Field Report

MIT Energy Study

Conducted for the
Massachusetts Institute of Technology

Submitted to:
Stephen Ansolabehere,
Professor of Political Science
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1360 Willow Road, Suite 101
Menlo Park, CA 94025
P: 650-289-2160
F: 650-289-2001
www.knowledgenetworks.com

Knowledge Networks Deliverable Authorization			
Printed Name	Signature	Date	Title
J. Michael Dennis		June 28, 2002	VP, Government and Academic Research

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MIT Energy Study

Introduction

Knowledge Networks conducted a study of opinions on energy use, energy sources and environmental issues for the Massachusetts Institute of Technology (MIT). The survey was fielded on June 14, 2002 to 1,831 Knowledge Networks panel members who represented a general population sample of adults, 18 years of age or older. The study's objective was to collect a minimum of 1,200 total completed interviews by June 28, 2002.

Table 1 below displays the completion rate of the survey.

Table 1. Survey Completion Rate

Field Start Date	Field End Date	Cases Fielded	Completes	Completion Rate
6/14/02	6/27/02*	1,831	1,342	73.29%

**The field period of the MIT study will remain open until 7/5/02*

MIT provided Knowledge Networks with the survey instrument. In conjunction with MIT, Knowledge Networks revised the instrument so that it met the design requirements of the WebTV platform.

Five different experimental tests groups, Group 0 and Groups A through D were implemented in the survey. The difference between the groups was the paragraph of information presented to the panel member before question eleven of the survey. Group 0 was shown no text screen while Groups A through D were shown similar, but different, paragraphs of information. Respondents were assigned to a group once they entered the survey so that Group 0 would contain 1/3 of the total respondent and Groups A through D would contain 1/6 each.

Table 1B below displays the group breakdowns.

Table 1B. Experimental Groups

Group	Description Key Point	Completes Per Group	Design Yield	Percent of Total Completes
0	No information displayed	450	33.3%	33.5%
A	Fossil fuels	225	16.6%	16.8%
B	Global warming	222	16.6%	16.5%
C	Toxic wastes	220	16.6%	16.4%
D	Fossil fuels / global warming / toxic wastes	225	16.6%	16.8%
Total		1342	100%	100%

Data File Deliverables and Descriptions

Three datasets have been delivered to MIT. 1) A fully-labeled SPSS file including Knowledge Network's standard profile variables, which are owned by Knowledge Networks and licensed to MIT for analysis and reporting. 2) Additional SPSS file containing standard profile and political variables for non-respondents. 3) The open-ended data file (in Excel) provides panel members' verbatim responses for survey questions QA, QB, and Q12.

Table 2. Deliverable Description

Delivery Date	*File Type*	*File Name*	*File Size*	*N Records*	*Inclusion of Standard Background Demographics*
6/28/2002	SPSS	MIT_Final_Client.sav	192KB	N=1,354	Yes
6/28/2002	SPSS	MIT_Nonrespondent.sav	20KB	N=478	Yes
6/28/2002	MS Excel	MIT_OE.xls	243KB	N=1,354	NA

Several supplemental variables are provided to assist MIT in identifying cases that could potentially be of interest. The GROUP variable displays which experimental test group of which each case was a part. DURATION variable shows the number of minutes it took a respondent to complete the survey. A second variable, RESUME, identifies the cases where the Panel Members took 100 minutes or more to complete the survey, suggesting these cases began and finished the interview in two or more sessions. The INCLUDE variable identifies if a respondent refused (skipped) more than 1/3 of the total number of survey questions.

Table 3 below compares the frequencies of key demographic variables between the weighted and unweighted respondents, the sample population the survey was fielded to as well as the standard CPS benchmarks.

Table 3. Comparison of Sample Frequencies

Demo	Completed Weighted %	Completed Unweighted %	Fielded Unweighted %	US Census %
Gender				
Male	47.7%	48.1%	48.6%	48%
Female	52.3%	51.9%	51.4%	52%
Age				
18-29	21.3%	17.1%	20.4%	21.7%
30-44	31.2%	27.0%	29.4%	31.1%
45-59	25.9%	30.4%	28.7%	25.8%
60+	21.6%	25.5%	21.5%	21.4%
Race/Ethnicity				
White	72.8%	76.8%	73%	72.7%
Black	11.6%	9.1%	11.2%	11.6%
Hispanic	11.0%	9.5%	10.5%	10.9%
Other	4.7%	4.7%	5.4%	4.8%
Region				
Northeast	18.9%	18.6%	18.8%	19.1%
Midwest	22.7%	23.8%	24%	22.8%
South	35.7%	35.6%	34.7%	35.6%
West	22.7%	22.0%	22.5%	22.5%
Education				
Less than high school	16.8%	16.6%	17.8%	16.7%
High school	32.2%	31.2%	30.5%	32.3%
Some college	27.0%	28.5%	27.9%	27%
College degree or more	23.9%	23.6%	23.8%	24%

The table below shows the name and description of each of the supplemental variables.

Table 4: Supplemental Variables

Variable Name	Variable Description
serial	Case identification number
weight	Final post stratification weight
dt_start	Date interview started
tm_start	Time interview started
dt_end	Date interview ended
tm_end	Time interview ended
duration	Duration of interview in minutes
resume	Interview Type
include	Cases to include in final analyses
group	Experiment group
ppgender	Gender
ppage	Age in years
ppagecat	Age - 7 categories
ppagect4	Age - 4 categories
ppeth	Race / Ethnicity
ppeduc	Education (highest degree received)
ppeducat	Education (categorical)
pphouse	Housing Type
pprent	Ownership Status of Living Quarters
ppincimp	HH Income (profile and imputed)
ppmarit	Marital Status
pphhhead	Household Head
pphhsize	Household Size
ppt01	Total number of HH members age 1 or younger
ppt1317	Total number of HH members age 13 to 17
ppt18ov	Total number of HH members age 18 or older
ppt25	Total number of HH members age 2 to 5
ppt612	Total number of HH members age 6 to 12
ppwork	Current Employment Status
ppstaten	State (numeric)
ppreg4	Region 4 (based on state of residence)
ppreg9	Region 9 (based on state of residence)

Key Personnel

Key personnel on the MIT Energy study include:

Mike Dennis – Vice President and Managing Director, Client Service. M. Dennis is based in the Menlo Park office of Knowledge Networks.
Phone number: (650) 289-2160
email: mdennis@knowledgenetworks.com

Vicki Huggins – Director of Statistics. V. Huggins is based in the Menlo Park office of Knowledge Networks.
Phone number: (650) 289-2062
Email: vhuggins@knowledgenetworks.com

Kathy Dykeman – Project Director. K. Dykeman is based in the Menlo Park office of Knowledge Networks.
Phone number: (650) 289-2028
Email: kdykeman@knowledgenetworks.com

Stefan Subias – Research Analyst, Custom Research. S. Subias is based in the Menlo Park office of Knowledge Networks.
Phone number: (650) 289-2162
Email: ssubias@knowledgenetworks.com

Knowledge Networks Methodology

Introduction

Knowledge Networks has recruited the first online research panel that is designed to be representative of the entire U.S. population. The panel is representative because it is recruited using high quality probability sampling techniques, and is not limited to current Web users or computer owners. Knowledge Networks selects households using random digit dialing (RDD) and provides selected households with free hardware and Internet access. This allows surveys to be administered using a Web browser and enables the inclusion of multimedia content. Once a person is recruited to the panel, they can be contacted by e-mail (instead of by phone or mail). This permits surveys to be fielded very quickly and economically. In addition, this approach reduces the burden placed on respondents, since e-mail notification is less obtrusive than telephone calls, and most respondents find answering Web questionnaires to be more interesting and engaging than being questioned by a telephone interviewer.

Panel Recruitment Methodology

Knowledge Networks' panel recruitment methodology uses the quality standards established by the best Random Digit Dialing (RDD) surveys conducted for the Federal Government.

Knowledge Networks utilizes list-assisted RDD sampling techniques on the sample frame consisting of the entire United States telephone population. The sample frame is updated quarterly. Knowledge Networks excludes only those banks of telephone numbers (consisting of 100 telephone numbers) that have zero directory-listed phone numbers. Knowledge Networks' telephone numbers are selected from the 1+ banks with equal probability of selection for each number. Note that the sampling is done without replacement to ensure that numbers already fielded by Knowledge Networks do not get fielded again.

Having generated the initial list of telephone numbers, the sample preparation system excludes confirmed disconnected and non-residential telephone numbers. Next, the sample is screened to exclude numbers that are not in the WebTV Internet Service Provider network. This process results in the exclusion of approximately 6% to 8% of the United States population. This percentage is diminishing steadily and as of July 2001, we will begin to include a small sample from the out of WebTV Internet Service Provider network in the panel to represent these areas and reduce coverage error.

Telephone numbers for which Knowledge Networks is able to recover a valid postal address (about 50%) are sent an advance mailing informing them that they have been selected to participate in the Knowledge Networks Panel. In addition to information about the Knowledge Networks Panel, the advance mailing also contains a monetary incentive to encourage cooperation when the interviewer calls.

Following the mailing, the telephone recruitment process begins. The numbers called by interviewers consist of all numbers sent an advance mailing, as well as 50% of the numbers not sent an advance mailing. The resulting cost efficiency more than offsets the decrease in precision caused by the need for sample weights. Cases sent to telephone interviewers are dialed up to 90 days, with at least 15 dial attempts on cases where no one answers the phone, and 25 dial attempts on phone numbers known to be associated with households. Extensive refusal conversion is also performed.

Experienced interviewers conduct all recruitment interviews. An interview, which typically requires about 10 minutes, begins with the interviewer informing the household member that they have been selected to join the Knowledge Networks Panel. They are told that in return for completing a short survey weekly, the household will be given a WebTV set-top box and free monthly Internet access. All members in the household are then enumerated, and some initial demographic variables and background information of prior computer and Internet usage are collected.

To ensure consistent delivery of survey content, each household is provided with identical hardware, even if they currently own a computer or have Internet access. Microsoft's WebTV is the hardware platform currently used by the Knowledge Networks panel. The device consists of a set-top box that connects to a TV and the telephone. It also includes a remote keyboard and pointing device. WebTV has a built-in 56K modem that provides the household with a connection to the Internet. The base unit also has a small hard drive to accommodate large file downloads, including video files. File downloads do not require any user intervention and usually occur during off hours.

Prior to shipment, each unit is custom configured with individual email accounts, so that it is ready for immediate use by the household. Most households are able to install the hardware without additional assistance, though Knowledge Networks maintains a telephone technical support line and will, when needed, provide on-site installation. The Knowledge Networks Call Center also contacts household members who do not respond to e-mail and attempts to restore contact and cooperation.

All new panel members are sent an initial survey to confirm equipment installation and familiarize them with the WebTV unit. Demographics such as gender, age, race, income, and education are collected for each participant to create a member profile. This information can be used to determine eligibility for specific studies and need not be gathered with each survey.

Survey Administration

For client-based surveys, a sample is drawn at random from active panel members who meet the screening criteria (if any) for the client's study. The typical sample size is between 200 and 2000 persons, depending on the purpose of the study. Once selected, members can be sent an advance letter by mail several days prior to receiving the questionnaire through their WebTV appliance to notify them of an important, upcoming survey.

Once assigned to a survey, members receive a notification email on their WebTV letting them know there is a new survey available for them to take. The email notification contains a button to start the survey. No login name or password is required. The field period depends on the client's needs, and can range anywhere from a few minutes to two weeks.

Email reminders are sent to uncooperative panel members. If email does not generate a response, a phone reminder is initiated. The usual protocol is to wait at least three days and to permit a weekend to pass before calling. Knowledge Networks also operates an ongoing incentive program to encourage participation and create member loyalty. To assist panel members with their survey taking, each individual has a personalized "home page" that lists all the surveys that were assigned to that member and have yet to be completed.

Survey Sampling from Panel

Once Panel Members are recruited and profiled, they become eligible for selection for specific surveys. In most cases, the specific survey sample represents a simple random sample from the panel. The sample is drawn from eligible members using an implicitly stratified systematic sample design. Customized stratified random sampling based on profile data is also conducted, as required by specific studies.

The primary sampling rule is not to assign more than one survey per week to members.
In certain cases, a survey sample calls for pre-screening, that is, members are drawn from a subsample of the panel (e.g., females, Republicans). In such cases, care is taken to ensure that all subsequent survey sample drawn that week are selected in such a way as to result in a sample that is representative of the panel distributions. Furthermore, Panel Members are not assigned surveys on the same topic in a given three-month period.

For this study, 1,831 general population panel members of age 18 or older were selected and administered the survey.

Weighting and Estimation

Whereas in principle the sample design is an equal probability design that is self-weighting, in fact there are several known deviations from this guiding principle. Furthermore, despite our efforts to correct for known sources of deviation from equal-probability design, there are several other sources of survey error that are an inherent part the process. We address these sources of survey error globally through the poststratification weights, which we describe below.

Sample Design Weights

The five sources of deviation from epsem design are:

1. Half-sampling of telephone numbers for which we could not find an address,
2. RDD sampling rates proportional to the number of phone lines in the household,
3. Minor oversampling of Chicago and Los Angeles due to early pilot surveys in those two cities,
4. Short-term double-sampling the four largest states (CA, NY, FL, and TX) and central region states, and
5. Under-sampling of households not covered by MSN TV.
6. Oversampling of minority households (Black and Hispanic)
7. Selection of one adult per household.

A few words about each feature:

1. Once the telephone numbers have been purged and screened, we address match as many of these numbers as possible. The success rate so far has been in the 50-60% range. The telephone numbers with addresses are sent a letter. The remaining, unmatched numbers are half-sampled in order to reduce costs. Based on previous research we suspect that the reduced field costs resulting from this allocation strategy will more than offset increases in the design effect due to the increased variance among the weights. We are currently quantifying these balancing features.

2. As part of the field data collection operation, we collect information on the number of separate phone lines in the selected households. We correspondingly down-weight households with multiple phone lines.

3. Two pilot surveys carried out in Chicago and Los Angeles increased the relative size of the sample from these two cities. The impact of this feature is disappearing as the panel grows.

4. Since we anticipated additional surveying in the four largest states, we double-sampled these states during January-October 2000. Similarly, the central region states were over-sampled for a brief period.

5. Certain areas of the U.S. are not serviced by MSN®. We select a smaller sample of phone numbers in those areas and use other Internet Service Providers for Internet access of recruited households in those areas.

6. As of October 2001, we began oversampling minority households (Black and Hispanic) to increase panel capacity for those subgroups.

7. Finally, for most of our surveys, we select panel members across the board, regardless of household affiliation. For some surveys, however, we select members in two stages: households in the first stage and one adult per household in the second stage.

We correct for this feature by multiplying the probabilities of selection by 1/ai where ai represents the number of adults (18 and over) in the household.

Poststratification Weights

The primary purpose of a poststratification adjustment to survey weights is to reduce the sampling error for characteristics highly correlated with reliable demographic and geographic totals – called population benchmarks. To implement poststratification, we used the following raking variables:

- gender: male, female
- age: 21-29, 30-44, 45-59, 60 and over
- race/ethnicity: white (nonhispanic), black (nonhispanic), other (nonhispanic), hispanic
- region: northeast, midwest, south, west
- education - highest level achieved: less than high school, high school, some college, college degree or more

In order to calculate final weights, we derive weighted sample distributions along various combinations of the above variables. Similar distributions are calculated using the most recent U.S. Census Bureau's Current Population Survey data and the Knowledge Networks panel data. Cell-by-cell adjustments over the various univariate and bivariate distributions are calculated to make the weighted sample cells match those of the U.S. Census and the Knowledge Networks panel. This process, known as raking, is repeated iteratively until there is convergence between the weighted sample and benchmark distributions (CPS distributions). Occasionally, collapsing of post-stratification cells is necessary. This is dependent on the size of the sample and topology of the sample universe.

The variable “weight” is the final post-stratification weight for all completed cases.

APPENDIX A: QUESTIONNAIRE

MIT Energy Study
JUNE 2002

Email Subject Line: MIT Energy Study

Email Body: This week we'd like you to participate in a survey sponsored by the Massachusetts Institute of Technology (MIT) regarding your attitudes and views on energy sources, energy use, and environmental concerns. In this survey, you will be asked to voice your opinions on current and future issues pertaining to US energy policies. The survey should take approximately 10 minutes to complete. As always, we appreciate your participation and value your responses.

[LARGE TEXT BOX]

QA. What is the most important problem facing the United States today?

[**RADIO BUTTON**]

QB. In politics do you consider yourself to be a Democrat, Republican, another partisan, or a non-partisan? **[ROTATE FIRST TWO ITEMS OF ANSWER LIST]**

Republican.....1
Democrat.....2
Green.....3
Reform.....4
Other _____.....5
No Party.....6

[**RADIO BUTTON**]

[**RANDOMLY SHOW ONE OF THE TWO VERSIONS OF QC**]

QC. Do you consider yourself politically conservative, liberal or moderate?

Strong Conservative 1
Conservative 2
Lean Conservative 3
Moderate 4
Lean Liberal 5
Liberal 6

Strong Liberal 7

Do you consider yourself politically liberal, conservative or moderate?

Strong Liberal 1
Liberal 2
Lean Liberal 3
Moderate 4
Lean Conservative 5
Conservative 6
Strong Conservative 7

[**RADIO BUTTON, ALIGN HORIZONTALLY**]

QD. Many government policies are designed to protect the environment, but these policies are costly to corporations and other businesses.

Which of the following captures your general opinion?

Environmental Regulations are…

1	2	3	4	5
Excessively Strong	Too Strong, but Not Excessive	About Right	Need to be Somewhat Stronger	Need to be A Lot Stronger

***** ***** ***** ***** ***** ***** ***** ***** ***** ***** ***** ******

[**INTROQ1**]

The following questions will ask you about energy use and the environment in the United States.

[**RADIO BUTTON**]

Q1. How do you heat your home?

Natural Gas 1
Oil 2
Electricity 3
Solar 4
Other 6

[**RADIO BUTTON**]

Q2. Do you have air conditioning?

Yes 1
No 2

[**RADIO BUTTON**]

Q3. Approximately how much did you pay for electricity last month?

Under $25 1
$25 to $50 2
$50 to $75 3
$75 to $100 4
$100 to $125 5
$125 to $150 6
Over $150 7

[**RADIO BUTTON, ALIGN HORIZONTALLY**]

Q4. Last summer there were energy shortages in California. Some people thought those were one-time problems; other people felt that the shortfalls pointed to the inadequacy of the U.S. energy supply.

How concerned are you about energy shortages in the future?

1	2	3	4
Very	Somewhat	Not Very	Not at All

[**RADIO BUTTON, ALIGN HORIZONTALLY**]

Q5. How important a problem is pollution in the United States today?

1	2	3	4
Very Significant	Somewhat Significant	Not Very Significant	Not A Problem

[**RADIO BUTTON, ALIGN HORIZONTALLY**]

Q6. There is a lot of talk about global warming caused by carbon dioxide emissions from burning coal, natural gas, and oil to generate electricity. In thinking about the important problems facing the United States and about your personal situation.

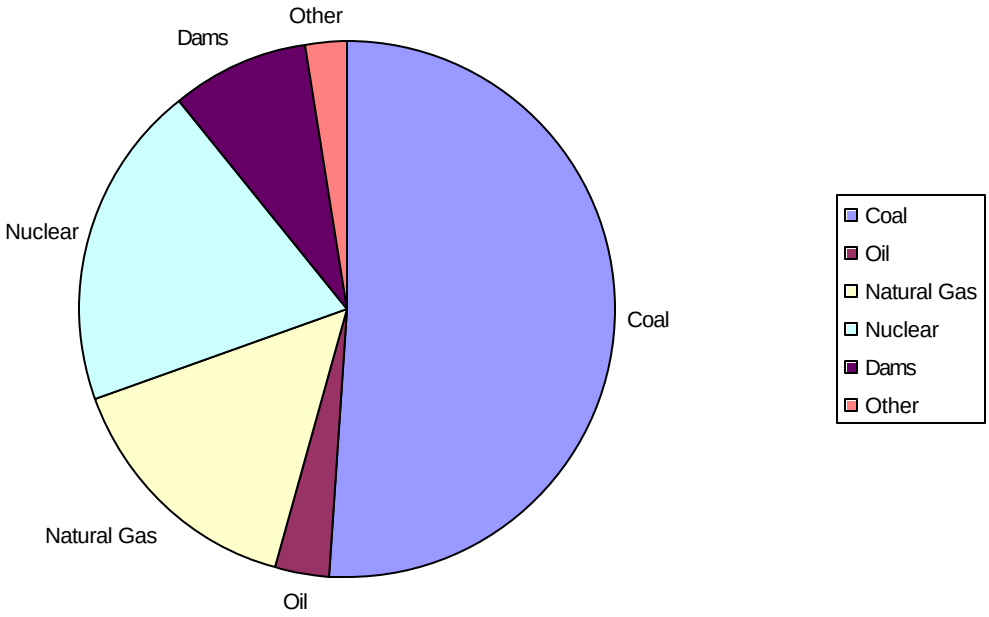
Is this problem:

1	2	3	4
Very Important	Somewhat Important	Not Very Important	Not Important At All

[INCLUDE DATA FOR CHART TEXT LISTED AT END OF DOCUMENT]

[**INTROQ7**]

The pie chart below displays information about how electricity is produced in the United States and shows the fraction of total electricity generated by different fuels. This information comes from the U. S. Department of Energy.



Source: Department of Energy

{Data for the chart. Coal 1882 Megawatts, Oil 119, Natural Gas 565, Nuclear 728, Dams 307, Other 89; Total = 3691}

GRID ANSWER
[GRID: RADIO BUTTONS ACROSS/DOWN]
[PROMPT IF NA FOR EACH ROW]

Q7. Some ways of generating electricity may be harmful to the environment we live in because they produce air pollution, water pollution, or toxic wastes. How harmful do you think each of these power sources is?

	1	2	3	4	5
	Very Harmful	Moderately Harmful	Somewhat Harmful	Slightly Harmful	Not Harmful At All
Coal					
Hydroelectric (Dams in Rivers)					
Natural Gas					
Nuclear					
Oil					
Solar					
Wind					

GRID ANSWER
[GRID: RADIO BUTTONS ACROSS/DOWN]
[PROMPT IF NA FOR EACH ROW]

Q8. Think about the costs of producing electricity of different sources of electricity. How expensive do you think it is to produce electricity with each of the following fuels?

	1	2	3	4	5
	Very Expensive	Somewhat Expensive	Moderately Priced	Somewhat Cheap	Very Cheap
Coal					
Hydroelectric (Dams in Rivers)					
Natural Gas					
Nuclear					
Oil					
Solar					
Wind					

[**RADIO BUTTON, ALIGN HORIZONTALLY**]

Q9. There are approximately 100 nuclear power plants in the United States. How likely do you think it is that in the next 10 years there will be a serious accident at a nuclear power plant?

1	2	3	4	5

Almost Certain Very Likely Somewhat Likely Not Very Likely Not At All

[**RADIO BUTTON, ALIGN HORIZONTALLY, NOT SURE SHOULD BE ON A SEPARATE LINE**]

Q10. Do you agree or disagree with the following: Nuclear waste can be stored safely for many years.

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

**** **** **** **** **** ****

[SCRIPTING INSTRUCTIONS: EACH RESPONDENT WILL BE SHOWN 1 OF THE TOTAL 5 INFORMATION CONCEPTS. THE CONCEPTS WILL BE DIVIDED AS:
GROUP 0: 1/3
GROUPS A TO D: 1/6 EACH
INCLUDE VARIABLE TO CAPTURE WHICH CONCEPT WAS SHOWN]

Experiment:

At this point the sample is randomly divided into 5 groups. Each group will receive a different set of information contained in the following scripts. The information is factually accurate.

Scripts are listed below, following the end of the questionnaire.

The division of the sample is as follows. Group 0, Control Group, 400 cases. Groups A through D, 200 cases each.

**** **** **** **** **** **** ****

GRID ANSWER
[GRID: RADIO BUTTONS ACROSS/DOWN]
[PROMPT IF NA FOR EACH ROW]

Q11. Consumers, such as you, have more and more say in how electricity is produced in the United States.

To make more electricity to meet the country's needs over the next 25 years, new power plants will have to be built. Companies and government agencies need to start planning today. How should we meet this demand? For each power source indicate whether you feel the U.S should increase or reduce its use, or not use at all.

	1	2	3	4	5	6
	Reduce A Lot	Reduce Somewhat	Keep Same	Increase Somewhat	Increase A Lot	Not Use At All
Coal						

Hydroelectric (Dams In Rivers)
Natural Gas
Nuclear
Oil
Solar
Wind

[LARGE TEXT BOX]

Question 12. If there is a source of power you think we should not use. Please explain what your most important concerns are?

[**RADIO BUTTON, ALIGN HORIZONTALLY**]

Q13. To meet new electricity demand, utilities will have to build additional power plants. How would you feel if a new natural gas fired power plant were built within 25 miles of your home?

1	2	3	4
Strongly Oppose	Somewhat Oppose	Support Somewhat	Strong Support

[**RADIO BUTTON, ALIGN HORIZONTALLY**]

Q14. How would you feel if a new coal-fired power plant were built within 25 miles of your home?

1	2	3	4
Strongly Oppose	Somewhat Oppose	Support Somewhat	Strong Support

[**RADIO BUTTON, ALIGN HORIZONTALLY**]

Q15. How would you feel if a new nuclear power plant were built within 25 miles of your home?

1	2	3	4
Strongly Oppose	Somewhat Oppose	Support Somewhat	Strongly Support

[CHECK BOXES, LIMIT TO TWO ANSWERS]

Q16. The United States government budgets 30 billion dollars for research on new energy technologies and improvement of existing technologies. Which **two** of these would you say should be a priority for this research effort?

More efficient electric appliances 1
Solar Power.....2
Nuclear Power.....3
Coal Power.....4
Wind Power.....5

Natural Gas 6
Energy from grain (ethanol).....7
New Automobile Designs.....8
Oil 9
Hydroelectric Power (Dams in Rivers).....10
Other 11
None 12

END

*** *
*** ***

Experimental Manipulations:

Group 0: No manipulation. (No text for Group 0, respondent will go from Q10 to Q11 without seeing any text)

Group A:

Alternative energy sources tend to be more expensive. Deutsche Bank, one of the world's leading financial institutions and investors, estimates that coal, natural gas, and oil are the cheapest fuels today. Nuclear power, dams in rivers, and wind power cost about twice as much. And solar power costs five times as much.

However, over the next 25 years, the **prices of fossil fuels will double**. Natural gas, coal, and oil will be as expensive as nuclear power, dams in rivers, and wind power.

Group B:

Alternative energy sources tend to be more expensive. Deutsche Bank, one of the world's leading financial institutions and investors, estimates that coal, natural gas, and oil are the cheapest fuels today. Nuclear power, dams in rivers, and wind power cost about twice as much. And solar power costs five times as much.

There may be other reasons for wanting to use fuels other than coal, oil, and natural gas.

Global warming is an increasingly important concern. The consensus in the scientific community is that continued burning of fossil fuels will raise global temperatures by 5 degrees over the next 50 years, causing coastal flooding and droughts.

Group C:

Alternative energy sources tend to be more expensive. Deutsche Bank, one of the world's leading financial institutions and investors, estimates that coal, natural gas, and oil are the cheapest fuels today. Nuclear power, dams in rivers, and wind power cost about twice as much. And solar power costs five times as much.

There may be other reasons for wanting to use fuels other than coal, oil, and natural gas.

Toxic wastes are an increasingly important concern. A recent DOE study finds that burning fossil fuels, especially coal, produces acid rain and large volumes of mercury, lead, and other toxic substances, which last for millions of years. Alternative fuels, even new nuclear plants, may produce less toxic waste.

Group D:

Alternative energy sources tend to be more expensive. Deutsche Bank, one of the world's leading financial institutions and investors, estimates that coal, natural gas, and oil are the cheapest fuels today. Nuclear power, dams in rivers, and wind power cost about twice as much. And solar power costs five times as much.

However, over the next 25 years, the **prices of fossil fuels will double**. Natural gas, coal, and oil will be as expensive as nuclear power, dams in rivers, and wind.

There may be other reasons for wanting to use fuels other than coal, oil, and natural gas.

Global warming is an increasingly important concern. The consensus in the scientific community is that continued burning of fossil fuels will raise global temperatures by 5 degrees over the next 50 years, causing coastal flooding and droughts.

Toxic wastes is another important problem. A recent DOE study finds that burning fossil fuels, especially coal, produces acid rain and large volumes of mercury, lead, and other toxic substances, which last for millions of years. Alternative fuels, even nuclear plants, may produce less toxic waste.

Appendix B.1: Codebook

SERIAL Case Identification Number

WEIGHT Final post-stratification weights

DT_START Date interview started

TM_START Time interview started

DT_END Date interview ended

TM_END Time interview ended

DURATION Duration of interview in minute

INCLUDE Cases to include

Frequency Table

RESUME Interview Type

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 Not a resumed interview (duration less than 100 minutes)	1276	95.1	95.1	95.1
	1 Resumed interview (duration 100 minutes or more)	66	4.9	4.9	100.0
	Total	1342	100.0	100.0	

GROUP Experiment group.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 0	450	33.5	33.5	33.5
	2 A	225	16.8	16.8	50.3
	3 B	222	16.5	16.5	66.8
	4 C	220	16.4	16.4	83.2
	5 D	225	16.8	16.8	100.0
	Total	1342	100.0	100.0	

QB QB. In politics do you consider yourself to be a Democrat, Republican, another partisan, or a non-partisan?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	9	.7	.7	.7
	1 Republican	384	28.6	28.6	29.3
	2 Democrat	490	36.5	36.5	65.8
	3 Green	10	.7	.7	66.5
	4 Reform	5	.4	.4	66.9
	5 Other	42	3.1	3.1	70.0
	6 No Party	402	30.0	30.0	100.0
	Total	1342	100.0	100.0	

QCORDER Order of the response list shown in QC

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Liberal first	683	50.9	50.9	50.9
	2 Conservative first	659	49.1	49.1	100.0
	Total	1342	100.0	100.0	

QC QC. Do you consider yourself politically liberal, conservative, or moderate?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	46	3.4	3.4	3.4
	1 Strong Conservative	78	5.8	5.8	9.2
	2 Conservative	256	19.1	19.1	28.3
	3 Lean Conservative	111	8.3	8.3	36.6
	4 Moderate	632	47.1	47.1	83.7
	5 Lean Liberal	72	5.4	5.4	89.0
	6 Liberal	116	8.6	8.6	97.7
	7 Strong Liberal	31	2.3	2.3	100.0
	Total	1342	100.0	100.0	

QD QD. Many government policies are designed to protect the environment, but these policies are costly to corporations and other businesses.Which of the following captures your general opinion?Environmental Regulations are...

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	20	1.5	1.5	1.5
	1 Excessively Strong	83	6.2	6.2	7.7
	2 Too Strong, but Not Excessive	212	15.8	15.8	23.5
	3 About Right	406	30.3	30.3	53.7
	4 Need to be Somewhat Stronger	441	32.9	32.9	86.6
	5 Need to be A Lot Stronger	180	13.4	13.4	100.0
	Total	1342	100.0	100.0	

Q1 Q1. How do you heat your home?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	2	.1	.1	.1
	1 Natural Gas	716	53.4	53.4	53.5
	2 Oil	116	8.6	8.6	62.1
	3 Electricity	407	30.3	30.3	92.5
	4 Solar	7	.5	.5	93.0
	5 Other	94	7.0	7.0	100.0
	Total	1342	100.0	100.0	

Q2 Q2. Do you have air conditioning?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	1027	76.5	76.5	76.5
	2 No	315	23.5	23.5	100.0
	Total	1342	100.0	100.0	

Q3 Q3. Approximately how much did you pay for electricity last month?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	21	1.6	1.6	1.6
	1 Under $25	65	4.8	4.8	6.4
	2 $25 to $50	278	20.7	20.7	27.1
	3 $50 to $75	309	23.0	23.0	50.1
	4 $75 to $100	290	21.6	21.6	71.8
	5 $100 to $125	183	13.6	13.6	85.4
	6 $125 to $150	88	6.6	6.6	92.0
	7 Over $150	108	8.0	8.0	100.0
	Total	1342	100.0	100.0	

Q4 Q4. Last summer there were energy shortages in California. How concerned are you about energy shortages in the future?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	5	.4	.4	.4
	1 Very	360	26.8	26.8	27.2
	2 Somewhat	665	49.6	49.6	76.8
	3 Not Very	250	18.6	18.6	95.4
	4 Not at All	62	4.6	4.6	100.0
	Total	1342	100.0	100.0	

Q5 Q5. How important a problem is pollution in the United States today?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	5	.4	.4	.4
	1 Very Significant	710	52.9	52.9	53.3
	2 Somewhat Significant	546	40.7	40.7	94.0
	3 Not Very Significant	72	5.4	5.4	99.3
	4 Not A Problem	9	.7	.7	100.0
	Total	1342	100.0	100.0	

Q6 Q6. There is a lot of talk about global warming caused by carbon dioxide emissions from burning coal, natural gas, and oil to generate electricity. Is this problem:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	3	.2	.2	.2
	1 Very Important	554	41.3	41.3	41.5
	2 Somewhat Important	564	42.0	42.0	83.5
	3 Not Very Important	160	11.9	11.9	95.5
	4 Not Important At All	61	4.5	4.5	100.0
	Total	1342	100.0	100.0	

Q7_A Q7_A. Some ways of generating electricity may be harmful to the environment we live in because they produce air pollution, water pollution, or toxic wastes. How harmful do you think each of these power sources is? [Coal]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	3	.2	.2	.2
	1 Very Harmful	455	33.9	33.9	34.1
	2 Moderately Harmful	398	29.7	29.7	63.8
	3 Somewhat Harmful	342	25.5	25.5	89.3
	4 Slightly Harmful	115	8.6	8.6	97.8
	5 Not Harmful At All	29	2.2	2.2	100.0
	Total	1342	100.0	100.0	

Q7_B Q7_B. Some ways of generating electricity may be harmful to the environment we live in because they produce air pollution, water pollution, or toxic wastes. How harmful do you think each of these power sources is? [Hydroelectric (Dams in Rivers)]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	2	.1	.1	.1
	1 Very Harmful	69	5.1	5.1	5.3
	2 Moderately Harmful	137	10.2	10.2	15.5
	3 Somewhat Harmful	239	17.8	17.8	33.3
	4 Slightly Harmful	411	30.6	30.6	63.9
	5 Not Harmful At All	484	36.1	36.1	100.0
	Total	1342	100.0	100.0	

Q7_C Q7_C. Some ways of generating electricity may be harmful to the environment we live in because they produce air pollution, water pollution, or toxic wastes. How harmful do you think each of these power sources is? [Natural Gas]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	3	.2	.2	.2
	1 Very Harmful	76	5.7	5.7	5.9
	2 Moderately Harmful	213	15.9	15.9	21.8
	3 Somewhat Harmful	471	35.1	35.1	56.9
	4 Slightly Harmful	430	32.0	32.0	88.9
	5 Not Harmful At All	149	11.1	11.1	100.0
	Total	1342	100.0	100.0	

Q7_D Q7_D. Some ways of generating electricity may be harmful to the environment we live in because they produce air pollution, water pollution, or toxic wastes. How harmful do you think each of these power sources is? [Nuclear]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	2	.1	.1	.1
	1 Very Harmful	559	41.7	41.7	41.8
	2 Moderately Harmful	294	21.9	21.9	63.7
	3 Somewhat Harmful	245	18.3	18.3	82.0
	4 Slightly Harmful	168	12.5	12.5	94.5
	5 Not Harmful At All	74	5.5	5.5	100.0
	Total	1342	100.0	100.0	

Q7_E Q7_E. Some ways of generating electricity may be harmful to the environment we live in because they produce air pollution, water pollution, or toxic wastes. How harmful do you think each of these power sources is? [Oil]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	4	.3	.3	.3
	1 Very Harmful	283	21.1	21.1	21.4
	2 Moderately Harmful	485	36.1	36.1	57.5
	3 Somewhat Harmful	409	30.5	30.5	88.0
	4 Slightly Harmful	128	9.5	9.5	97.5
	5 Not Harmful At All	33	2.5	2.5	100.0
	Total	1342	100.0	100.0	

Q7_F Q7_F. Some ways of generating electricity may be harmful to the environment we live in because they produce air pollution, water pollution, or toxic wastes. How harmful do you think each of these power sources is? [Solar]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	2	.1	.1	.1
	1 Very Harmful	25	1.9	1.9	2.0
	2 Moderately Harmful	34	2.5	2.5	4.5
	3 Somewhat Harmful	105	7.8	7.8	12.4
	4 Slightly Harmful	175	13.0	13.0	25.4
	5 Not Harmful At All	1001	74.6	74.6	100.0
	Total	1342	100.0	100.0	

Q7_G Q7_G. Some ways of generating electricity may be harmful to the environment we live in because they produce air pollution, water pollution, or toxic wastes. How harmful do you think each of these power sources is? [Wind]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	2	.1	.1	.1
	1 Very Harmful	15	1.1	1.1	1.3
	2 Moderately Harmful	25	1.9	1.9	3.1
	3 Somewhat Harmful	81	6.0	6.0	9.2
	4 Slightly Harmful	164	12.2	12.2	21.4
	5 Not Harmful At All	1055	78.6	78.6	100.0
	Total	1342	100.0	100.0	

Q8_A Q8_A. Think about the costs of producing electricity of different sources of electricity. How expensive do you think it is to produce electricity with each of the following fuels? [Coal]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	3	.2	.2	.2
	1 Very Expensive	170	12.7	12.7	12.9
	2 Somewhat Expensive	306	22.8	22.8	35.7
	3 Moderately Priced	485	36.1	36.1	71.8
	4 Somewhat Cheap	293	21.8	21.8	93.7
	5 Very Cheap	85	6.3	6.3	100.0
	Total	1342	100.0	100.0	

Q8_B Q8_B. Think about the costs of producing electricity of different sources of electricity. How expensive do you think it is to produce electricity with each of the following fuels? [Hydroelectric (Dams in Rivers)]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	3	.2	.2	.2
	1 Very Expensive	117	8.7	8.7	8.9
	2 Somewhat Expensive	320	23.8	23.8	32.8
	3 Moderately Priced	460	34.3	34.3	67.1
	4 Somewhat Cheap	315	23.5	23.5	90.5
	5 Very Cheap	127	9.5	9.5	100.0
	Total	1342	100.0	100.0	

Q8_C Q8_C. Think about the costs of producing electricity of different sources of electricity. How expensive do you think it is to produce electricity with each of the following fuels? [Natural Gas]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	3	.2	.2	.2
	1 Very Expensive	137	10.2	10.2	10.4
	2 Somewhat Expensive	431	32.1	32.1	42.5
	3 Moderately Priced	583	43.4	43.4	86.0
	4 Somewhat Cheap	166	12.4	12.4	98.4
	5 Very Cheap	22	1.6	1.6	100.0
	Total	1342	100.0	100.0	

Q8_D Q8_D. Think about the costs of producing electricity of different sources of electricity. How expensive do you think it is to produce electricity with each of the following fuels? [Nuclear]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	3	.2	.2	.2
	1 Very Expensive	482	35.9	35.9	36.1
	2 Somewhat Expensive	445	33.2	33.2	69.3
	3 Moderately Priced	266	19.8	19.8	89.1
	4 Somewhat Cheap	117	8.7	8.7	97.8
	5 Very Cheap	29	2.2	2.2	100.0
	Total	1342	100.0	100.0	

Q8_E Q8_E. Think about the costs of producing electricity of different sources of electricity. How expensive do you think it is to produce electricity with each of the following fuels? [Oil]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	4	.3	.3	.3
	1 Very Expensive	320	23.8	23.8	24.1
	2 Somewhat Expensive	546	40.7	40.7	64.8
	3 Moderately Priced	385	28.7	28.7	93.5
	4 Somewhat Cheap	77	5.7	5.7	99.3
	5 Very Cheap	10	.7	.7	100.0
	Total	1342	100.0	100.0	

Q8_F Q8_F. Think about the costs of producing electricity of different sources of electricity. How expensive do you think it is to produce electricity with each of the following fuels? [Solar]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	4	.3	.3	.3
	1 Very Expensive	122	9.1	9.1	9.4
	2 Somewhat Expensive	242	18.0	18.0	27.4
	3 Moderately Priced	293	21.8	21.8	49.3
	4 Somewhat Cheap	377	28.1	28.1	77.3
	5 Very Cheap	304	22.7	22.7	100.0
	Total	1342	100.0	100.0	

Q8_G Q8_G. Think about the costs of producing electricity of different sources of electricity. How expensive do you think it is to produce electricity with each of the following fuels? [Wind]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	5	.4	.4	.4
	1 Very Expensive	56	4.2	4.2	4.5
	2 Somewhat Expensive	164	12.2	12.2	16.8
	3 Moderately Priced	250	18.6	18.6	35.4
	4 Somewhat Cheap	394	29.4	29.4	64.8
	5 Very Cheap	473	35.2	35.2	100.0
	Total	1342	100.0	100.0	

Q9 Q9. There are approximately 100 nuclear power plants in the United States. How likely do you think it is that in the next 10 years there will be a serious accident at a nuclear power plant?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	4	.3	.3	.3
	1 Almost Certain	253	18.9	18.9	19.2
	2 Very Likely	309	23.0	23.0	42.2
	3 Somewhat Likely	428	31.9	31.9	74.1
	4 Not Very Likely	317	23.6	23.6	97.7
	5 Not At All	31	2.3	2.3	100.0
	Total	1342	100.0	100.0	

Q10 Q10. Do you agree or disagree with the following: Nuclear waste can be stored safely for many years.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	3	.2	.2	.2
	1 Strongly Agree	79	5.9	5.9	6.1
	2 Agree	406	30.3	30.3	36.4
	3 Disagree	533	39.7	39.7	76.1
	4 Strongly Disagree	321	23.9	23.9	100.0
	Total	1342	100.0	100.0	

Q11_A Q11_A. Companies and government agencies need to start planning today. How should we meet this demand? For each power source indicate whether you feel the U.S should increase or reduce its use, or not use at all. [Coal]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	5	.4	.4	.4
	1 Reduce A Lot	313	23.3	23.3	23.7
	2 Reduce Somewhat	401	29.9	29.9	53.6
	3 Keep Same	335	25.0	25.0	78.5
	4 Increase Somewhat	143	10.7	10.7	89.2
	5 Increase A Lot	81	6.0	6.0	95.2
	6 Not Use At All	64	4.8	4.8	100.0
	Total	1342	100.0	100.0	

Q11_B Q11_B. Companies and government agencies need to start planning today. How should we meet this demand? For each power source indicate whether you feel the U.S should increase or reduce its use, or not use at all. [Hydroelectric (Dams In Rivers)]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	4	.3	.3	.3
	1 Reduce A Lot	51	3.8	3.8	4.1
	2 Reduce Somewhat	150	11.2	11.2	15.3
	3 Keep Same	417	31.1	31.1	46.3
	4 Increase Somewhat	459	34.2	34.2	80.6
	5 Increase A Lot	242	18.0	18.0	98.6
	6 Not Use At All	19	1.4	1.4	100.0
	Total	1342	100.0	100.0	

Q11_C Q11_C. Companies and government agencies need to start planning today. How should we meet this demand? For each power source indicate whether you feel the U.S should increase or reduce its use, or not use at all. [Natural Gas]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	4	.3	.3	.3
	1 Reduce A Lot	84	6.3	6.3	6.6
	2 Reduce Somewhat	324	24.1	24.1	30.7
	3 Keep Same	499	37.2	37.2	67.9
	4 Increase Somewhat	305	22.7	22.7	90.6
	5 Increase A Lot	109	8.1	8.1	98.7
	6 Not Use At All	17	1.3	1.3	100.0
	Total	1342	100.0	100.0	

Q11_D Q11_D. Companies and government agencies need to start planning today. How should we meet this demand? For each power source indicate whether you feel the U.S should increase or reduce its use, or not use at all. [Nuclear]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	4	.3	.3	.3
	1 Reduce A Lot	258	19.2	19.2	19.5
	2 Reduce Somewhat	250	18.6	18.6	38.2
	3 Keep Same	330	24.6	24.6	62.7
	4 Increase Somewhat	245	18.3	18.3	81.0
	5 Increase A Lot	132	9.8	9.8	90.8
	6 Not Use At All	123	9.2	9.2	100.0
	Total	1342	100.0	100.0	

Q11_E Q11_E. Companies and government agencies need to start planning today. How should we meet this demand? For each power source indicate whether you feel the U.S should increase or reduce its use, or not use at all. [Oil]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	5	.4	.4	.4
	1 Reduce A Lot	265	19.7	19.7	20.1
	2 Reduce Somewhat	451	33.6	33.6	53.7
	3 Keep Same	405	30.2	30.2	83.9
	4 Increase Somewhat	127	9.5	9.5	93.4
	5 Increase A Lot	43	3.2	3.2	96.6
	6 Not Use At All	46	3.4	3.4	100.0
	Total	1342	100.0	100.0	

Q11_F Q11_F. Companies and government agencies need to start planning today. How should we meet this demand? For each power source indicate whether you feel the U.S should increase or reduce its use, or not use at all. [Solar]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	4	.3	.3	.3
	1 Reduce A Lot	31	2.3	2.3	2.6
	2 Reduce Somewhat	66	4.9	4.9	7.5
	3 Keep Same	183	13.6	13.6	21.2
	4 Increase Somewhat	363	27.0	27.0	48.2
	5 Increase A Lot	676	50.4	50.4	98.6
	6 Not Use At All	19	1.4	1.4	100.0
	Total	1342	100.0	100.0	

Q11_G Q11_G. Companies and government agencies need to start planning today. How should we meet this demand? For each power source indicate whether you feel the U.S should increase or reduce its use, or not use at all. [Wind]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	4	.3	.3	.3
	1 Reduce A Lot	33	2.5	2.5	2.8
	2 Reduce Somewhat	63	4.7	4.7	7.5
	3 Keep Same	187	13.9	13.9	21.4
	4 Increase Somewhat	328	24.4	24.4	45.8
	5 Increase A Lot	706	52.6	52.6	98.4
	6 Not Use At All	21	1.6	1.6	100.0
	Total	1342	100.0	100.0	

Q13 Q13. To meet new electricity demand, utilities will have to build additional power plants. How would you feel if a new natural gas fired power plant were built within 25 miles of your home?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	7	.5	.5	.5
	1 Strongly Oppose	289	21.5	21.5	22.1
	2 Somewhat Oppose	404	30.1	30.1	52.2
	3 Support Somewhat	514	38.3	38.3	90.5
	4 Strong Support	128	9.5	9.5	100.0
	Total	1342	100.0	100.0	

Q14 Q14. How would you feel if a new coal-fired power plant were built within 25 miles of your home?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	9	.7	.7	.7
	1 Strongly Oppose	580	43.2	43.2	43.9
	2 Somewhat Oppose	460	34.3	34.3	78.2
	3 Support Somewhat	244	18.2	18.2	96.3
	4 Strong Support	49	3.7	3.7	100.0
	Total	1342	100.0	100.0	

Q15 Q15. How would you feel if a new nuclear power plant were built within 25 miles of your home?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED	18	1.3	1.3	1.3
	1 Strongly Oppose	846	63.0	63.0	64.4
	2 Somewhat Oppose	252	18.8	18.8	83.2
	3 Support Somewhat	167	12.4	12.4	95.6
	4 Strong Support	59	4.4	4.4	100.0
	Total	1342	100.0	100.0	

Q16_A Q16_A. The United States government budgets 30 billion dollars for research on new energy technologies and improvement of existing technologies. Which two of these would you say should be a priority for this research effort?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED More efficient electric appliances	2	.1	.1	.1
	0 no More efficient electric appliances	1102	82.1	82.1	82.3
	1 More efficient electric appliances	238	17.7	17.7	100.0
	Total	1342	100.0	100.0	

Q16_B Q16_B. The United States government budgets 30 billion dollars for research on new energy technologies and improvement of existing technologies. Which two of these would you say should be a priority for this research effort?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED Solar Power	2	.1	.1	.1
	0 no Solar Power	602	44.9	44.9	45.0
	1 Solar Power	738	55.0	55.0	100.0
	Total	1342	100.0	100.0	

Q16_C Q16_C. The United States government budgets 30 billion dollars for research on new energy technologies and improvement of existing technologies. Which two of these would you say should be a priority for this research effort?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED Nuclear Power	2	.1	.1	.1
	0 no Nuclear Power	1213	90.4	90.4	90.5
	1 Nuclear Power	127	9.5	9.5	100.0
	Total	1342	100.0	100.0	

Q16_D Q16_D. The United States government budgets 30 billion dollars for research on new energy technologies and improvement of existing technologies. Which two of these would you say should be a priority for this research effort?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED Coal Power	2	.1	.1	.1
	0 no Coal Power	1280	95.4	95.4	95.5
	1 Coal Power	60	4.5	4.5	100.0
	Total	1342	100.0	100.0	

Q16_E Q16_E. The United States government budgets 30 billion dollars for research on new energy technologies and improvement of existing technologies. Which two of these would you say should be a priority for this research effort?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED Wind Power	2	.1	.1	.1
	0 no Wind Power	898	66.9	66.9	67.1
	1 Wind Power	442	32.9	32.9	100.0
	Total	1342	100.0	100.0	

Q16_F Q16_F. The United States government budgets 30 billion dollars for research on new energy technologies and improvement of existing technologies. Which two of these would you say should be a priority for this research effort?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED Natural Gas	2	.1	.1	.1
	0 no Natural Gas	1257	93.7	93.7	93.8
	1 Natural Gas	83	6.2	6.2	100.0
	Total	1342	100.0	100.0	

Q16_G Q16_G. The United States government budgets 30 billion dollars for research on new energy technologies and improvement of existing technologies. Which two of these would you say should be a priority for this research effort?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED Energy from grain (ethanol)	2	.1	.1	.1
	0 no Energy from grain (ethanol)	1031	76.8	76.8	77.0
	1 Energy from grain (ethanol)	309	23.0	23.0	100.0
	Total	1342	100.0	100.0	

Q16_H Q16_H. The United States government budgets 30 billion dollars for research on new energy technologies and improvement of existing technologies. Which two of these would you say should be a priority for this research effort?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED New Automobile Designs	2	.1	.1	.1
	0 no New Automobile Designs	1016	75.7	75.7	75.9
	1 New Automobile Designs	324	24.1	24.1	100.0
	Total	1342	100.0	100.0	

Q16_I Q16_I. The United States government budgets 30 billion dollars for research on new energy technologies and improvement of existing technologies. Which two of these would you say should be a priority for this research effort?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED Oil	2	.1	.1	.1
	0 no Oil	1295	96.5	96.5	96.6
	1 Oil	45	3.4	3.4	100.0
	Total	1342	100.0	100.0	

Q16_J Q16_J. The United States government budgets 30 billion dollars for research on new energy technologies and improvement of existing technologies. Which two of these would you say should be a priority for this research effort?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED Hydroelectric Power (Dams in Rivers)	2	.1	.1	.1
	0 no Hydroelectric Power (Dams in Rivers)	1151	85.8	85.8	85.9
	1 Hydroelectric Power (Dams in Rivers)	189	14.1	14.1	100.0
	Total	1342	100.0	100.0	

Q16_K Q16_K. The United States government budgets 30 billion dollars for research on new energy technologies and improvement of existing technologies. Which two of these would you say should be a priority for this research effort?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED Other	2	.1	.1	.1
	0 no Other	1301	96.9	96.9	97.1
	1 Other	39	2.9	2.9	100.0
	Total	1342	100.0	100.0	

Q16_L Q16_L. The United States government budgets 30 billion dollars for research on new energy technologies and improvement of existing technologies. Which two of these would you say should be a priority for this research effort?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 REFUSED None	2	.1	.1	.1
	0 no None	1315	98.0	98.0	98.1
	1 None	25	1.9	1.9	100.0
	Total	1342	100.0	100.0	

PPGENDER Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Male	646	48.1	48.1	48.1
	2 Female	696	51.9	51.9	100.0
	Total	1342	100.0	100.0	

PPAGE Age in years.

PPAGECAT Age - 7 categories

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 18-24	132	9.8	9.8	9.8
	2 25-34	197	14.7	14.7	24.5
	3 35-44	263	19.6	19.6	44.1
	4 45-54	271	20.2	20.2	64.3
	5 55-64	241	18.0	18.0	82.3
	6 65-74	149	11.1	11.1	93.4
	7 75+	89	6.6	6.6	100.0
	Total	1342	100.0	100.0	

PPAGECT4 Age - 4 categories

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 18-29	230	17.1	17.1	17.1
	2 30-44	362	27.0	27.0	44.1
	3 45-59	408	30.4	30.4	74.5
	4 60+	342	25.5	25.5	100.0
	Total	1342	100.0	100.0	

PPETH Race / Ethnicity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 White, Non-Hispanic	1030	76.8	76.8	76.8
	2 Black, Non-Hispanic	122	9.1	9.1	85.8
	3 Other, Non-Hispanic	63	4.7	4.7	90.5
	4 Hispanic	127	9.5	9.5	100.0
	Total	1342	100.0	100.0	

PPEDUC Education (highest degree received)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Less than HS	64	4.8	4.8	4.8
	2 Some HS, no diploma	159	11.8	11.8	16.6
	3 Graduated from HS - Diploma or equivalent (GED)	419	31.2	31.2	47.8
	4 Some college, no degree	300	22.4	22.4	70.2
	5 Associate degree (AA, AS)	82	6.1	6.1	76.3
	6 Bachelor's degree	214	15.9	15.9	92.3
	7 Master's degree	85	6.3	6.3	98.6
	8 Professional degree (MD, DDS, LLB, JD)	13	1.0	1.0	99.6
	9 Doctorate degree	6	.4	.4	100.0
	Total	1342	100.0	100.0	

PPEDUCAT Education (categorical)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Less than HS	223	16.6	16.6	16.6
	2 HS	419	31.2	31.2	47.8
	3 Some college	382	28.5	28.5	76.3
	4 Bachelor's degree or higher	318	23.7	23.7	100.0
	Total	1342	100.0	100.0	

PPHOUSE Housing Type

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 Refused	3	.2	.2	.2
	1 A single-family house detached	910	67.8	67.8	68.0
	2 A single-family house attached	87	6.5	6.5	74.5
	3 An apartment	175	13.0	13.0	87.6
	4 A condominium or co-op	30	2.2	2.2	89.8
	5 College dormitory	2	.1	.1	89.9
	6 A manufactured or mobile home	117	8.7	8.7	98.7
	7 Other	18	1.3	1.3	100.0
	Total	1342	100.0	100.0	

PPRENT Ownership Status of Living Quarters

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 Refused	3	.2	.2	.2
	1 Own	906	67.5	67.5	67.7
	2 Rent	348	25.9	25.9	93.7
	3 Do not pay for housing	85	6.3	6.3	100.0
	Total	1342	100.0	100.0	

PPINCIMP HH Income (profile and imputed)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 Refused	10	.7	.7	.7
	1 Less than $5,000	39	2.9	2.9	3.7
	2 $5,000 to $7,499	29	2.2	2.2	5.8
	3 $7,500 to $9,999	31	2.3	2.3	8.1
	4 $10,000 to $12,499	27	2.0	2.0	10.1
	5 $12,500 to $14,999	42	3.1	3.1	13.3
	6 $15,000 to $19,999	76	5.7	5.7	18.9
	7 $20,000 to $24,999	91	6.8	6.8	25.7
	8 $25,000 to $29,999	86	6.4	6.4	32.1
	9 $30,000 to $34,999	97	7.2	7.2	39.3
	10 $35,000 to $39,999	136	10.1	10.1	49.5
	11 $40,000 to $49,999	167	12.4	12.4	61.9
	12 $50,000 to $59,999	141	10.5	10.5	72.4
	13 $60,000 to $74,999	140	10.4	10.4	82.9
	14 $75,000 to $84,999	74	5.5	5.5	88.4
	15 $85,000 to $99,999	55	4.1	4.1	92.5
	16 $100,000 to $124,999	46	3.4	3.4	95.9
	17 $125,000 or more	55	4.1	4.1	100.0
	Total	1342	100.0	100.0	

PPMARIT Marital Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 Refused	1	.1	.1	.1
	1 Married	834	62.1	62.1	62.2
	2 Single (never married)	260	19.4	19.4	81.6
	3 Divorced	138	10.3	10.3	91.9
	4 Widowed	83	6.2	6.2	98.1
	5 Separated	26	1.9	1.9	100.0
	Total	1342	100.0	100.0	

PPHHHEAD Household Head

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 Refused	4	.3	.3	.3
	0 No	245	18.3	18.3	18.6
	1 Yes	1093	81.4	81.4	100.0
	Total	1342	100.0	100.0	

PPHHSIZE Household size

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	198	14.8	14.8	14.8
	2	553	41.2	41.2	56.0
	3	268	20.0	20.0	75.9
	4	206	15.4	15.4	91.3
	5	78	5.8	5.8	97.1
	6	29	2.2	2.2	99.3
	7	6	.4	.4	99.7
	8	2	.1	.1	99.9
	9	1	.1	.1	99.9
	10	1	.1	.1	100.0
	Total	1342	100.0	100.0	

PPT01 Total number of HH members age 1 or younger

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1321	98.4	98.4	98.4
	1	21	1.6	1.6	100.0
	Total	1342	100.0	100.0	

PPT1317 Total number of HH members age 13 to 17

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1149	85.6	85.6	85.6
	1	143	10.7	10.7	96.3
	2	41	3.1	3.1	99.3
	3	9	.7	.7	100.0
	Total	1342	100.0	100.0	

PPT18OV Total number of HH members age 18 or older

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	223	16.6	16.6	16.6
	2	781	58.2	58.2	74.8
	3	244	18.2	18.2	93.0
	4	72	5.4	5.4	98.4
	5	19	1.4	1.4	99.8
	6	3	.2	.2	100.0
	Total	1342	100.0	100.0	

PPT25 Total number of HH members age 2 to 5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1238	92.3	92.3	92.3
	1	81	6.0	6.0	98.3
	2	23	1.7	1.7	100.0
	Total	1342	100.0	100.0	

PPT612 Total number of HH members age 6 to 12

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1171	87.3	87.3	87.3
	1	118	8.8	8.8	96.1
	2	40	3.0	3.0	99.0
	3	13	1.0	1.0	100.0
	Total	1342	100.0	100.0	

PPWORK Current Employment Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-1 Refused	1	.1	.1	.1
	1 I work as a paid employee	734	54.7	54.7	54.8
	2 I am self-employed	74	5.5	5.5	60.3
	3 I am an owner/partner in small business, prof practice, farm	24	1.8	1.8	62.1
	4 I work at least 15 hrs/wk w/o pay in family business/farm	5	.4	.4	62.4
	5 I am unemployed, temporarily laid off, but looking for work	70	5.2	5.2	67.7
	6 I am retired	227	16.9	16.9	84.6
	7 I am disabled	65	4.8	4.8	89.4
	8 I am a homemaker	106	7.9	7.9	97.3
	9 Other	36	2.7	2.7	100.0
	Total	1342	100.0	100.0	

PPSTATE State of Residence

PPREG4 Region 4 (based on state of residence)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Northeast	250	18.6	18.6	18.6
	2 Midwest	319	23.8	23.8	42.4
	3 South	478	35.6	35.6	78.0
	4 West	295	22.0	22.0	100.0
	Total	1342	100.0	100.0	

PPREG9 Region 9 (based on state of residence)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 New England	61	4.5	4.5	4.5
	2 Mid-Atlantic	189	14.1	14.1	18.6
	3 East-North Central	219	16.3	16.3	34.9
	4 West-North Central	100	7.5	7.5	42.4
	5 South Atlantic	234	17.4	17.4	59.8
	6 East-South Central	98	7.3	7.3	67.1
	7 West-South Central	146	10.9	10.9	78.0
	8 Mountain	108	8.0	8.0	86.1
	9 Pacific	187	13.9	13.9	100.0
	Total	1342	100.0	100.0	