A Survey on Energy

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1. Energy-Saving Behaviors

In your opinion, what is the most effective thing that you could do to conserve energy in your life?

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2. Energy Consumed by the Average Household

Think about an average household in the United States.

Now think about the total amount of energy that is used directly by that household in one year.

Consider that the energy used by a household can be divided into household operations, transportation and food production.

- Household operations include electricity, natural gas, and heating oil that is used for the house.
- Transportation includes air travel, motor travel, and public transportation used by people in the household.
- Food production includes growing and shipping food that people in the household eat.

Please enter whole numbers with no other text (not decimals, ranges, or percent signs).

1. What percentage of the total energy consumed per year by an average household in the United States is attributed to energy used by household operations? _____
2. What percentage of the total energy consumed per year by an average household in the United States is attributed to energy used by transportation? _____
3. What percentage of the total energy consumed per year by an average household in the United States is attributed to energy used by food production? _____

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3. Energy Used by Devices in One Hour

A 100-Watt incandescent light bulb uses 100 units of energy in one hour.

How many units of energy do you think each of the following devices typically uses in one hour?

Enter a number less than 100 if you think the device uses less energy than a 100-Watt bulb. Enter a number greater than 100 if you think the device uses more energy than a 100-Watt bulb. Your best estimates are fine. Please enter whole numbers with no other text (not decimals, ranges, or percent signs).

[Error message "Please enter whole numbers with no other text (not decimals, ranges, or percent signs)."]

Device	Units of Energy per Hour
A compact fluorescent light bulb that is as bright as a 100-Watt incandescent light bulb	_____
A desktop computer	_____
A laptop computer	_____
A stereo	_____
An electric clothes dryer	_____
A portable heater	_____
A room air-conditioner	_____
A central air conditioner	_____
A dish washer	_____

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4. Energy Saved in the Household

Turning off a 100-Watt incandescent light bulb for one hour SAVES 100 units of energy.

How many units of energy do you think each of the following changes will save?

Enter a number less than 100 if you think the change saves less energy than turning off a 100-Watt bulb for one hour. Enter a number greater than 100 if you think the change saves more energy than turning off a 100-Watt bulb for one hour. Your best estimates are fine.

Please enter whole numbers with no other text (not decimals, ranges, or percent signs).

Remember to enter a number of the amount of energy SAVED, not the amount of energy USED.

[Text entered is validated for a whole number between 0 and 1000000. Error message: "Please enter whole numbers with no other text (not decimals, ranges, or percent signs)."]

1. Replacing one 100-watt incandescent bulb with equally bright compact fluorescent bulb that is used for one hour would reduce energy use by how many units? _____
2. Replacing one 100-watt kitchen bulb with a 75-watt bulb that is used for one hour would reduce energy use by how many units? _____
3. Drying clothes on a clothes line (not using the dryer) for one load of laundry would reduce energy use by how many units? _____

4. In the summer: turning up the thermostat on your air conditioner (making your home warmer) by 5° F would reduce energy use by how many units? _____
5. In the winter: turning down the thermostat on your heater (making your home cooler) by 5° F would reduce energy use by how many units? _____
6. Changing washer temperature settings from "hot wash, warm rinse" to "warm wash, cold rinse" for one load of laundry would reduce energy use by how many units? _____

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5. Energy Saved in Transportation

Assume that a 20-miles-per-gallon car going 60 miles per hour uses 100 units of energy in one hour. (Note that this scale in different from that used in previous questions, in that "100 units" now refers to a different amount of energy.)

How many units of energy do you think each of the following changes will save?

Enter a number less than 100 if you think the change saves less energy than is consumed by the 20-miles-per-gallon car going 60 miles per hour. Enter a number greater than 100 if you think the change saves more energy than consumed by the 20-miles-per-gallon car going 60 miles per hour. Your best estimates are fine.

Please enter whole numbers with no other text (not decimals, ranges, or percent signs).

Remember to enter a number of the amount of energy SAVED, not the amount of energy USED.

[Text entered is validated for a whole number between 0 and 100000000. Error message: "Please enter whole numbers with no other text (not decimals, ranges, or percent signs)."]

1. Driving a more fuel efficient car (30 miles per gallon instead of 20 miles per gallon) at 60 miles per hour for one hour would reduce energy use by how many units? _____
2. Tuning up the car twice a year (including air filter changes) would reduce energy use by how many units for the **whole year**? _____
3. Assume that you are driving a 20-miles-per-gallon car for 60 miles. Reducing your highway speed from 70 miles per hour to 60 miles per hour would reduce energy use by how many units for the trip? _____

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6. Energy Used to Transport Goods

In your opinion, which of the following modes of transportation uses the most energy per mile to transport one ton of goods? Please check the mode that uses the most energy, the second most, the third most, and the least energy.

Mode	Most energy	Second most energy	Third most energy	Least energy
Ship	[ ]	[ ]	[ ]	[ ]
Train	[ ]	[ ]	[ ]	[ ]
Airplane	[ ]	[ ]	[ ]	[ ]
Truck	[ ]	[ ]	[ ]	[ ]

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7. Energy Used in Recycling and Manufacturing

In your opinion, which of the following uses the most energy? Please check the activity that uses the most energy, the second most, the third most, and the least energy.

Activity	Most energy	Second most energy	Third most energy	Least energy
Making a can out of virgin aluminum	[ ]	[ ]	[ ]	[ ]
Making a can out of recycled aluminum	[ ]	[ ]	[ ]	[ ]
Making a glass bottle out of virgin glass	[ ]	[ ]	[ ]	[ ]
Making a glass bottle out of recycled glass	[ ]	[ ]	[ ]	[ ]

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8. Ease or Difficulty of Energy-Saving Behaviors

Please indicate how easy or hard it would be for you to make each of the following changes. Please consider all aspects of the changes, including the physical or mental effort required, the time or hassle involved, and any relevant monetary costs. > If you already engage in the activity please check the option on the far left.

Change	Do it already	Extremely easy	Very easy	Somewhat easy	Neither easy nor hard	Somewhat hard	Very hard	Extremely hard
Buying a more fuel efficient automobile (31 vs. 20 miles per gallon)	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Carpooling with one other person to work	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Replacing poorly insulated windows with highly insulated windows	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Cutting highway speed from 70 miles per hour to 60 miles per hour	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Installing a more efficient heating unit (92% efficient)	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
In the winter: turning down the thermostat from 72° F to 68° F during the day and to 65° F during the night	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
In the summer: turning up the thermostat on your air conditioner from 73° F to 78° F	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

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9. Ease or Difficulty of Energy-Saving Behaviors

(Note: This section uses the same instructions and scale as Section 8) > If you already engage in the activity please check the option on the far left.

Change	Do it already	Extremely easy	Very easy	Somewhat easy	Neither easy nor hard	Somewhat hard	Very hard	Extremely hard
Tuning up the car twice a year (including air filter changes)	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Replacing 85% of all incandescent bulbs with equally bright compact fluorescent bulbs	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Turning up the refrigerator thermostat from 33° F to 38° F and the freezer thermostat from -5° F to 0° F	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Drying clothes on a clothes line (not using the dryer) for 5 months of the year	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Watching 25% fewer hours of TV each day	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Installing a more efficient washer (replace a 2001 or older non-Energy Star washer with a new Energy Star)	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Changing washer temperature settings from “hot wash, warm rinse” to “warm wash, cold rinse”	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Replacing two 100-watt kitchen bulbs with 75-watt bulbs	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

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10. Attitudes

Please indicate how strongly you agree or disagree with each of the following statements.

Statement	Completely agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Completely disagree
We are approaching the limit of the number of people the earth can support.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Humans have the right to modify the natural environment to suit their needs.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
When humans interfere with nature it often produces disastrous consequences.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Human ingenuity will insure that we do NOT make the earth unlivable.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Humans are severely abusing the environment.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
The earth has plenty of natural resources if we can just learn how to develop them.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Plants and animals have as much right as humans to exist.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

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11. Attitudes

Please indicate how strongly you agree or disagree with each of the following statements.

Statement	Completely agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Completely disagree
The balance of nature is strong enough to cope with the impacts of modern industrial nations.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Despite our special abilities, humans are still subject to the laws of nature.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
The so-called “ecological crisis” facing humankind has been greatly exaggerated.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
The earth is like a spaceship with very limited room and resources.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Humans were meant to rule over the rest of nature.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
The balance of nature is very delicate and easily upset.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Humans will eventually learn enough about how nature works to be able to control it.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
If things continue on their present course, we will soon experience a major ecological catastrophe.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

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12. Climate Change Attitudes

Please indicate how strongly you agree or disagree with each of the following statements.

Statement	Completely agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Completely disagree
Humans are responsible for global warming and climate change.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Humans do not need to change their lifestyles to address global warming and climate change.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
I believe that my actions contribute to global warming and climate change.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
I believe that I need to change my lifestyle to address global warming and climate change.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

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13. Math Questions

To answer the following questions, please enter whole numbers or decimals with no other text (not ranges or percent signs).

1. Imagine that we flip a fair coin 1,000 times. What is your best guess about how many times the coin would come up heads in 1,000 flips? _____
2. In the BIG BUCKS LOTTERY, the chance of winning a $10 prize is 1%. What is your best guess about how many people would win a $10 prize if 1000 people each buy a single ticket to BIG BUCKS? _____
3. In ACME PUBLISHING SWEEPSAKES, the chance of winning a car is 1 in 1,000. What percent of tickets to ACME PUBLISHING SWEEPSAKES win a car? _____

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14. Demographics

Please answer the following questions about yourself and your situation. Your confidential answers will help us understand the types of people who have completed the survey.

1. Do you consume more or less energy than the average individual in the United States?
   - [ ] I consume more energy than average
   - [ ] I consume less energy than average
2. About how much was the last monthly electric bill for your household? Please provide a dollar amount (rounded to the nearest dollar) with no other text. Your best estimate is fine. _____
3. About how much did your household pay for gas (for transportation) last month? Please provide a dollar amount (rounded to the nearest dollar) with no other text. Your best estimate is fine. _____
4. How many people are there in your household? _____
5. For the vehicle you use most, approximately what is the vehicle's gas mileage? (Assume your normal mix of city and highway driving.)
   - [ ] I do not own or lease a vehicle
   - [ ] less than 10 miles per gallon
   - [ ] 11-20 miles per gallon
   - [ ] 21-30 miles per gallon
   - [ ] 31-40 miles per gallon
   - [ ] 41-50 miles per gallon
   - [ ] more than 50 miles per gallon
6. Do you have any compact fluorescent light bulbs or fluorescent linear bulbs (tube lights) installed in your home?
   - [ ] Yes
   - [ ] No
7. When buying **large** household appliances (like refrigerators, dishwashers, etc.), do you consider their energy efficiency in your purchasing decisions?
   - [ ] Yes
   - [ ] No
8. When buying **small** household appliances (like coffee makers, blenders, etc.), do you consider their energy efficiency in your purchasing decisions?
   - [ ] Yes
   - [ ] No
9. Have you ever had an energy audit of your home? (A home energy audit is done to evaluate measures you can take to make your home more energy efficient.)
   - [ ] Yes
   - [ ] No
10. This past year, was anything done to weatherize your home? (Examples include caulking and weather stripping to seal air leaks around windows and doors, etc.)
    - [ ] Yes
    - [ ] No
11. Does your home have any double-paned windows (two glass panels set in a frame, separated by a small space) or storm windows (installed on the interior or exterior of the primary window)?

- [ ] Yes
- [ ] No

12. Have you ever bought renewable energy from your electricity provider?

- [ ] Yes
- [ ] No

13. This past year, did you send a letter to any political official about environmental or energy issues?

- [ ] Yes
- [ ] No

14. Do you consider yourself an environmentalist?

- [ ] Yes
- [ ] No

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15. Demographics (Continued)

1. Do you rent or own the place where you live?

- [ ] Rent
- [ ] Own

2. In the last election, for whom did you vote?

- [ ] Barack Obama
- [ ] John McCain
- [ ] An Independent candidate
- [ ] Chose not to vote
- [ ] Could not vote
- [ ] Do not want to divulge

3. How would you describe your political beliefs? ( ) Extremely liberal ( ) Liberal ( ) Slightly liberal ( ) Moderate ( ) Slightly conservative ( ) Conservative ( ) Extremely conservative

4. What is your sex?

- [ ] Female
- [ ] Male

5. What is your age? _____

6. During 2008, what was your yearly household income before tax? Your best estimate is fine.

- [ ] Did not have an income
- [ ] < $20,000
- [ ] $20,000 - $49,999
- [ ] $50,000 - $79,999
- [ ] $80,000 - $109,999
- [ ] $110,000 - $139,999
- [ ] $140,000 - $169,999
- [ ] >$170,000

7. What is the highest level of education that you have completed?

- [ ] Some schooling, but no diploma or degree
- [ ] High school diploma or GED
- [ ] Some college
- [ ] College degree
- [ ] Some graduate school
- [ ] Graduate degree

8. What is your email address? Your email address is required to make sure you receive your $10 Amazon gift certificate. The email address will no way be linked to any of the answers you have provided. _____

9. Your ZIP code? _____

10. Do you have any additional thoughts about energy use or energy conservation, or any comments about the survey that you would like to share with us?

_____ _____

_____ _____