)	.37 loads/day	18.9	10	8.9	3,249	316
Water Eff. Dishwasher (7 gpl)	.1 loads/day	1.1	0.7	0.4	146	36
<b>Total</b>		<b>68.3</b>	<b>38.2</b>	<b>30.1</b>	<b>10,987</b>	<b>600</b>



Outdoor water use in the  
United States averages about  
32 gallons per person per day



# Other Water Conservation Tips

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- Dishwashing by hand or by machine?
- Turn the water off



# Simple ideas on hot water heaters

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Once a month

- Clean around water heater
- Look for leaks
- Drain a gallon or two from the heater

Once a year

- Check temperature
- Drain and flush

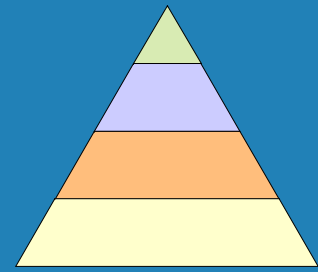
# Resources



- Cleaner and Greener Environment Program Home
- Consumer Guide to Green Energy Choices
- Energy Efficiency and Renewable Energy Dept.
- Energy Savers
- Energy Advisor
- Energy Star



# Home Management



- Replace appliances
- Warm wash, cold rinse in washer
- Keep lint trap clean on dryer
- Do full loads in dishwasher or washer
- Turn off the heat dry in dishwasher
- Correct temperature on refrigerator and freezer
- Unplug unnecessary appliances
- Use correct appliance for cooking



# More management tips

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- Use the right sized pot on stove
- Double up on cooking duties
- Use covered pan or kettle to boil water
- Keep range burners clean and shiny
- Check oven door gasket
- Turn oven off 5 minutes before time
- Use a pressure cooker

# More Management Tips



- Cover windows at dusk
- Turn hot water heater from 145° to 120°
- Clean is more efficient
- Don't over dry clothes
- Cover and wrap food in refrigerator
- Check seal around refrigerator door
- Landscape your home



# More management tips

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- Use lap top rather than a desk top
- Put computer, fax, other equipment on a surge protector and turn it off when not in use
- If you are out of a room more than 15 minutes, turn the light off



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Once again—Alaska is #1

In energy consumption per capita