



# CENTER FOR APPLIED RURAL INNOVATION

A Research Report\*

**Energy Use and Concerns of Rural  
Nebraskans**

*2008 Nebraska Rural Poll Results*

Rebecca J. Vogt  
Randolph L. Cantrell  
Miguel A. Carranza  
Bruce B. Johnson  
David J. Peters

UNIVERSITY OF  
**Nebraska**  
Lincoln

**N**  
**IANR**

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Phone: 515.288.4431, FAX: 515.243.1979

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## *Executive Summary*

Energy prices have steadily increased during the past year. Rural residents are now faced with higher costs to drive and heat and cool their homes. Given these conditions, how much of a problem have rising energy costs been for rural Nebraskans? What are their opinions on future energy sources? What changes have they made or do they plan to make due to the price increases? This paper provides a detailed analysis of these questions.

This report details 2,496 responses to the 2008 Nebraska Rural Poll, the thirteenth annual effort to understand rural Nebraskans' perceptions. Respondents were asked a series of questions about energy. For all questions, comparisons are made among different respondent subgroups, that is, comparisons by age, occupation, region, etc. Based on these analyses, some key findings emerged:

- ***Most rural Nebraskans report that rising energy costs have been a somewhat serious problem or a very serious problem for themselves and their family lately.*** Forty-one percent of rural Nebraskans say rising energy costs have been a very serious problem and 43 percent report it has been a somewhat serious problem. Only one percent say the rising costs have not been a problem at all and 14 percent indicate it has been not too serious a problem. (page 2)
- ***Persons with the lowest household incomes are more likely than persons with higher incomes to report that rising energy prices have been a very serious problem.*** Fifty-three percent of persons with household incomes under \$20,000 say rising energy costs have been a very serious problem, compared to 32 percent of persons with household incomes of \$60,000 or more. (page 3)
- ***Many rural Nebraskans have made changes in household spending, driving patterns and household energy use as a result of recent energy price increases.*** At least three-quarters of rural Nebraskans have done the following items as a result of the recent energy price increases: cut back on luxury household spending (94%), reduced the heat or air conditioning use in your home (91%), cut back how much you drive (91%), attempted to use household appliances more efficiently (89%), cut back on necessary household spending (88%), acquired more goods and services locally (80%), and changed your vacation plans by shortening or postponing the trip (75%). (page 8)
- ***Many rural Nebraskans have also made driving behavior changes as a result of the recent energy price increases.*** Two-thirds (67%) of rural Nebraskans have driven their most fuel-efficient vehicle more often as a result of the recent energy price increases. Another nine percent are considering this change. Eleven percent of rural Nebraskans have converted to E-85 gasoline and an additional 14 percent are considering making this switch. Only three percent of rural Nebraskans have purchased a hybrid vehicle but 17 percent are considering this type of purchase. (page 11)

- ***Rural Nebraskans are divided in their opinions about whether or not sufficient energy supplies exist or if new technologies and alternative energy sources will help maintain energy supplies.*** Just under one-half (44%) of rural Nebraskans agree or strongly agree that there are sufficient oil and natural gas supplies around the world to meet U.S. needs for the foreseeable future. Thirty-eight percent disagree or strongly disagree with the statement. Similarly, just under one-half (47%) agree or strongly agree that “even if oil and natural gas supplies do decline, new technologies and alternative energy sources will ensure Americans maintain their current standard of living.” Thirty-two percent disagree or strongly disagree. (page 3)
- ***Most rural Nebraskans think the environment should be protected, even if this means some energy supplies are not available for use.*** Over one-half (57%) agree or strongly agree with this statement. Seventeen percent disagree or strongly disagree with that statement. Approximately one-quarter (26%) neither agree nor disagree with the statement. (page 3)
- ***Most rural Nebraskans believe that Americans should reduce their energy consumption to prevent an energy crisis and that more should be done to develop renewable energy.*** Seventy-seven percent of rural Nebraskans agree or disagree with the following statement: Americans must change their lifestyles to reduce energy consumption to avoid the onset of an energy “crisis” in the U.S. Only 10 percent disagree or strongly disagree with the statement. The majority (91%) of rural Nebraskans agree or strongly agree that “more should be done to develop renewable energy, such as ethanol, biodiesel or wind energy.” Only three percent disagree or strongly disagree with the statement. (pages 3 and 4)
- ***The vast majority of rural Nebraskans also believe we are too dependent on foreign oil sources.*** Ninety-three percent of rural Nebraskans agree or strongly agree with that statement, while only three percent disagree or strongly disagree. (page 4)
- ***Most rural Nebraskans see renewable sources as being important energy sources for the next generation. A larger proportion of rural Nebraskans rated wind and solar energy as being important compared to the fossil fuels of oil and natural gas.*** At least three-quarters of rural Nebraskans rate the following energy sources as being important for the next generation: wind energy (89%), solar energy (89%), oil (87%), natural gas (84%), ethanol from other sources (81%), ethanol from corn (79%), and biodiesel (76%). (page 5)
- ***Most rural Nebraskans rate electricity and unleaded gasoline as being very important or somewhat important to their household.*** Ninety-seven percent of rural Nebraskans say electricity is important to their household and 95 percent rate unleaded gasoline as important to their household. (page 7)

## *Introduction*

Energy prices have steadily increased during the past year. Although gasoline prices have continued to increase after the administration of this survey, prices increased from approximately \$3.20 per gallon at the beginning of March to \$3.75 per gallon in mid-May when the last completed surveys were received. Rural residents are particularly affected by high gas prices due to increased commuting distances for jobs, groceries and other shopping. In addition to increased gas prices, rural residents have also faced higher costs to heat their homes.

Given these conditions, how much of a problem have rising energy costs been for rural Nebraskans? What are their opinions on future energy sources? What changes have they made or do they plan to make due to the price increases? This paper provides a detailed analysis of these questions.

The 2008 Nebraska Rural Poll is the thirteenth annual effort to understand rural Nebraskans' perceptions. Respondents were asked a series of questions about energy.

### *Methodology and Respondent Profile*

This study is based on 2,496 responses from Nebraskans living in the 84 non-metropolitan counties in the state. A self-administered questionnaire was mailed in March and April to approximately 6,200 randomly selected households. Metropolitan counties not included in the sample were Cass, Dakota, Dixon, Douglas, Lancaster, Sarpy, Saunders, Seward and Washington. The 14-page questionnaire included questions pertaining to well-being, community, energy, climate change, television viewing, personal finances

and work. This paper reports only results from the energy portion of the survey.

A 40% response rate was achieved using the total design method (Dillman, 1978). The sequence of steps used follow:

1. A pre-notification letter was sent requesting participation in the study.
2. The questionnaire was mailed with an informal letter signed by the project director approximately seven days later.
3. A reminder postcard was sent to the entire sample approximately seven days after the questionnaire had been sent.
4. Those who had not yet responded within approximately 14 days of the original mailing were sent a replacement questionnaire.

Appendix Table 1 shows demographic data from this year's study and previous rural polls, as well as similar data based on the entire non-metropolitan population of Nebraska (using 2000 U.S. Census data). As can be seen from the table, there are some marked differences between some of the demographic variables in our sample compared to the Census data. Certainly some variance from 2000 Census data is to be expected as a result of changes that have occurred in the intervening eight years. Nonetheless, we suggest the reader use caution in generalizing our data to all rural Nebraska. However, given the random sampling frame used for this survey, the acceptable percentage of responses, and the large number of respondents, we feel the data provide useful insights into opinions of rural Nebraskans on the various issues presented in this report. The margin of error for this study is plus or minus two percent.

Since younger residents have typically been

under-represented by survey respondents and older residents have been over-represented, weights were used to adjust the sample to match the age distribution in the non-metropolitan counties in Nebraska (using U.S. Census figures).

The average age of respondents is 50 years. Seventy percent are married (Appendix Table 1) and 70 percent live within the city limits of a town or village. On average, respondents have lived in Nebraska 43 years and have lived in their current community 28 years. Fifty-two percent are living in or near towns or villages with populations less than 5,000. Ninety-five percent have attained at least a high school diploma.

Forty-five percent of the respondents report their 2007 approximate household income from all sources, before taxes, as below \$40,000. Forty-two percent report incomes over \$50,000.

Seventy-five percent were employed in 2007 on a full-time, part-time, or seasonal basis.

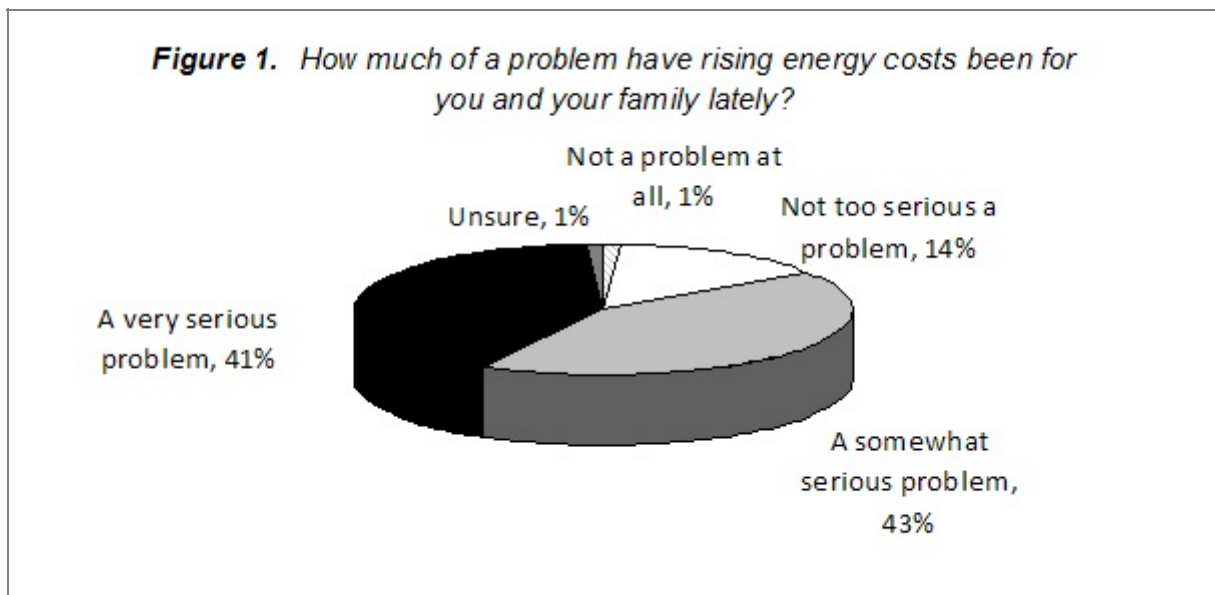
Eighteen percent are retired. Thirty-three percent of those employed reported working in a management, professional, or education occupation. Fifteen percent indicated they were employed in agriculture.

### *Concerns about Rising Energy Costs*

Most rural Nebraskans (84%) report that rising energy costs have been a somewhat serious problem or a very serious problem for themselves and their family lately (Figure 1). Only one percent say the rising costs have not been a problem at all and 14 percent indicate it has been not too serious a problem.

Responses to this question are analyzed by community size, region and various individual attributes (Appendix Table 2). Many differences emerge.

Persons with the lowest household incomes are more likely than persons with higher incomes to report that rising energy prices have been a very serious problem. Fifty-





three percent of persons with household incomes under \$20,000 say rising energy costs have been a very serious problem, compared to 32 percent of persons with household incomes of \$60,000 or more.

Persons living in or near smaller communities are more likely than persons living in or near larger communities to say energy price increases have been a very serious problem. Forty-eight percent of persons living in or near communities with less than 500 people report rising energy costs are a serious problem, compared to 37 percent of persons living in or near communities with populations of 10,000 or more.

Persons in agriculture occupations are the occupation group most likely to report rising energy costs have been a very serious problem. Fifty-one percent of persons employed in agriculture report rising energy costs are a very serious problem. In comparison, approximately 38 percent of persons with either management, professional or education occupations or sales or office support occupations report this being a very serious problem.

Other groups most likely to report rising energy costs have been a very serious problem include: persons between the ages of 40 and 64, divorced/separated respondents and persons with lower educational levels.

### ***Current and Future Energy Sources***

Respondents were next asked their opinions about energy supplies. They were asked to rate the extent to which they agreed or disagreed with six statements.

Rural Nebraskans are divided in their opinions on whether or not sufficient energy supplies exist or if new technologies and alternative energy sources will help maintain energy supplies. Just under one-half (44%) of rural Nebraskans agree or strongly agree that there are sufficient oil and natural gas supplies around the world to meet U.S. needs for the foreseeable future (Table 1). Thirty-eight percent disagree or strongly disagree with the statement.

Similarly, just under one-half (47%) agree or strongly agree that “even if oil and natural gas supplies do decline, new technologies and alternative energy sources will ensure Americans maintain their current standard of living.” Thirty-two percent disagree or strongly disagree.

Most rural Nebraskans think the environment should be protected even if this means some energy supplies are not available for use. Over one-half (57%) agree or strongly agree with this statement. Seventeen percent disagree or strongly disagree with that statement. Approximately one-quarter (26%) neither agree nor disagree with the statement.

Most rural Nebraskans believe that Americans should reduce their energy consumption to prevent an energy crisis and that more should be done to develop renewable energy. Seventy-seven percent of rural Nebraskans agree or disagree with the following statement: Americans must change their lifestyles to reduce energy consumption to avoid the onset of an energy “crisis” in the U.S. Only 10 percent disagree or strongly disagree with the statement.

**Table 1. Opinions About Energy Supplies**

|   | Strongly Disagree | Disagree | Neither | Agree | Strongly Agree |
|---|-------------------|----------|---------|-------|----------------|
| There are sufficient oil and natural gas supplies around the world to meet U.S. needs for the foreseeable future.   | 8%                | 30%      | 18%     | 38%   | 6%             |
| Even if oil and natural gas supplies do decline, new technologies and alternative energy sources will ensure Americans maintain their current standard of living. | 4                 | 28       | 21      | 43    | 4              |
| The environment should be protected, even if this means some energy supplies are not available for use.   | 3                 | 14       | 26      | 48    | 9              |
| Americans must change their lifestyles to reduce energy consumption to avoid the onset of an energy “crisis” in the U.S.  | 3                 | 7        | 13      | 60    | 17             |
| More should be done to develop renewable energy, such as ethanol, biodiesel or wind energy.   | 1                 | 2        | 6       | 52    | 39             |
| We are too dependent on foreign oil sources.  | 1                 | 2        | 6       | 38    | 55             |

The majority (91%) of rural Nebraskans agree or strongly agree that “more should be done to develop renewable energy, such as ethanol, biodiesel or wind energy.” Only three percent disagree or strongly disagree with the statement.

The vast majority of rural Nebraskans also believe we are too dependent on foreign oil sources. Ninety-three percent of rural Nebraskans agree or strongly agree with that statement, while only three percent disagree or strongly disagree.

Responses to these questions were analyzed by community size, region and various individual attributes (Appendix Table 3). Some differences are detected.

Younger persons are more likely than older persons to disagree with the statement that there are sufficient oil and natural gas supplies around the world to meet U.S. needs for the foreseeable future. One-half (50%) of persons age 19 to 29 disagree or strongly disagree with the statement, compared to 30 percent of persons age 65 and older.

Persons with higher educational levels are more likely than persons with less education to disagree that there are sufficient oil and natural gas supplies to meet the country's needs. Forty-five percent of persons with at least a bachelors degree disagree or strongly disagree with the statement, compared to thirty percent of persons with a high school diploma or less education.

Other groups most likely to disagree with this statement include: persons living in or near larger communities, persons with higher household incomes, females, and persons with management, professional or education occupations.

Persons living in or near the largest communities and persons living in the Panhandle are the groups most likely to disagree that new technologies and alternative energy sources will ensure Americans maintain their current standard of living.

The following groups are most likely to agree that the environment should be protected even if this means some energy supplies are not available for use: persons living in or near larger communities, the oldest respondents, females, the widowed respondents and persons in food service or personal care occupations.

Females, persons with at least a bachelors degree and persons with food service or personal care occupations are the groups most likely to agree that Americans must change their lifestyles to reduce energy consumption to avoid the onset of an energy "crisis" in the U.S.

The groups most likely to agree with the

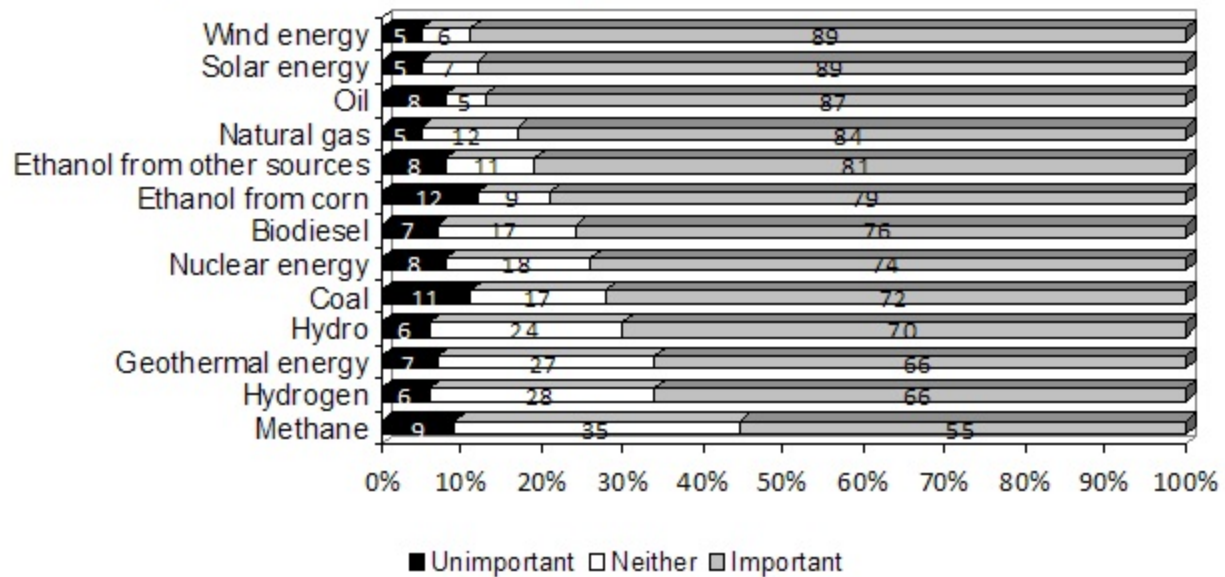
statement that we are too dependent on foreign oil sources include: persons living in or near the largest communities, residents of the South Central region (see Appendix Figure 1 for the counties included in each region), the oldest respondents, widowed respondents and persons with occupations classified as "other."

Respondents were next asked to rate how important various energy sources will be for the next generation. The specific question wording was "Many people believe that our energy sources will change dramatically for the next generation. How important do you believe the following energy sources will be for the next generation?" They were given a five-point scale that ranged from very unimportant to very important.

Most rural Nebraskans see renewable sources as being important energy sources for the next generation. A larger proportion of rural Nebraskans rated wind and solar energy as being important compared to the fossil fuels of oil and natural gas. At least three-quarters of rural Nebraskans rate the following energy sources as being important for the next generation: wind energy (89%), solar energy (89%), oil (87%), natural gas (84%), ethanol from other sources (81%), ethanol from corn (79%), and biodiesel (76%) (Figure 2).

Opinions about the future importance of the energy sources showed some differences by community size, region and various individual attributes (Appendix Table 4). Only the six energy sources with the highest proportions of somewhat important or very important responses were included in the table.

**Figure 2. Importance of Energy Sources for the Next Generation**



Persons living in the Panhandle region are more likely than persons living in other regions to believe wind energy will be important for the next generation. Ninety-three percent of the Panhandle residents believe wind energy will be important for the

next generation, compared to 83 percent of the residents of the Southeast region. Other groups most likely to believe wind energy will be important include: persons with production, transportation or warehousing occupations and both the married and widowed respondents.

Groups most likely to believe solar energy will be important include: residents of both the Panhandle and South Central regions, divorced/separated respondents and persons with either management, professional or education occupations or persons with occupations classified as other.

Widowed respondents are more likely than

persons of different marital status to believe oil will be important for the next generation. Persons with construction, installation or maintenance occupations and persons with food service or personal care occupations are the occupation groups *least* likely to rate oil as being an important energy source for the next generation.

Persons with production, transportation or warehousing occupations are the occupation group most likely to rate natural gas as being important for the next generation.

The youngest persons and persons living in or near communities with populations ranging from 500 to 999 are the groups most likely to believe ethanol from other sources will be important for the next generation.

Persons living in the South Central region, persons with lower household incomes, younger persons, persons living in or near communities with populations ranging from

500 to 999 and females are the groups most likely to believe ethanol from corn will be an important energy source for the next generation.

Respondents were also asked how important various energy sources are to their household. Most rural Nebraskans rate electricity and unleaded gasoline as being very important or somewhat important to their household. Ninety-seven percent of rural Nebraskans say electricity is important to their household and 95 percent rate unleaded gasoline as important to their household (Figure 3).

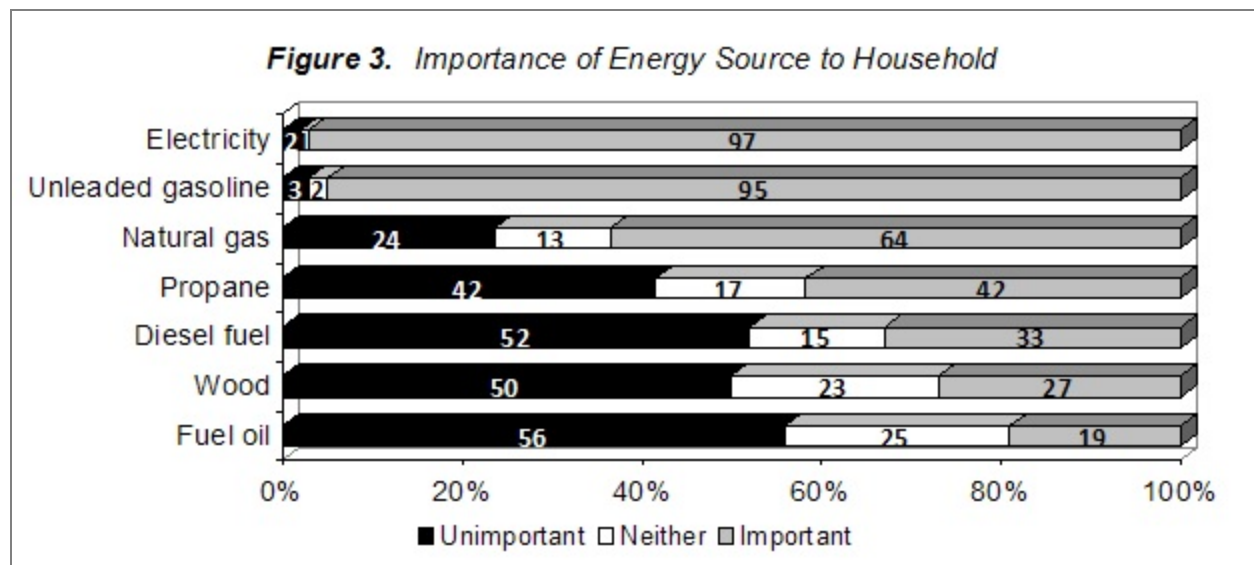
Responses to this question differ by community size, region and various individual attributes (Appendix Table 5). Persons in agriculture occupations are more likely than persons with different occupations to say diesel fuel is important to their household. Seventy-six percent of persons with agricultural occupations say diesel fuel is important to their household, compared to 20 percent of persons with food service or personal care occupations.

Other groups most likely to say diesel fuel is important to their household include: persons living in or near smaller communities, males, married persons and persons with lower education levels.

The groups most likely to say unleaded gasoline is important include: persons with the highest household incomes, younger persons, both married respondents and those who have never married, and persons with higher education levels.

Persons living in or near the smallest communities are more likely than persons living in or near larger communities to say propane is an important energy source for their household. Sixty-one percent of persons living in or near communities with less than 500 people say propane is important to their household, compared to 34 percent of persons living in or near communities with populations of 10,000 or more.

Persons with agriculture occupations are more likely than persons with different



occupations to say propane is an important energy source for their household. Sixty-two percent of persons with agriculture occupations say propane is important to their household, compared to 26 percent of persons with occupations classified as other. Other groups most likely to rate propane as important include: persons living in the Southeast region, persons under the age of 30 and married persons.

Persons living in or near the largest communities are more likely than persons living in or near smaller communities to say natural gas is an important energy source for their household. Seventy-six percent of persons living in or near communities with populations of 10,000 or more say natural gas is an important energy source for their household, compared to 37 percent of persons living in or near communities with less than 500 people.

Persons living in the South Central region are more likely than persons living elsewhere to say natural gas is an important energy source for their household. Seventy-five percent of South Central residents say natural gas is an important energy source for their household, compared to 52 percent of persons in the North Central region.

Other groups most likely to rate natural gas as important include: persons with lower household incomes, the youngest respondents, persons who have never married, persons with at least a bachelors degree and persons with food service or personal care occupations.

The groups most likely to rate fuel oil as important include: persons living in or near communities with populations ranging from

500 to 999, persons with the lowest household incomes, the youngest respondents, females, persons who have never married and persons with food service or personal care occupations.

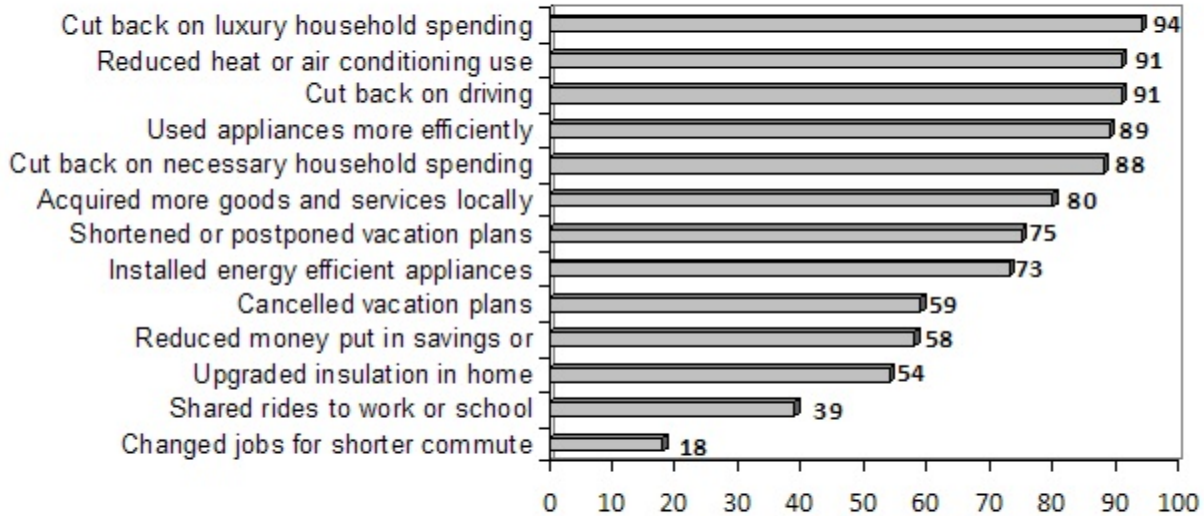
The groups most likely to rate wood as an important energy source for their household include: persons living in or near the smallest communities, residents of the North Central region, persons with the lowest household incomes, the youngest respondents, persons with the lowest education levels and persons with agriculture occupations and persons with construction, installation or maintenance occupations. The widowed respondents are the marital group *least* likely to rate wood as an important energy source for their household.

### *Effects of Energy Price Increases*

Finally, respondents were asked if they have done or plan to do various items as a result of the recent energy price increases. They were given a four-point scale (1 = none, 2 = a little, 3 = some, and 4 = a lot). To simplify the analysis, the last three scale points have been combined to determine if the respondent has done or plans to do the item or not. Given an approximate increase of 20 percent in gasoline prices since the administration of this survey, these results are probably underestimating the effects of increasing fuel prices on rural Nebraskans.

Many rural Nebraskans have made changes in household spending, driving patterns and household energy use as a result of recent energy price increases. At least three-quarters of rural Nebraskans have done the following items as a result of the recent energy price increases: cut back on luxury

**Figure 4. Effects of Recent Energy Price Increases**



household spending (94%), reduced the heat or air conditioning use in your home (91%), cut back how much you drive (91%), attempted to use household appliances more efficiently (89%), cut back on necessary household spending (88%), acquired more goods and services locally (80%), and changed your vacation plans by shortening or postponing the trip (75%) (Figure 4). Responses to these questions differ by community size, region and various individual attributes (Appendix Table 6). Persons with lower household incomes are more likely than persons with higher incomes to have cut back or plan to cut back on necessary household spending. Ninety-three percent of persons with household incomes under \$40,000 have or plan to cut back on

necessary household spending, compared to 83 percent of persons with household incomes of \$60,000 or more. Persons with production, transportation or warehousing occupations are more likely than persons with different occupations to have or plan to cut back on necessary household spending.

Persons living in or near the smallest communities are more likely than persons living in or near larger communities to have or plan to cut back how much they drive. Ninety-five percent of persons living in or near communities with less than 500 people have or plan to cut back how much they drive, compared to 88 percent of persons living in or near communities with populations of 10,000 or more.

Other groups most likely to have or plan to cut back how much they drive include persons with lower household incomes and persons with production, transportation or warehousing occupations.

Groups most likely to have either changed their vacation plans by shortening or postponing the trip or to have cancelled vacation plans include: persons living in or near the smallest communities, persons with lower household incomes, older persons and persons with occupations classified as other. Married persons were the marital group *least* likely to have or plan to cancel vacation plans.

Persons with occupations classified as other are the group most likely to have or plan to reduce the heat or air conditioning use in their home. All (100%) of persons with this occupation classification have or plan to reduce the heat or air conditioning use in their home, compared to 89 percent of persons with agriculture occupations.

Persons between the ages of 50 and 64 are the group most likely to have or plan to install energy efficient appliances. Seventy-nine percent of persons in this age group have or plan to install energy efficient appliances, compared to 65 percent of persons between the ages of 30 and 39.

Other groups most likely to have or plan to install energy efficient appliances include persons with household incomes between \$40,000 and \$59,999, married persons and persons with production, transportation and warehousing occupations.

The groups most likely to have or plan to upgrade insulation in their home include

persons living in or near communities with populations between 500 and 999, persons between the ages of 50 and 64, and married persons.

Younger persons are more likely than older persons to have or plan to change jobs for a shorter commute. Thirty percent of persons under the age of 30 have or plan to change jobs for a shorter commute, compared to 12 percent of persons age 65 and older.

Persons with food service or personal care occupations are the occupation group most likely to have or plan to change jobs for a shorter commute. Thirty-five percent of persons in this occupation group have or plan to change jobs for a shorter commute, compared to 11 percent of persons with occupations classified as other. Other groups most likely to have or plan to change jobs for a shorter commute include persons with lower household incomes and persons who have never married or divorced/separated respondents. The regional groups most likely to have or plan to change jobs for a shorter commute include residents of the South Central, Northeast and Southeast regions.

Persons living in or near communities with populations ranging from 500 to 9,999 are more likely than persons living in or near both the smallest and largest communities to have or plan to acquire more goods and services locally.

Persons with the lowest household incomes are more likely than persons with higher incomes to have or plan to reduce the amount of money put into savings or retirement account. Approximately 64 percent of persons with household incomes



under \$40,000 have or plan to reduce the amount put into either savings or retirement accounts, compared to 50 percent of persons with household incomes of \$60,000 or more. Persons who have never married are the marital group most likely to have or plan to reduce money put into savings or retirement account (69%).

The groups most likely to have or plan to share rides to work or school include persons with the lowest household incomes, the youngest respondents, persons who have never married and persons with food service or personal care occupations.

Respondents were also asked if they have made any driving behavior changes as a result of the recent energy price increases. The answer choices included yes, no or considering it.

Two-thirds (67%) of rural Nebraskans have driven their most fuel-efficient vehicle more often as a result of the recent energy price

increases (Figure 5). Another nine percent are considering this change.

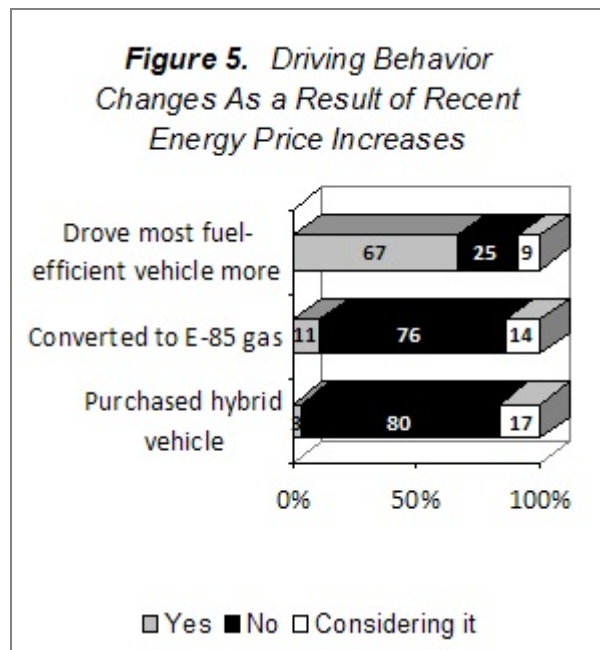
Eleven percent of rural Nebraskans have converted to E-85 gasoline and an additional 14 percent are considering making this switch. Only three percent of rural Nebraskans have purchased a hybrid vehicle but 17 percent are considering this type of purchase.

Answers to this question differ by community size, region and various individual attributes (Appendix Table 7). The groups most likely to be considering purchasing a hybrid vehicle include persons with the highest household incomes, younger persons, persons who have never married, respondents with at least some college education and persons with food service or personal care occupations.

Younger persons are more likely than older persons to have converted to E-85 gasoline. Nineteen percent of persons under the age of 30 have converted to E-85 gasoline, compared to seven percent of persons between the ages of 40 and 49.

Persons with management, professional or education occupations are more likely than persons with different occupations to have converted to E-85 gasoline. Persons living in the Northeast region are more likely than persons living in other regions of the state to have converted to E-85 gasoline.

Persons living in the North Central region are more likely than persons living in other regions of the state to have driven their most fuel-efficient vehicle more often. Seventy-six percent of North Central residents drove their most fuel-efficient vehicle more often,



compared to 62 percent of residents of the South Central region.

Other groups most likely to have driven their most fuel-efficient vehicle more often include persons living in or near smaller communities, persons with household incomes ranging from \$20,000 to \$39,999, the youngest respondents, married persons and respondents with some college education.

### ***Conclusion***

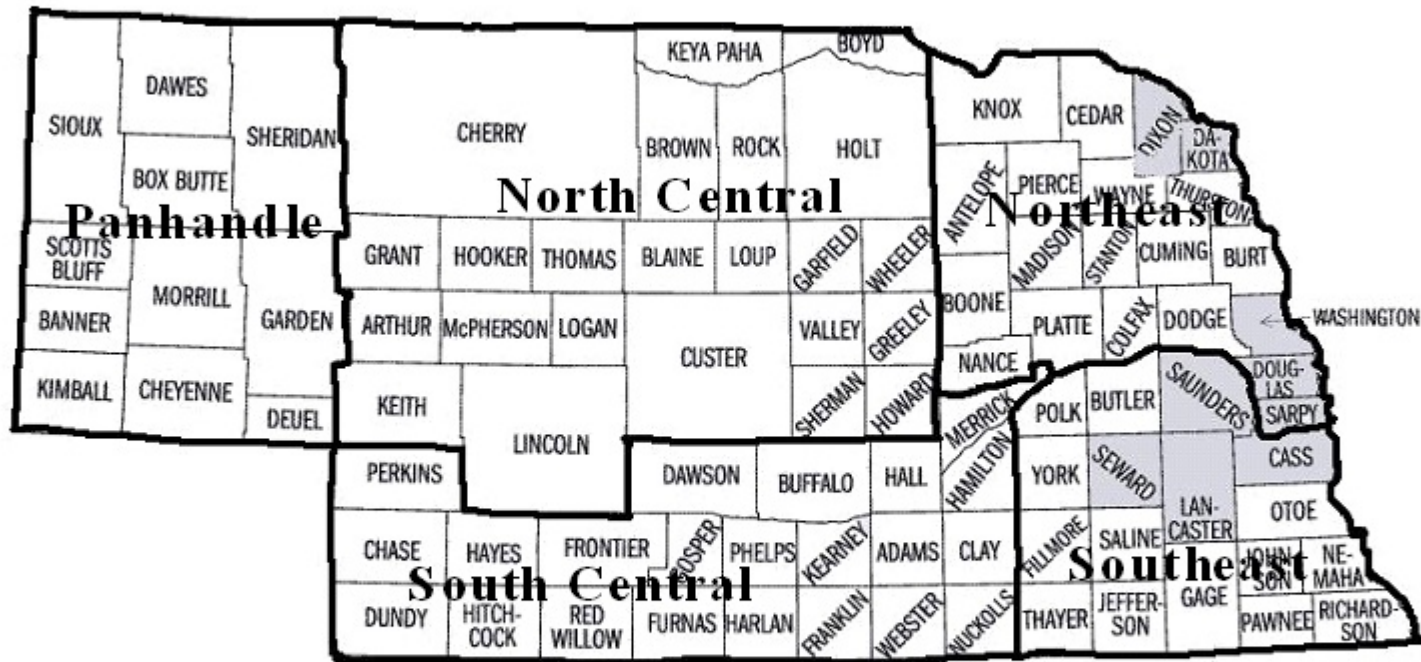
The recent energy price increases have impacted rural Nebraskans. Most say the price increases have been either a very serious or somewhat serious problem. Many rural Nebraskans have also made changes in household spending, driving patterns and household energy use as a result of these price increases. Although some of these changes are positive, rural Nebraskans have also had to cut back on necessary household spending, reduced money put in savings or retirement account and changed jobs for a shorter commute. These changes have the potential to affect the state's economy and rural population as less dollars are being spent and population may begin to concentrate in urban areas and retail hubs to eliminate long commutes.

Many rural Nebraskans believe sufficient energy supplies exist or that new technologies and alternative energy sources will help maintain energy supplies. However, a significant proportion disagree with these statements. Thus, opinions about future energy supplies are mixed.

Most rural Nebraskans favor environmental protection even if energy supplies are not

available for use. And, most believe energy consumption needs to be reduced and that more should be done to develop renewable energy. The state has been moving toward increasing renewable energy production through wind energy and ethanol production. However, it appears that rural Nebraskans think more can be done in this area. Rural Nebraskans believe wind energy, solar energy, oil, natural gas, ethanol from other sources, ethanol from corn and biodiesel will be important energy sources for the next generation.

# Appendix Figure 1. Regions of Nebraska



■ Metropolitan counties (not surveyed)

*Appendix Table 1. Demographic Profile of Rural Poll Respondents<sup>1</sup> Compared to 2000 Census*

|  | <b>2008</b> | <b>2007</b> | <b>2006</b> | <b>2005</b> | <b>2004</b> | <b>2003</b> | <b>2000</b>   |
|--|-------------|-------------|-------------|-------------|-------------|-------------|---------------|
|  | <b>Poll</b> | <b>Poll</b> | <b>Poll</b> | <b>Poll</b> | <b>Poll</b> | <b>Poll</b> | <b>Census</b> |
| <b>Age : <sup>2</sup></b>                              |             |             |             |             |             |             |               |
| 20 - 39  | 32%         | 31%         | 33%         | 34%         | 34%         | 33%         | 33%           |
| 40 - 64  | 44%         | 44%         | 43%         | 42%         | 42%         | 43%         | 42%           |
| 65 and over  | 24%         | 25%         | 24%         | 24%         | 24%         | 24%         | 24%           |
| <b>Gender: <sup>3</sup></b>                            |             |             |             |             |             |             |               |
| Female   | 56%         | 59%         | 30%         | 32%         | 33%         | 51%         | 51%           |
| Male   | 44%         | 41%         | 70%         | 68%         | 67%         | 49%         | 49%           |
| <b>Education: <sup>4</sup></b>                         |             |             |             |             |             |             |               |
| Less than 9 <sup>th</sup> grade                        | 2%          | 4%          | 2%          | 2%          | 2%          | 2%          | 7%            |
| 9 <sup>th</sup> to 12 <sup>th</sup> grade (no diploma) | 3%          | 6%          | 4%          | 4%          | 4%          | 4%          | 10%           |
| High school diploma (or equivalent)                    | 26%         | 26%         | 28%         | 28%         | 31%         | 31%         | 35%           |
| Some college, no degree                                | 25%         | 23%         | 25%         | 24%         | 24%         | 24%         | 25%           |
| Associate degree                                       | 12%         | 14%         | 13%         | 15%         | 14%         | 13%         | 7%            |
| Bachelors degree                                       | 21%         | 18%         | 18%         | 17%         | 16%         | 18%         | 11%           |
| Graduate or professional degree                        | 10%         | 10%         | 10%         | 10%         | 8%          | 9%          | 4%            |
| <b>Household income: <sup>5</sup></b>                  |             |             |             |             |             |             |               |
| Less than \$10,000                                     | 7%          | 7%          | 6%          | 7%          | 9%          | 7%          | 10%           |
| \$10,000 - \$19,999                                    | 10%         | 13%         | 12%         | 12%         | 14%         | 13%         | 16%           |
| \$20,000 - \$29,999                                    | 14%         | 15%         | 14%         | 15%         | 16%         | 17%         | 17%           |
| \$30,000 - \$39,999                                    | 14%         | 14%         | 15%         | 16%         | 16%         | 16%         | 15%           |
| \$40,000 - \$49,999                                    | 13%         | 13%         | 16%         | 15%         | 13%         | 14%         | 12%           |
| \$50,000 - \$59,999                                    | 11%         | 12%         | 12%         | 12%         | 12%         | 12%         | 10%           |
| \$60,000 - \$74,999                                    | 13%         | 11%         | 12%         | 10%         | 11%         | 11%         | 9%            |
| \$75,000 or more                                       | 18%         | 16%         | 13%         | 14%         | 10%         | 11%         | 11%           |
| <b>Marital Status: <sup>6</sup></b>                    |             |             |             |             |             |             |               |
| Married  | 70%         | 70%         | 70%         | 72%         | 69%         | 73%         | 61%           |
| Never married  | 10%         | 10%         | 11%         | 10%         | 11%         | 9%          | 22%           |
| Divorced/separated                                     | 11%         | 10%         | 9%          | 10%         | 10%         | 9%          | 9%            |
| Widowed/widower  | 9%          | 10%         | 10%         | 8%          | 9%          | 9%          | 8%            |

<sup>1</sup> Data from the Rural Polls have been weighted by age.

<sup>2</sup> 2000 Census universe is non-metro population 20 years of age and over.

<sup>3</sup> 2000 Census universe is total non-metro population.

<sup>4</sup> 2000 Census universe is non-metro population 18 years of age and over.

<sup>5</sup> 2000 Census universe is all non-metro households.

<sup>6</sup> 2000 Census universe is non-metro population 15 years of age and over.

**Appendix Table 2. Perceptions of Rising Energy Costs by Community Size, Region and Individual Attributes**

| <b>How much of a problem have rising energy costs been for you and your family lately?</b> |                             |                                  |                                   |                               |               |                              |
|--|-----------------------------|----------------------------------|-----------------------------------|-------------------------------|---------------|------------------------------|
|  | <i>Not a problem at all</i> | <i>Not too serious a problem</i> | <i>A somewhat serious problem</i> | <i>A very serious problem</i> | <i>Unsure</i> | <i>Significance</i>          |
| <b>Percentages</b>   |                             |                                  |                                   |                               |               |                              |
| (n = 2247)   |                             |                                  |                                   |                               |               |                              |
| <b>Community Size</b>  |                             |                                  |                                   |                               |               |                              |
| Less than 500  | 0**                         | 8                                | 44                                | 48                            | 0**           | $\chi^2 = 35.42^*$<br>(.003) |
| 500 - 999  | 0                           | 15                               | 42                                | 43                            | 0**           |                              |
| 1,000 - 4,999  | 1                           | 13                               | 42                                | 43                            | 1             |                              |
| 5,000 - 9,999  | 2                           | 13                               | 42                                | 43                            | 0**           |                              |
| 10,000 and up  | 1                           | 18                               | 44                                | 37                            | 1             |                              |
| <b>Region</b>  |                             |                                  |                                   |                               |               |                              |
| (n = 2326)   |                             |                                  |                                   |                               |               |                              |
| Panhandle  | 1                           | 14                               | 42                                | 43                            | 1             | $\chi^2 = 17.63$<br>(.346)   |
| North Central  | 2                           | 14                               | 40                                | 43                            | 1             |                              |
| South Central  | 1                           | 14                               | 41                                | 44                            | 1             |                              |
| Northeast  | 1                           | 16                               | 45                                | 38                            | 1             |                              |
| Southeast  | 0**                         | 13                               | 45                                | 41                            | 2             |                              |
| <b>Income Level</b>  |                             |                                  |                                   |                               |               |                              |
| (n = 2156)   |                             |                                  |                                   |                               |               |                              |
| Under \$20,000   | 0                           | 7                                | 38                                | 53                            | 2             | $\chi^2 = 93.90^*$<br>(.000) |
| \$20,000 - \$39,999  | 1                           | 12                               | 38                                | 48                            | 1             |                              |
| \$40,000 - \$59,999  | 0**                         | 13                               | 45                                | 41                            | 0**           |                              |
| \$60,000 and over  | 2                           | 21                               | 45                                | 32                            | 1             |                              |
| <b>Age</b>   |                             |                                  |                                   |                               |               |                              |
| (n = 2332)   |                             |                                  |                                   |                               |               |                              |
| 19 - 29  | 1                           | 17                               | 45                                | 37                            | 0             | $\chi^2 = 28.70^*$<br>(.026) |
| 30 - 39  | 1                           | 13                               | 46                                | 39                            | 1             |                              |
| 40 - 49  | 1                           | 14                               | 41                                | 44                            | 1             |                              |
| 50 - 64  | 1                           | 13                               | 40                                | 46                            | 1             |                              |
| 65 and older   | 1                           | 14                               | 43                                | 39                            | 2             |                              |
| <b>Marital Status</b>  |                             |                                  |                                   |                               |               |                              |
| (n = 2323)   |                             |                                  |                                   |                               |               |                              |
| Married  | 1                           | 15                               | 44                                | 40                            | 1             | $\chi^2 = 46.44^*$<br>(.000) |
| Never married  | 1                           | 16                               | 39                                | 45                            | 0**           |                              |
| Divorced/separated   | 0                           | 9                                | 38                                | 52                            | 1             |                              |
| Widowed  | 1                           | 14                               | 41                                | 41                            | 4             |                              |
| <b>Education</b>   |                             |                                  |                                   |                               |               |                              |
| (n = 2311)   |                             |                                  |                                   |                               |               |                              |
| H.S. diploma or less   | 1                           | 13                               | 41                                | 44                            | 2             | $\chi^2 = 49.06^*$<br>(.000) |
| Some college   | 1                           | 12                               | 42                                | 45                            | 1             |                              |
| Bachelors or grad degree   | 2                           | 18                               | 45                                | 35                            | 0**           |                              |

Appendix Table 2 continued.

| <i>How much of a problem have rising energy costs been for you and your family lately?</i> |                             |                                  |                                   |                               |               |                              |
|--|-----------------------------|----------------------------------|-----------------------------------|-------------------------------|---------------|------------------------------|
|  | <i>Not a problem at all</i> | <i>Not too serious a problem</i> | <i>A somewhat serious problem</i> | <i>A very serious problem</i> | <i>Unsure</i> | <i>Significance</i>          |
| <b>Occupation</b>  | (n = 1633)                  |                                  |                                   |                               |               |                              |
| Management, professional or education  | 2                           | 15                               | 44                                | 38                            | 1             |                              |
| Sales or office support  | 0**                         | 17                               | 46                                | 37                            | 0             |                              |
| Construction, installation or maintenance  | 0                           | 12                               | 42                                | 45                            | 0             |                              |
| Production, transportation or warehousing  | 1                           | 12                               | 40                                | 47                            | 0             |                              |
| Agriculture  | 0**                         | 12                               | 36                                | 51                            | 0**           |                              |
| Food service or personal care  | 0                           | 9                                | 44                                | 46                            | 1             | $\chi^2 = 41.89^*$<br>(.044) |
| Healthcare support or public safety  | 1                           | 16                               | 42                                | 41                            | 0             |                              |
| Other  | 0                           | 13                               | 42                                | 42                            | 3             |                              |

\* Chi-square values are statistically significant at the .05 level. 0\*\* = Less than 1 percent.

**Appendix Table 3. Opinions About Energy in Relation to Community Size, Region and Individual Attributes**

*There are sufficient oil and natural gas supplies around the world to meet U.S. needs for the foreseeable future.*

*Even if oil and natural gas supplies do decline, new technologies and alternative energy sources will ensure Americans maintain their current standard of living.*

|                         | <i>Disagree</i> | <i>Neither</i> | <i>Agree</i> | Chi-square<br>(sig.) | <i>Disagree</i>           | <i>Neither</i> | <i>Agree</i> | Chi-square<br>(sig.) |
|-------------------------|-----------------|----------------|--------------|----------------------|---------------------------|----------------|--------------|----------------------|
|                         | (n = 2232)      |                |              |                      | Percentages<br>(n = 2235) |                |              |                      |
| <b>Community Size</b>   |                 |                |              |                      |                           |                |              |                      |
| Less than 500           | 30              | 21             | 49           |                      | 29                        | 21             | 50           |                      |
| 500 - 999               | 29              | 17             | 54           |                      | 29                        | 17             | 54           |                      |
| 1,000 - 4,999           | 34              | 19             | 47           | $\chi^2 =$           | 28                        | 22             | 49           | $\chi^2 =$           |
| 5,000 - 9,999           | 52              | 14             | 34           | 50.16*               | 37                        | 17             | 46           | 19.13*               |
| 10,000 and up           | 41              | 16             | 43           | (.000)               | 35                        | 22             | 43           | (.014)               |
|                         | (n = 2313)      |                |              |                      | (n = 2315)                |                |              |                      |
| <b>Region</b>           |                 |                |              |                      |                           |                |              |                      |
| Panhandle               | 39              | 13             | 48           |                      | 39                        | 16             | 45           |                      |
| North Central           | 31              | 20             | 49           |                      | 28                        | 20             | 52           |                      |
| South Central           | 40              | 18             | 42           | $\chi^2 =$           | 31                        | 24             | 45           | $\chi^2 =$           |
| Northeast               | 39              | 17             | 44           | 16.55*               | 32                        | 19             | 48           | 17.77*               |
| Southeast               | 35              | 20             | 45           | (.035)               | 31                        | 22             | 47           | (.023)               |
|                         | (n = 2141)      |                |              |                      | (n = 2146)                |                |              |                      |
| <b>Income Level</b>     |                 |                |              |                      |                           |                |              |                      |
| Under \$20,000          | 33              | 16             | 51           |                      | 34                        | 17             | 49           |                      |
| \$20,000 - \$39,999     | 36              | 23             | 42           | $\chi^2 =$           | 30                        | 22             | 48           | $\chi^2 =$           |
| \$40,000 - \$59,999     | 40              | 14             | 46           | 25.82*               | 33                        | 21             | 47           | 5.15                 |
| \$60,000 and over       | 41              | 17             | 42           | (.000)               | 32                        | 23             | 46           | (.525)               |
|                         | (n = 2315)      |                |              |                      | (n = 2319)                |                |              |                      |
| <b>Age</b>              |                 |                |              |                      |                           |                |              |                      |
| 19 - 29                 | 50              | 23             | 27           |                      | 30                        | 23             | 48           |                      |
| 30 - 39                 | 35              | 20             | 45           |                      | 31                        | 20             | 48           |                      |
| 40 - 49                 | 38              | 18             | 45           | $\chi^2 =$           | 32                        | 23             | 46           | $\chi^2 =$           |
| 50 - 64                 | 37              | 13             | 49           | 81.32*               | 35                        | 21             | 45           | 7.85                 |
| 65 and older            | 30              | 16             | 54           | (.000)               | 30                        | 19             | 51           | (.448)               |
|                         | (n = 2303)      |                |              | $\chi^2 =$           | (n = 2308)                |                |              | $\chi^2 =$           |
| <b>Gender</b>           |                 |                |              |                      |                           |                |              |                      |
| Male                    | 32              | 13             | 55           | 81.15*               | 29                        | 21             | 50           | 5.67                 |
| Female                  | 42              | 21             | 37           | (.000)               | 34                        | 21             | 45           | (.059)               |
|                         | (n = 2305)      |                |              |                      | (n = 2311)                |                |              |                      |
| <b>Marital Status</b>   |                 |                |              |                      |                           |                |              |                      |
| Married                 | 37              | 17             | 46           |                      | 31                        | 22             | 47           |                      |
| Never married           | 40              | 23             | 36           | $\chi^2 =$           | 31                        | 13             | 56           | $\chi^2 =$           |
| Divorced/separated      | 41              | 15             | 44           | 12.02                | 37                        | 24             | 39           | 20.80*               |
| Widowed                 | 34              | 18             | 48           | (.061)               | 33                        | 18             | 49           | (.002)               |
|                         | (n = 2295)      |                |              |                      | (n = 2299)                |                |              |                      |
| <b>Education</b>        |                 |                |              |                      |                           |                |              |                      |
| H.S. diploma or less    | 30              | 17             | 53           | $\chi^2 =$           | 33                        | 20             | 47           | $\chi^2 =$           |
| Some college            | 38              | 18             | 45           | 46.91*               | 31                        | 20             | 48           | 2.78                 |
| Bachelors degree        | 45              | 18             | 37           | (.000)               | 31                        | 23             | 46           | (.595)               |
|                         | (n = 1624)      |                |              |                      | (n = 1631)                |                |              |                      |
| <b>Occupation</b>       |                 |                |              |                      |                           |                |              |                      |
| Mgt, prof or education  | 48              | 14             | 38           |                      | 34                        | 21             | 45           |                      |
| Sales or office support | 39              | 20             | 41           |                      | 28                        | 24             | 48           |                      |
| Constrn, inst or maint  | 30              | 16             | 53           |                      | 28                        | 20             | 52           |                      |
| Prodn/trans/warehsing   | 29              | 21             | 50           |                      | 30                        | 23             | 47           |                      |
| Agriculture             | 29              | 16             | 55           | $\chi^2 =$           | 27                        | 19             | 54           | $\chi^2 =$           |
| Food serv/pers. care    | 36              | 27             | 37           | 64.99*               | 32                        | 26             | 43           | 17.74                |
| Hlthcare supp/safety    | 45              | 24             | 31           | (.000)               | 31                        | 25             | 44           | (.219)               |
| Other                   | 42              | 21             | 37           |                      | 45                        | 29             | 26           |                      |

\* Chi-square values are statistically significant at the .05 level.

Appendix Table 3 continued

|                         | <i>The environment should be protected,<br/>even if this means some energy<br/>supplies are not available for use.</i> |                |              |                                   | <i>Americans must change their lifestyles to<br/>reduce energy consumption to avoid the onset<br/>of an energy "crisis" in the U.S.</i> |                |              |                                   |
|-------------------------|--|----------------|--------------|-----------------------------------|---|----------------|--------------|-----------------------------------|
|                         | <i>Disagree</i>  | <i>Neither</i> | <i>Agree</i> | <i>Chi-<br/>square<br/>(sig.)</i> | <i>Disagree</i>   | <i>Neither</i> | <i>Agree</i> | <i>Chi-<br/>square<br/>(sig.)</i> |
|                         | (n = 2223)   |                |              |                                   | Percentages<br>(n = 2233)   |                |              |                                   |
| <b>Community Size</b>   |  |                |              |                                   |   |                |              |                                   |
| Less than 500           | 21   | 27             | 52           |                                   | 9   | 15             | 76           |                                   |
| 500 - 999               | 23   | 26             | 51           |                                   | 12  | 16             | 73           |                                   |
| 1,000 - 4,999           | 18   | 27             | 56           | $\chi^2 =$                        | 11  | 15             | 74           | $\chi^2 =$                        |
| 5,000 - 9,999           | 13   | 23             | 64           | 21.27*                            | 7   | 11             | 83           | 14.40                             |
| 10,000 and up           | 15   | 27             | 59           | (.006)                            | 10  | 11             | 79           | (.072)                            |
| <b>Region</b>           | (n = 2301)   |                |              |                                   | (n = 2312)  |                |              |                                   |
| Panhandle               | 16   | 24             | 60           |                                   | 8   | 14             | 78           |                                   |
| North Central           | 17   | 30             | 53           |                                   | 14  | 13             | 73           |                                   |
| South Central           | 18   | 25             | 57           | $\chi^2 =$                        | 11  | 12             | 77           | $\chi^2 =$                        |
| Northeast               | 18   | 26             | 56           | 8.04                              | 9   | 12             | 79           | 24.01*                            |
| Southeast               | 14   | 27             | 59           | (.430)                            | 7   | 18             | 75           | (.002)                            |
| <b>Income Level</b>     | (n = 2135)   |                |              |                                   | (n = 2144)  |                |              |                                   |
| Under \$20,000          | 14   | 27             | 59           |                                   | 11  | 14             | 75           |                                   |
| \$20,000 - \$39,999     | 15   | 28             | 57           | $\chi^2 =$                        | 10  | 13             | 77           | $\chi^2 =$                        |
| \$40,000 - \$59,999     | 16   | 26             | 58           | 13.19*                            | 8   | 13             | 79           | 4.93                              |
| \$60,000 and over       | 21   | 24             | 55           | (.040)                            | 11  | 13             | 76           | (.553)                            |
| <b>Age</b>              | (n = 2304)   |                |              |                                   | (n = 2317)  |                |              |                                   |
| 19 - 29                 | 6  | 36             | 58           |                                   | 8   | 15             | 77           |                                   |
| 30 - 39                 | 23   | 27             | 50           |                                   | 12  | 16             | 72           |                                   |
| 40 - 49                 | 18   | 27             | 55           | $\chi^2 =$                        | 9   | 14             | 78           | $\chi^2 =$                        |
| 50 - 64                 | 20   | 24             | 57           | 65.58*                            | 10  | 11             | 79           | 11.22                             |
| 65 and older            | 18   | 20             | 62           | (.000)                            | 11  | 12             | 77           | (.189)                            |
| <b>Gender</b>           | (n = 2295)   |                |              |                                   | (n = 2303)  |                |              |                                   |
| Male                    | 24   | 24             | 52           | 57.47*                            | 14  | 14             | 72           | 43.24*                            |
| Female                  | 12   | 28             | 60           | (.000)                            | 6   | 13             | 81           | (.000)                            |
| <b>Marital Status</b>   | (n = 2298)   |                |              |                                   | (n = 2307)  |                |              |                                   |
| Married                 | 18   | 26             | 55           |                                   | 10  | 13             | 77           |                                   |
| Never married           | 9  | 30             | 61           | $\chi^2 =$                        | 7   | 17             | 76           | $\chi^2 =$                        |
| Divorced/separated      | 19   | 25             | 56           | 18.41*                            | 11  | 13             | 76           | 6.81                              |
| Widowed                 | 14   | 22             | 64           | (.005)                            | 7   | 14             | 80           | (.338)                            |
| <b>Education</b>        | (n = 2286)   |                |              |                                   | (n = 2293)  |                |              |                                   |
| H.S. diploma or less    | 16   | 26             | 58           | $\chi^2 =$                        | 10  | 13             | 77           | $\chi^2 =$                        |
| Some college            | 18   | 29             | 54           | 8.81                              | 10  | 17             | 74           | 16.50*                            |
| Bachelors degree        | 17   | 23             | 60           | (.066)                            | 10  | 10             | 81           | (.002)                            |
| <b>Occupation</b>       | (n = 1623)   |                |              |                                   | (n = 1628)  |                |              |                                   |
| Mgt, prof or education  | 16   | 25             | 59           |                                   | 9   | 11             | 80           |                                   |
| Sales or office support | 13   | 33             | 55           |                                   | 9   | 21             | 71           |                                   |
| Constrn, inst or maint  | 17   | 28             | 55           |                                   | 10  | 20             | 70           |                                   |
| Prodn/trans/warehsing   | 18   | 24             | 59           |                                   | 12  | 9              | 79           |                                   |
| Agriculture             | 26   | 28             | 46           | $\chi^2 =$                        | 15  | 16             | 69           | $\chi^2 =$                        |
| Food serv/pers. care    | 10   | 21             | 69           | 35.42*                            | 6   | 6              | 87           | 43.78*                            |
| Hlthcare supp/safety    | 11   | 30             | 59           | (.001)                            | 7   | 13             | 80           | (.000)                            |
| Other                   | 21   | 24             | 55           |                                   | 0   | 16             | 84           |                                   |

\* Chi-square values are statistically significant at the .05 level.



Appendix Table 3 continued

*More should be done to develop  
renewable energy, such as ethanol,  
biodiesel or wind energy.*

*We are too dependent on foreign oil sources.*

|                         | <i>Disagree</i> | <i>Neither</i> | <i>Agree</i> | <i>Chi-<br/>square<br/>(sig.)</i> | <i>Disagree</i>           | <i>Neither</i> | <i>Agree</i> | <i>Chi-<br/>square<br/>(sig.)</i> |
|-------------------------|-----------------|----------------|--------------|-----------------------------------|---------------------------|----------------|--------------|-----------------------------------|
|                         | (n = 2240)      |                |              |                                   | Percentages<br>(n = 2245) |                |              |                                   |
| <b>Community Size</b>   |                 |                |              |                                   |                           |                |              |                                   |
| Less than 500           | 3               | 9              | 88           |                                   | 3                         | 8              | 90           |                                   |
| 500 - 999               | 4               | 7              | 89           |                                   | 3                         | 3              | 93           |                                   |
| 1,000 - 4,999           | 3               | 7              | 90           | $\chi^2 =$                        | 2                         | 6              | 92           | $\chi^2 =$                        |
| 5,000 - 9,999           | 4               | 6              | 90           | 10.08                             | 3                         | 6              | 91           | 17.49*                            |
| 10,000 and up           | 3               | 5              | 93           | (.259)                            | 1                         | 4              | 95           | (.025)                            |
| <b>Region</b>           | (n = 2318)      |                |              |                                   | (n = 2327)                |                |              |                                   |
| Panhandle               | 2               | 6              | 92           |                                   | 2                         | 7              | 92           |                                   |
| North Central           | 5               | 5              | 90           |                                   | 2                         | 10             | 88           |                                   |
| South Central           | 3               | 5              | 92           | $\chi^2 =$                        | 2                         | 3              | 95           | $\chi^2 =$                        |
| Northeast               | 3               | 5              | 92           | 15.77*                            | 2                         | 5              | 93           | 24.04*                            |
| Southeast               | 3               | 10             | 87           | (.046)                            | 3                         | 6              | 91           | (.002)                            |
| <b>Income Level</b>     | (n = 2150)      |                |              |                                   | (n = 2156)                |                |              |                                   |
| Under \$20,000          | 2               | 7              | 91           |                                   | 3                         | 9              | 88           |                                   |
| \$20,000 - \$39,999     | 2               | 5              | 93           | $\chi^2 =$                        | 1                         | 6              | 93           | $\chi^2 =$                        |
| \$40,000 - \$59,999     | 3               | 5              | 91           | 9.68                              | 1                         | 4              | 94           | 20.75*                            |
| \$60,000 and over       | 5               | 6              | 89           | (.139)                            | 2                         | 4              | 94           | (.002)                            |
| <b>Age</b>              | (n = 2322)      |                |              |                                   | (n = 2331)                |                |              |                                   |
| 19 - 29                 | 0               | 7              | 93           |                                   | 2                         | 13             | 85           |                                   |
| 30 - 39                 | 4               | 7              | 89           |                                   | 2                         | 8              | 90           |                                   |
| 40 - 49                 | 5               | 5              | 90           | $\chi^2 =$                        | 2                         | 4              | 95           | $\chi^2 =$                        |
| 50 - 64                 | 5               | 6              | 89           | 23.47*                            | 2                         | 3              | 95           | 59.40*                            |
| 65 and older            | 3               | 5              | 92           | (.003)                            | 2                         | 3              | 95           | (.000)                            |
| <b>Gender</b>           | (n = 2311)      |                |              | $\chi^2 =$                        | (n = 2319)                |                |              | $\chi^2 =$                        |
| Male                    | 5               | 6              | 90           | 16.73*                            | 4                         | 6              | 91           | 19.24*                            |
| Female                  | 2               | 6              | 92           | (.000)                            | 1                         | 6              | 94           | (.000)                            |
| <b>Marital Status</b>   | (n = 2313)      |                |              |                                   | (n = 2320)                |                |              |                                   |
| Married                 | 4               | 6              | 90           |                                   | 2                         | 5              | 93           |                                   |
| Never married           | 0**             | 6              | 94           | $\chi^2 =$                        | 2                         | 13             | 85           | $\chi^2 =$                        |
| Divorced/separated      | 4               | 5              | 91           | 9.84                              | 1                         | 6              | 93           | 28.34*                            |
| Widowed                 | 1               | 6              | 93           | (.132)                            | 1                         | 4              | 95           | (.000)                            |
| <b>Education</b>        | (n = 2304)      |                |              |                                   | (n = 2308)                |                |              |                                   |
| H.S. diploma or less    | 4               | 7              | 89           | $\chi^2 =$                        | 2                         | 6              | 91           | $\chi^2 =$                        |
| Some college            | 3               | 5              | 92           | 5.08                              | 2                         | 5              | 93           | 2.73                              |
| Bachelors degree        | 3               | 6              | 91           | (.279)                            | 2                         | 6              | 93           | (.604)                            |
| <b>Occupation</b>       | (n = 1633)      |                |              |                                   | (n = 1637)                |                |              |                                   |
| Mgt, prof or education  | 3               | 5              | 92           |                                   | 2                         | 5              | 93           |                                   |
| Sales or office support | 2               | 6              | 92           |                                   | 1                         | 6              | 93           |                                   |
| Constrn, inst or maint  | 4               | 11             | 85           |                                   | 2                         | 10             | 88           |                                   |
| Prodn/trans/warehsing   | 4               | 4              | 92           |                                   | 2                         | 3              | 95           |                                   |
| Agriculture             | 5               | 6              | 89           | $\chi^2 =$                        | 3                         | 10             | 86           | $\chi^2 =$                        |
| Food serv/pers. care    | 3               | 7              | 90           | 14.77                             | 1                         | 10             | 89           | 29.02*                            |
| Hlthcare supp/safety    | 3               | 8              | 89           | (.394)                            | 1                         | 5              | 94           | (.010)                            |
| Other                   | 0               | 5              | 95           |                                   | 0                         | 0              | 100          |                                   |

\* Chi-square values are statistically significant at the .05 level. 0\*\* = Less than 1 percent.

**Appendix Table 4. Perceptions of the Importance of Various Energy Sources for Next Generation by Community Size, Region and Individual Attributes**

|                              | <i>Wind Energy</i> |                |                  |                          | <i>Solar Energy</i> |                |                  |                          |
|------------------------------|--------------------|----------------|------------------|--------------------------|---------------------|----------------|------------------|--------------------------|
|                              | <i>Unimportant</i> | <i>Neither</i> | <i>Important</i> | <i>Chi-square (sig.)</i> | <i>Unimportant</i>  | <i>Neither</i> | <i>Important</i> | <i>Chi-square (sig.)</i> |
| <b><u>Community Size</u></b> |                    | (n = 2268)     |                  |                          | <i>Percentages</i>  | (n = 2249)     |                  |                          |
| Less than 500                | 3                  | 5              | 93               |                          | 5                   | 5              | 90               |                          |
| 500 - 999                    | 6                  | 4              | 90               |                          | 3                   | 9              | 88               |                          |
| 1,000 - 4,999                | 6                  | 5              | 89               | $\chi^2 =$               | 6                   | 6              | 88               | $\chi^2 =$               |
| 5,000 - 9,999                | 4                  | 9              | 87               | 15.13                    | 3                   | 7              | 90               | 8.24                     |
| 10,000 and up                | 4                  | 7              | 89               | (.057)                   | 4                   | 6              | 90               | (.411)                   |
| <b><u>Region</u></b>         |                    | (n = 2344)     |                  |                          |                     | (n = 2323)     |                  |                          |
| Panhandle                    | 3                  | 4              | 93               |                          | 4                   | 4              | 92               |                          |
| North Central                | 4                  | 8              | 88               |                          | 7                   | 7              | 86               |                          |
| South Central                | 5                  | 6              | 89               | $\chi^2 =$               | 4                   | 6              | 91               | $\chi^2 =$               |
| Northeast                    | 5                  | 4              | 91               | 27.16*                   | 4                   | 7              | 89               | 16.39*                   |
| Southeast                    | 7                  | 10             | 83               | (.001)                   | 6                   | 10             | 85               | (.037)                   |
| <b><u>Income Level</u></b>   |                    | (n = 2174)     |                  |                          |                     | (n = 2163)     |                  |                          |
| Under \$20,000               | 5                  | 8              | 87               |                          | 4                   | 8              | 88               |                          |
| \$20,000 - \$39,999          | 4                  | 7              | 89               | $\chi^2 =$               | 4                   | 7              | 89               | $\chi^2 =$               |
| \$40,000 - \$59,999          | 3                  | 4              | 93               | 9.87                     | 4                   | 6              | 90               | 4.25                     |
| \$60,000 and over            | 5                  | 7              | 88               | (.130)                   | 5                   | 6              | 89               | (.642)                   |
| <b><u>Age</u></b>            |                    | (n = 2353)     |                  |                          |                     | (n = 2329)     |                  |                          |
| 19 - 29                      | 2                  | 10             | 88               |                          | 2                   | 10             | 88               |                          |
| 30 - 39                      | 6                  | 9              | 85               |                          | 4                   | 9              | 87               |                          |
| 40 - 49                      | 2                  | 7              | 91               | $\chi^2 =$               | 3                   | 6              | 91               | $\chi^2 =$               |
| 50 - 64                      | 6                  | 4              | 90               | 55.29*                   | 6                   | 5              | 89               | 32.08*                   |
| 65 and older                 | 7                  | 3              | 90               | (.000)                   | 7                   | 5              | 88               | (.000)                   |
| <b><u>Gender</u></b>         |                    | (n = 2339)     |                  |                          |                     | (n = 2317)     |                  |                          |
| Male                         | 6                  | 5              | 88               | $\chi^2 =$               | 7                   | 7              | 86               | $\chi^2 =$               |
| Female                       | 3                  | 7              | 90               | (.001)                   | 3                   | 7              | 90               | (.000)                   |
| <b><u>Marital Status</u></b> |                    | (n = 2341)     |                  |                          |                     | (n = 2318)     |                  |                          |
| Married                      | 5                  | 6              | 90               |                          | 5                   | 6              | 89               |                          |
| Never married                | 3                  | 13             | 84               | $\chi^2 =$               | 5                   | 15             | 81               | $\chi^2 =$               |
| Divorced/separated           | 7                  | 6              | 87               | 28.34*                   | 4                   | 4              | 92               | 29.18*                   |
| Widowed                      | 6                  | 4              | 90               | (.000)                   | 6                   | 5              | 89               | (.000)                   |
| <b><u>Education</u></b>      |                    | (n = 2330)     |                  |                          |                     | (n = 2311)     |                  |                          |
| H.S. diploma or less         | 6                  | 6              | 88               | $\chi^2 =$               | 7                   | 8              | 85               | $\chi^2 =$               |
| Some college                 | 4                  | 6              | 90               | 5.67                     | 4                   | 5              | 90               | 16.80*                   |
| Bachelors degree             | 4                  | 7              | 89               | (.225)                   | 3                   | 7              | 90               | (.002)                   |
| <b><u>Occupation</u></b>     |                    | (n = 1660)     |                  |                          |                     | (n = 1654)     |                  |                          |
| Mgt, prof or education       | 4                  | 8              | 88               |                          | 3                   | 7              | 91               |                          |
| Sales or office support      | 2                  | 6              | 92               |                          | 3                   | 8              | 89               |                          |
| Constrn, inst or maint       | 8                  | 7              | 86               |                          | 10                  | 7              | 83               |                          |
| Prodn/trans/warehsing        | 3                  | 3              | 94               |                          | 4                   | 7              | 89               |                          |
| Agriculture                  | 5                  | 6              | 90               | $\chi^2 =$               | 6                   | 5              | 88               | $\chi^2 =$               |
| Food serv/pers. care         | 3                  | 11             | 86               | 24.49*                   | 3                   | 11             | 87               | 25.58*                   |
| Hlthcare supp/safety         | 8                  | 7              | 86               | (.040)                   | 3                   | 8              | 89               | (.029)                   |
| Other                        | 0                  | 8              | 92               |                          | 3                   | 8              | 90               |                          |

\* Chi-square values are statistically significant at the .05 level.

Appendix Table 4 continued

|                              | <i>Oil</i>         |                |                  | <i>Chi-square (sig.)</i> | <i>Natural Gas</i> |                           |                  | <i>Chi-square (sig.)</i> |
|------------------------------|--------------------|----------------|------------------|--------------------------|--------------------|---------------------------|------------------|--------------------------|
|                              | <i>Unimportant</i> | <i>Neither</i> | <i>Important</i> |                          | <i>Unimportant</i> | <i>Neither</i>            | <i>Important</i> |                          |
| <b><u>Community Size</u></b> |                    | (n = 2251)     |                  |                          |                    | Percentages<br>(n = 2244) |                  |                          |
| Less than 500                | 6                  | 6              | 88               |                          | 3                  | 15                        | 82               |                          |
| 500 - 999                    | 7                  | 5              | 88               |                          | 4                  | 7                         | 89               |                          |
| 1,000 - 4,999                | 9                  | 6              | 85               | $\chi^2 =$               | 5                  | 11                        | 84               | $\chi^2 =$               |
| 5,000 - 9,999                | 10                 | 8              | 82               | 19.51*                   | 6                  | 14                        | 79               | 16.69*                   |
| 10,000 and up                | 6                  | 4              | 90               | (.012)                   | 4                  | 11                        | 85               | (.034)                   |
| <b><u>Region</u></b>         |                    | (n = 2331)     |                  |                          |                    | (n = 2324)                |                  |                          |
| Panhandle                    | 7                  | 7              | 86               |                          | 5                  | 12                        | 84               |                          |
| North Central                | 8                  | 4              | 88               |                          | 4                  | 11                        | 86               |                          |
| South Central                | 6                  | 5              | 89               | $\chi^2 =$               | 5                  | 12                        | 84               | $\chi^2 =$               |
| Northeast                    | 9                  | 5              | 86               | 6.69                     | 5                  | 11                        | 84               | 4.74                     |
| Southeast                    | 8                  | 6              | 86               | (.571)                   | 5                  | 14                        | 81               | (.785)                   |
| <b><u>Income Level</u></b>   |                    | (n = 2162)     |                  |                          |                    | (n = 2157)                |                  |                          |
| Under \$20,000               | 9                  | 6              | 86               |                          | 6                  | 12                        | 82               |                          |
| \$20,000 - \$39,999          | 10                 | 4              | 86               | $\chi^2 =$               | 4                  | 12                        | 84               | $\chi^2 =$               |
| \$40,000 - \$59,999          | 6                  | 5              | 89               | 12.00                    | 5                  | 12                        | 83               | 2.77                     |
| \$60,000 and over            | 6                  | 6              | 88               | (.062)                   | 4                  | 11                        | 85               | (.837)                   |
| <b><u>Age</u></b>            |                    | (n = 2338)     |                  |                          |                    | (n = 2328)                |                  |                          |
| 19 - 29                      | 7                  | 7              | 86               |                          | 2                  | 16                        | 82               |                          |
| 30 - 39                      | 6                  | 7              | 87               |                          | 3                  | 15                        | 82               |                          |
| 40 - 49                      | 8                  | 7              | 86               | $\chi^2 =$               | 4                  | 11                        | 85               | $\chi^2 =$               |
| 50 - 64                      | 9                  | 5              | 87               | 13.00                    | 6                  | 10                        | 83               | 27.48*                   |
| 65 and older                 | 8                  | 3              | 89               | (.112)                   | 6                  | 9                         | 85               | (.001)                   |
| <b><u>Gender</u></b>         |                    | (n = 2327)     |                  | $\chi^2 =$               |                    | (n = 2316)                |                  | $\chi^2 =$               |
| Male                         | 9                  | 5              | 86               | 3.76                     | 5                  | 11                        | 84               | 1.90                     |
| Female                       | 7                  | 6              | 88               | (.153)                   | 4                  | 12                        | 84               | (.387)                   |
| <b><u>Marital Status</u></b> |                    | (n = 2328)     |                  |                          |                    | (n = 2315)                |                  |                          |
| Married                      | 7                  | 6              | 87               |                          | 5                  | 12                        | 84               |                          |
| Never married                | 6                  | 5              | 89               | $\chi^2 =$               | 2                  | 16                        | 82               | $\chi^2 =$               |
| Divorced/separated           | 11                 | 6              | 83               | 13.91*                   | 6                  | 10                        | 84               | 13.45*                   |
| Widowed                      | 7                  | 1              | 91               | (.031)                   | 6                  | 8                         | 86               | (.036)                   |
| <b><u>Education</u></b>      |                    | (n = 2318)     |                  |                          |                    | (n = 2309)                |                  |                          |
| H.S. diploma or less         | 8                  | 6              | 86               | $\chi^2 =$               | 6                  | 12                        | 82               | $\chi^2 =$               |
| Some college                 | 8                  | 5              | 87               | 2.28                     | 5                  | 11                        | 85               | 8.28                     |
| Bachelors degree             | 7                  | 6              | 88               | (.684)                   | 3                  | 13                        | 84               | (.082)                   |
| <b><u>Occupation</u></b>     |                    | (n = 1647)     |                  |                          |                    | (n = 1646)                |                  |                          |
| Mgt, prof or education       | 5                  | 6              | 89               |                          | 3                  | 11                        | 86               |                          |
| Sales or office support      | 5                  | 6              | 89               |                          | 5                  | 13                        | 82               |                          |
| Constrn, inst or maint       | 15                 | 7              | 78               |                          | 6                  | 19                        | 76               |                          |
| Prodn/trans/warehsing        | 8                  | 5              | 87               |                          | 3                  | 9                         | 88               |                          |
| Agriculture                  | 9                  | 3              | 88               | $\chi^2 =$               | 6                  | 8                         | 87               | $\chi^2 =$               |
| Food serv/pers. care         | 12                 | 11             | 78               | 36.62*                   | 4                  | 21                        | 75               | 34.97*                   |
| Hlthcare supp/safety         | 6                  | 9              | 85               | (.001)                   | 2                  | 18                        | 80               | (.001)                   |
| Other                        | 8                  | 3              | 89               |                          | 5                  | 19                        | 76               |                          |

\* Chi-square values are statistically significant at the .05 level.

Appendix Table 4 continued

|                              | <i>Ethanol from Other Sources</i> |                |                  | <i>Chi-square (sig.)</i> | <i>Ethanol from Corn</i> |                                  |                  | <i>Chi-square (sig.)</i> |
|------------------------------|-----------------------------------|----------------|------------------|--------------------------|--------------------------|----------------------------------|------------------|--------------------------|
|                              | <i>Unimportant</i>                | <i>Neither</i> | <i>Important</i> |                          | <i>Unimportant</i>       | <i>Neither</i>                   | <i>Important</i> |                          |
| <b><u>Community Size</u></b> |                                   | (n = 2243)     |                  |                          |                          | <i>Percentages</i><br>(n = 2256) |                  |                          |
| Less than 500                | 7                                 | 12             | 81               |                          | 9                        | 12                               | 79               |                          |
| 500 - 999                    | 7                                 | 5              | 88               |                          | 12                       | 5                                | 83               |                          |
| 1,000 - 4,999                | 9                                 | 10             | 82               | $\chi^2 =$               | 11                       | 8                                | 81               | $\chi^2 =$               |
| 5,000 - 9,999                | 10                                | 14             | 77               | 17.49*                   | 14                       | 10                               | 76               | 18.98*                   |
| 10,000 and up                | 8                                 | 13             | 80               | (.025)                   | 13                       | 10                               | 76               | (.015)                   |
| <b><u>Region</u></b>         |                                   | (n = 2322)     |                  |                          |                          | (n = 2331)                       |                  |                          |
| Panhandle                    | 9                                 | 14             | 77               |                          | 15                       | 11                               | 74               |                          |
| North Central                | 9                                 | 12             | 79               |                          | 14                       | 11                               | 74               |                          |
| South Central                | 7                                 | 9              | 84               | $\chi^2 =$               | 10                       | 7                                | 83               | $\chi^2 =$               |
| Northeast                    | 8                                 | 9              | 82               | 13.21                    | 11                       | 9                                | 80               | 17.46*                   |
| Southeast                    | 8                                 | 14             | 79               | (.105)                   | 11                       | 11                               | 78               | (.026)                   |
| <b><u>Income Level</u></b>   |                                   | (n = 2158)     |                  |                          |                          | (n = 2168)                       |                  |                          |
| Under \$20,000               | 6                                 | 13             | 81               |                          | 9                        | 11                               | 80               |                          |
| \$20,000 - \$39,999          | 7                                 | 10             | 83               | $\chi^2 =$               | 10                       | 9                                | 81               | $\chi^2 =$               |
| \$40,000 - \$59,999          | 8                                 | 9              | 83               | 8.54                     | 10                       | 9                                | 81               | 20.27*                   |
| \$60,000 and over            | 10                                | 11             | 79               | (.201)                   | 16                       | 9                                | 75               | (.002)                   |
| <b><u>Age</u></b>            |                                   | (n = 2326)     |                  |                          |                          | (n = 2335)                       |                  |                          |
| 19 - 29                      | 3                                 | 11             | 86               |                          | 4                        | 10                               | 86               |                          |
| 30 - 39                      | 7                                 | 13             | 80               |                          | 12                       | 10                               | 78               |                          |
| 40 - 49                      | 9                                 | 11             | 80               | $\chi^2 =$               | 12                       | 9                                | 79               | $\chi^2 =$               |
| 50 - 64                      | 11                                | 10             | 78               | 26.09*                   | 16                       | 10                               | 74               | 35.93*                   |
| 65 and older                 | 9                                 | 10             | 81               | (.001)                   | 14                       | 9                                | 78               | (.000)                   |
| <b><u>Gender</u></b>         |                                   | (n = 2315)     |                  | $\chi^2 =$               |                          | (n = 2324)                       |                  | $\chi^2 =$               |
| Male                         | 11                                | 11             | 78               | 20.27*                   | 17                       | 11                               | 73               | 45.96*                   |
| Female                       | 6                                 | 11             | 83               | (.000)                   | 8                        | 8                                | 84               | (.000)                   |
| <b><u>Marital Status</u></b> |                                   | (n = 2317)     |                  |                          |                          | (n = 2325)                       |                  |                          |
| Married                      | 9                                 | 11             | 81               |                          | 13                       | 9                                | 78               |                          |
| Never married                | 5                                 | 12             | 82               | $\chi^2 =$               | 5                        | 12                               | 82               | $\chi^2 =$               |
| Divorced/separated           | 8                                 | 11             | 82               | 3.99                     | 13                       | 8                                | 79               | 14.93*                   |
| Widowed                      | 8                                 | 11             | 81               | (.679)                   | 10                       | 8                                | 82               | (.021)                   |
| <b><u>Education</u></b>      |                                   | (n = 2308)     |                  |                          |                          | (n = 2315)                       |                  |                          |
| H.S. diploma or less         | 9                                 | 12             | 79               | $\chi^2 =$               | 12                       | 11                               | 77               | $\chi^2 =$               |
| Some college                 | 8                                 | 8              | 84               | 9.98*                    | 12                       | 7                                | 81               | 8.63                     |
| Bachelors degree             | 8                                 | 13             | 80               | (.041)                   | 12                       | 10                               | 78               | (.071)                   |
| <b><u>Occupation</u></b>     |                                   | (n = 1647)     |                  |                          |                          | (n = 1648)                       |                  |                          |
| Mgt, prof or education       | 8                                 | 12             | 80               |                          | 12                       | 9                                | 80               |                          |
| Sales or office support      | 6                                 | 13             | 81               |                          | 11                       | 10                               | 79               |                          |
| Constrn, inst or maint       | 6                                 | 13             | 81               |                          | 12                       | 14                               | 75               |                          |
| Prodn/trans/warehsing        | 10                                | 7              | 83               |                          | 15                       | 9                                | 75               |                          |
| Agriculture                  | 11                                | 8              | 81               | $\chi^2 =$               | 13                       | 6                                | 80               | $\chi^2 =$               |
| Food serv/pers. care         | 4                                 | 15             | 82               | 22.02                    | 5                        | 16                               | 80               | 18.14                    |
| Hlthcare supp/safety         | 5                                 | 13             | 82               | (.078)                   | 13                       | 10                               | 78               | (.200)                   |
| Other                        | 3                                 | 8              | 89               |                          | 8                        | 11                               | 81               |                          |

\* Chi-square values are statistically significant at the .05 level.

**Appendix Table 5. Importance of Energy Sources to Household by Community Size, Region and Individual Attributes**

|                         | <b>Diesel Fuel</b> |                |                  |                          | <b>Unleaded Gasoline</b>         |                |                  |                          |
|-------------------------|--------------------|----------------|------------------|--------------------------|----------------------------------|----------------|------------------|--------------------------|
|                         | <i>Unimportant</i> | <i>Neither</i> | <i>Important</i> | <i>Chi-square (sig.)</i> | <i>Unimportant</i>               | <i>Neither</i> | <i>Important</i> | <i>Chi-square (sig.)</i> |
| <b>Community Size</b>   | (n = 2255)         |                |                  |                          | <i>Percentages</i><br>(n = 2290) |                |                  |                          |
| Less than 500           | 32                 | 14             | 54               |                          | 5                                | 1              | 94               |                          |
| 500 - 999               | 38                 | 10             | 52               |                          | 3                                | 2              | 96               |                          |
| 1,000 - 4,999           | 48                 | 15             | 38               | $\chi^2 =$               | 4                                | 2              | 94               | $\chi^2 =$               |
| 5,000 - 9,999           | 63                 | 15             | 22               | 181.6*                   | 3                                | 2              | 95               | 12.92                    |
| 10,000 and up           | 63                 | 16             | 21               | (.000)                   | 2                                | 1              | 97               | (.115)                   |
| <b>Region</b>           | (n = 2332)         |                |                  |                          | (n = 2378)                       |                |                  |                          |
| Panhandle               | 50                 | 13             | 37               |                          | 2                                | 2              | 96               |                          |
| North Central           | 49                 | 14             | 37               |                          | 5                                | 1              | 95               |                          |
| South Central           | 54                 | 16             | 31               | $\chi^2 =$               | 2                                | 2              | 96               | $\chi^2 =$               |
| Northeast               | 52                 | 16             | 33               | 7.52                     | 4                                | 2              | 95               | 21.16*                   |
| Southeast               | 51                 | 14             | 34               | (.482)                   | 5                                | 3              | 92               | (.007)                   |
| <b>Income Level</b>     | (n = 2167)         |                |                  |                          | (n = 2195)                       |                |                  |                          |
| Under \$20,000          | 50                 | 19             | 31               |                          | 7                                | 6              | 87               |                          |
| \$20,000 - \$39,999     | 52                 | 15             | 33               | $\chi^2 =$               | 4                                | 1              | 95               | $\chi^2 =$               |
| \$40,000 - \$59,999     | 51                 | 17             | 33               | 22.91*                   | 2                                | 1              | 97               | 63.92*                   |
| \$60,000 and over       | 58                 | 10             | 32               | (.001)                   | 1                                | 1              | 98               | (.000)                   |
| <b>Age</b>              | (n = 2336)         |                |                  |                          | (n = 2379)                       |                |                  |                          |
| 19 - 29                 | 57                 | 11             | 32               |                          | 2                                | 1              | 97               |                          |
| 30 - 39                 | 56                 | 13             | 31               |                          | 1                                | 2              | 97               |                          |
| 40 - 49                 | 51                 | 12             | 37               | $\chi^2 =$               | 2                                | 2              | 96               | $\chi^2 =$               |
| 50 - 64                 | 51                 | 15             | 34               | 31.12*                   | 3                                | 2              | 95               | 38.05*                   |
| 65 and older            | 46                 | 21             | 33               | (.000)                   | 7                                | 3              | 90               | (.000)                   |
| <b>Gender</b>           | (n = 2326)         |                |                  |                          | (n = 2369)                       |                |                  |                          |
| Male                    | 47                 | 14             | 39               | $\chi^2 =$               | 4                                | 2              | 95               | $\chi^2 =$               |
| Female                  | 56                 | 15             | 29               | 27.72*                   | 3                                | 2              | 95               | 0.90                     |
|                         |                    |                |                  | (.000)                   |                                  |                |                  | (.639)                   |
| <b>Marital Status</b>   | (n = 2329)         |                |                  |                          | (n = 2371)                       |                |                  |                          |
| Married                 | 50                 | 13             | 36               |                          | 2                                | 1              | 96               |                          |
| Never married           | 55                 | 13             | 32               | $\chi^2 =$               | 3                                | 3              | 95               | $\chi^2 =$               |
| Divorced/separated      | 58                 | 18             | 24               | 30.20*                   | 6                                | 4              | 91               | 33.27*                   |
| Widowed                 | 52                 | 22             | 26               | (.000)                   | 7                                | 4              | 89               | (.000)                   |
| <b>Education</b>        | (n = 2319)         |                |                  |                          | (n = 2360)                       |                |                  |                          |
| H.S. diploma or less    | 44                 | 19             | 37               | $\chi^2 =$               | 6                                | 3              | 91               | $\chi^2 =$               |
| Some college            | 50                 | 14             | 36               | 52.54*                   | 2                                | 1              | 97               | 30.78*                   |
| Bachelors degree        | 62                 | 11             | 27               | (.000)                   | 2                                | 1              | 97               | (.000)                   |
| <b>Occupation</b>       | (n = 1659)         |                |                  |                          | (n = 1668)                       |                |                  |                          |
| Mgt, prof or education  | 64                 | 12             | 24               |                          | 2                                | 2              | 97               |                          |
| Sales or office support | 49                 | 16             | 35               |                          | 0**                              | 0**            | 99               |                          |
| Constrn, inst or maint  | 59                 | 12             | 29               |                          | 2                                | 1              | 97               |                          |
| Prodn/trans/warehsing   | 56                 | 12             | 32               |                          | 2                                | 1              | 98               |                          |
| Agriculture             | 15                 | 9              | 76               | $\chi^2 =$               | 5                                | 1              | 95               | $\chi^2 =$               |
| Food serv/pers. care    | 64                 | 17             | 20               | 232.4*                   | 3                                | 3              | 94               | 22.33                    |
| Hlthcare supp/safety    | 58                 | 12             | 30               | (.000)                   | 3                                | 2              | 95               | (.072)                   |
| Other                   | 61                 | 14             | 25               |                          | 3                                | 6              | 92               |                          |

\* Chi-square values are statistically significant at the .05 level. 0\*\* = Less than 1 percent.

Appendix Table 5 continued

|                              | <i>Propane</i>     |                |                  | <i>Chi-square (sig.)</i> | <i>Natural Gas</i> |                |                  | <i>Chi-square (sig.)</i> |
|------------------------------|--------------------|----------------|------------------|--------------------------|--------------------|----------------|------------------|--------------------------|
|                              | <i>Unimportant</i> | <i>Neither</i> | <i>Important</i> |                          | <i>Unimportant</i> | <i>Neither</i> | <i>Important</i> |                          |
| <b><u>Community Size</u></b> |                    | (n = 2239)     |                  |                          | <i>Percentages</i> | (n = 2267)     |                  |                          |
| Less than 500                | 28                 | 11             | 61               |                          | 38                 | 26             | 37               |                          |
| 500 - 999                    | 34                 | 15             | 52               |                          | 32                 | 15             | 53               |                          |
| 1,000 - 4,999                | 40                 | 19             | 41               | $\chi^2 =$               | 24                 | 15             | 62               | $\chi^2 =$               |
| 5,000 - 9,999                | 50                 | 19             | 32               | 96.73*                   | 22                 | 8              | 70               | 176.1*                   |
| 10,000 and up                | 50                 | 17             | 34               | (.000)                   | 17                 | 7              | 76               | (.000)                   |
| <b><u>Region</u></b>         |                    | (n = 2320)     |                  |                          |                    | (n = 2349)     |                  |                          |
| Panhandle                    | 39                 | 17             | 44               |                          | 27                 | 10             | 63               |                          |
| North Central                | 43                 | 14             | 43               |                          | 32                 | 16             | 52               |                          |
| South Central                | 45                 | 16             | 39               | $\chi^2 =$               | 17                 | 8              | 75               | $\chi^2 =$               |
| Northeast                    | 41                 | 20             | 39               | 17.28*                   | 24                 | 13             | 63               | 83.36*                   |
| Southeast                    | 36                 | 16             | 48               | (.027)                   | 25                 | 19             | 56               | (.000)                   |
| <b><u>Income Level</u></b>   |                    | (n = 2153)     |                  |                          |                    | (n = 2174)     |                  |                          |
| Under \$20,000               | 38                 | 23             | 39               |                          | 17                 | 15             | 68               |                          |
| \$20,000 - \$39,999          | 43                 | 17             | 40               | $\chi^2 =$               | 25                 | 11             | 64               | $\chi^2 =$               |
| \$40,000 - \$59,999          | 39                 | 19             | 43               | 26.74*                   | 20                 | 14             | 66               | 29.33*                   |
| \$60,000 and over            | 48                 | 12             | 40               | (.000)                   | 29                 | 10             | 61               | (.000)                   |
| <b><u>Age</u></b>            |                    | (n = 2325)     |                  |                          |                    | (n = 2353)     |                  |                          |
| 19 - 29                      | 36                 | 13             | 51               |                          | 19                 | 11             | 71               |                          |
| 30 - 39                      | 46                 | 17             | 38               |                          | 26                 | 12             | 62               |                          |
| 40 - 49                      | 42                 | 14             | 45               | $\chi^2 =$               | 30                 | 11             | 58               | $\chi^2 =$               |
| 50 - 64                      | 44                 | 18             | 39               | 33.23*                   | 25                 | 14             | 62               | 28.74*                   |
| 65 and older                 | 41                 | 21             | 37               | (.000)                   | 19                 | 14             | 66               | (.000)                   |
| <b><u>Gender</u></b>         |                    | (n = 2315)     |                  | $\chi^2 =$               |                    | (n = 2342)     |                  | $\chi^2 =$               |
| Male                         | 43                 | 18             | 40               | 3.00                     | 25                 | 13             | 62               | 1.86                     |
| Female                       | 41                 | 16             | 43               | (.223)                   | 23                 | 12             | 65               | (.395)                   |
| <b><u>Marital Status</u></b> |                    | (n = 2315)     |                  |                          |                    | (n = 2343)     |                  |                          |
| Married                      | 41                 | 16             | 44               |                          | 27                 | 14             | 59               |                          |
| Never married                | 43                 | 15             | 42               | $\chi^2 =$               | 12                 | 8              | 80               | $\chi^2 =$               |
| Divorced/separated           | 48                 | 21             | 32               | 22.76*                   | 19                 | 8              | 73               | 55.97*                   |
| Widowed                      | 41                 | 23             | 35               | (.001)                   | 18                 | 11             | 71               | (.000)                   |
| <b><u>Education</u></b>      |                    | (n = 2305)     |                  |                          |                    | (n = 2332)     |                  |                          |
| H.S. diploma or less         | 39                 | 19             | 42               | $\chi^2 =$               | 23                 | 15             | 62               | $\chi^2 =$               |
| Some college                 | 39                 | 18             | 43               | 27.68*                   | 25                 | 13             | 62               | 16.46*                   |
| Bachelors degree             | 49                 | 12             | 39               | (.000)                   | 24                 | 9              | 68               | (.002)                   |
| <b><u>Occupation</u></b>     |                    | (n = 1648)     |                  |                          |                    | (n = 1654)     |                  |                          |
| Mgt, prof or education       | 45                 | 15             | 40               |                          | 24                 | 8              | 68               |                          |
| Sales or office support      | 41                 | 14             | 44               |                          | 25                 | 12             | 62               |                          |
| Constrn, inst or maint       | 50                 | 13             | 38               |                          | 21                 | 14             | 66               |                          |
| Prodn/trans/warehsing        | 46                 | 19             | 36               |                          | 23                 | 11             | 66               |                          |
| Agriculture                  | 23                 | 14             | 62               | $\chi^2 =$               | 39                 | 21             | 40               | $\chi^2 =$               |
| Food serv/pers. care         | 39                 | 24             | 37               | 66.50*                   | 19                 | 9              | 73               | 72.33*                   |
| Hlthcare supp/safety         | 41                 | 15             | 44               | (.000)                   | 26                 | 13             | 61               | (.000)                   |
| Other                        | 66                 | 9              | 26               |                          | 22                 | 8              | 70               |                          |

\* Chi-square values are statistically significant at the .05 level.

Appendix Table 5 continued

|                              | <i>Electricity</i> |                |                  | <i>Chi-square<br/>(sig.)</i> | <i>Fuel Oil</i>    |                                  |                  | <i>Chi-square<br/>(sig.)</i> |
|------------------------------|--------------------|----------------|------------------|------------------------------|--------------------|----------------------------------|------------------|------------------------------|
|                              | <i>Unimportant</i> | <i>Neither</i> | <i>Important</i> |                              | <i>Unimportant</i> | <i>Neither</i>                   | <i>Important</i> |                              |
| <b><u>Community Size</u></b> |                    | (n = 2300)     |                  |                              |                    | <i>Percentages</i><br>(n = 2235) |                  |                              |
| Less than 500                | 3                  | 1              | 96               |                              | 51                 | 29                               | 21               |                              |
| 500 - 999                    | 1                  | 0              | 99               |                              | 55                 | 20                               | 25               |                              |
| 1,000 - 4,999                | 2                  | 2              | 96               | $\chi^2 =$                   | 54                 | 29                               | 18               | $\chi^2 =$                   |
| 5,000 - 9,999                | 2                  | 1              | 97               | 20.11*                       | 62                 | 18                               | 20               | 28.54*                       |
| 10,000 and up                | 1                  | 0**            | 99               | (.010)                       | 60                 | 24                               | 17               | (.000)                       |
| <b><u>Region</u></b>         |                    | (n = 2384)     |                  |                              |                    | (n = 2309)                       |                  |                              |
| Panhandle                    | 2                  | 0**            | 98               |                              | 61                 | 23                               | 16               |                              |
| North Central                | 2                  | 0              | 98               |                              | 52                 | 28                               | 21               |                              |
| South Central                | 1                  | 1              | 98               | $\chi^2 =$                   | 57                 | 23                               | 19               | $\chi^2 =$                   |
| Northeast                    | 2                  | 1              | 97               | 16.57*                       | 59                 | 22                               | 19               | 19.49*                       |
| Southeast                    | 3                  | 2              | 95               | (.035)                       | 50                 | 32                               | 19               | (.012)                       |
| <b><u>Income Level</u></b>   |                    | (n = 2197)     |                  |                              |                    | (n = 2144)                       |                  |                              |
| Under \$20,000               | 4                  | 1              | 95               |                              | 43                 | 30                               | 27               |                              |
| \$20,000 - \$39,999          | 2                  | 1              | 97               | $\chi^2 =$                   | 55                 | 24                               | 21               | $\chi^2 =$                   |
| \$40,000 - \$59,999          | 1                  | 1              | 98               | 16.04*                       | 57                 | 25                               | 19               | 48.44*                       |
| \$60,000 and over            | 1                  | 0**            | 99               | (.014)                       | 65                 | 21                               | 14               | (.000)                       |
| <b><u>Age</u></b>            |                    | (n = 2390)     |                  |                              |                    | (n = 2316)                       |                  |                              |
| 19 - 29                      | 0                  | 1              | 99               |                              | 40                 | 28                               | 33               |                              |
| 30 - 39                      | 1                  | 1              | 98               |                              | 59                 | 24                               | 17               |                              |
| 40 - 49                      | 1                  | 1              | 98               | $\chi^2 =$                   | 62                 | 20                               | 17               | $\chi^2 =$                   |
| 50 - 64                      | 3                  | 0**            | 97               | 29.76*                       | 64                 | 23                               | 14               | 92.06*                       |
| 65 and older                 | 4                  | 1              | 95               | (.000)                       | 53                 | 30                               | 17               | (.000)                       |
| <b><u>Gender</u></b>         |                    | (n = 2379)     |                  | $\chi^2 =$                   |                    | (n = 2304)                       |                  | $\chi^2 =$                   |
| Male                         | 2                  | 1              | 97               | 5.27                         | 64                 | 21                               | 15               | 42.75*                       |
| Female                       | 2                  | 0**            | 98               | (.072)                       | 50                 | 28                               | 22               | (.000)                       |
| <b><u>Marital Status</u></b> |                    | (n = 2379)     |                  |                              |                    | (n = 2305)                       |                  |                              |
| Married                      | 2                  | 1              | 98               |                              | 57                 | 24                               | 18               |                              |
| Never married                | 1                  | 1              | 98               | $\chi^2 =$                   | 47                 | 25                               | 28               | $\chi^2 =$                   |
| Divorced/separated           | 2                  | 2              | 96               | 13.16*                       | 61                 | 22                               | 17               | 23.35*                       |
| Widowed                      | 4                  | 0**            | 95               | (.041)                       | 50                 | 33                               | 17               | (.001)                       |
| <b><u>Education</u></b>      |                    | (n = 2367)     |                  |                              |                    | (n = 2297)                       |                  |                              |
| H.S. diploma or less         | 4                  | 1              | 95               | $\chi^2 =$                   | 51                 | 29                               | 20               | $\chi^2 =$                   |
| Some college                 | 1                  | 0**            | 99               | 25.96*                       | 56                 | 24                               | 20               | 15.68*                       |
| Bachelors degree             | 1                  | 1              | 98               | (.000)                       | 61                 | 23                               | 17               | (.003)                       |
| <b><u>Occupation</u></b>     |                    | (n = 1666)     |                  |                              |                    | (n = 1641)                       |                  |                              |
| Mgt, prof or education       | 1                  | 0**            | 99               |                              | 63                 | 20                               | 18               |                              |
| Sales or office support      | 0**                | 0              | 100              |                              | 51                 | 30                               | 19               |                              |
| Constrn, inst or maint       | 0                  | 1              | 99               |                              | 58                 | 26                               | 16               |                              |
| Prodn/trans/warehsing        | 1                  | 1              | 98               |                              | 61                 | 22                               | 18               |                              |
| Agriculture                  | 2                  | 0**            | 98               | $\chi^2 =$                   | 54                 | 23                               | 23               | $\chi^2 =$                   |
| Food serv/pers. care         | 4                  | 0              | 96               | 19.14                        | 34                 | 39                               | 27               | 45.49*                       |
| Hlthcare supp/safety         | 1                  | 1              | 99               | (.160)                       | 56                 | 22                               | 22               | (.000)                       |
| Other                        | 0                  | 0              | 100              |                              | 73                 | 16                               | 11               |                              |

\* Chi-square values are statistically significant at the .05 level. 0\*\* = Less than 1 percent.

Appendix Table 5 continued

|                              |    | <i>Wood</i>        |                |                  |                          |
|------------------------------|----|--------------------|----------------|------------------|--------------------------|
|                              |    | <i>Unimportant</i> | <i>Neither</i> | <i>Important</i> | <i>Chi-square (sig.)</i> |
| <b><u>Community Size</u></b> |    | (n = 2252)         |                |                  |                          |
| Less than 500                | 42 | 26                 | 32             |                  |                          |
| 500 - 999                    | 50 | 22                 | 28             |                  |                          |
| 1,000 - 4,999                | 46 | 24                 | 30             | $\chi^2 =$       |                          |
| 5,000 - 9,999                | 58 | 23                 | 18             | 32.22*           |                          |
| 10,000 and up                | 55 | 22                 | 23             | (.000)           |                          |
| <b><u>Region</u></b>         |    | (n = 2328)         |                |                  |                          |
| Panhandle                    | 51 | 22                 | 27             |                  |                          |
| North Central                | 44 | 23                 | 33             |                  |                          |
| South Central                | 51 | 23                 | 27             | $\chi^2 =$       |                          |
| Northeast                    | 54 | 23                 | 23             | 16.56*           |                          |
| Southeast                    | 48 | 27                 | 25             | (.035)           |                          |
| <b><u>Income Level</u></b>   |    | (n = 2160)         |                |                  |                          |
| Under \$20,000               | 39 | 29                 | 33             |                  |                          |
| \$20,000 - \$39,999          | 49 | 23                 | 29             | $\chi^2 =$       |                          |
| \$40,000 - \$59,999          | 52 | 23                 | 25             | 39.93*           |                          |
| \$60,000 and over            | 59 | 19                 | 23             | (.000)           |                          |
| <b><u>Age</u></b>            |    | (n = 2333)         |                |                  |                          |
| 19 - 29                      | 41 | 25                 | 34             |                  |                          |
| 30 - 39                      | 54 | 22                 | 24             |                  |                          |
| 40 - 49                      | 53 | 19                 | 29             | $\chi^2 =$       |                          |
| 50 - 64                      | 52 | 22                 | 26             | 35.88*           |                          |
| 65 and older                 | 50 | 28                 | 22             | (.000)           |                          |
| <b><u>Gender</u></b>         |    | (n = 2322)         |                |                  | $\chi^2 =$               |
| Male                         | 52 | 22                 | 26             | 3.15             |                          |
| Female                       | 48 | 24                 | 28             | (.207)           |                          |
| <b><u>Marital Status</u></b> |    | (n = 2323)         |                |                  |                          |
| Married                      | 50 | 22                 | 28             |                  |                          |
| Never married                | 47 | 26                 | 27             | $\chi^2 =$       |                          |
| Divorced/separated           | 51 | 22                 | 27             | 14.55*           |                          |
| Widowed                      | 50 | 32                 | 18             | (.024)           |                          |
| <b><u>Education</u></b>      |    | (n = 2313)         |                |                  |                          |
| H.S. diploma or less         | 41 | 29                 | 30             | $\chi^2 =$       |                          |
| Some college                 | 51 | 20                 | 28             | 44.12*           |                          |
| Bachelors degree             | 58 | 20                 | 22             | (.000)           |                          |
| <b><u>Occupation</u></b>     |    | (n = 1648)         |                |                  |                          |
| Mgt, prof or education       | 54 | 20                 | 26             |                  |                          |
| Sales or office support      | 48 | 26                 | 26             |                  |                          |
| Constrn, inst or maint       | 46 | 22                 | 32             |                  |                          |
| Prodn/trans/warehsing        | 52 | 20                 | 28             |                  |                          |
| Agriculture                  | 45 | 22                 | 33             | $\chi^2 =$       |                          |
| Food serv/pers. care         | 40 | 30                 | 30             | 23.78*           |                          |
| Hlthcare supp/safety         | 53 | 18                 | 29             | (.049)           |                          |
| Other                        | 69 | 17                 | 14             |                  |                          |

\* Chi-square values are statistically significant at the .05 level.



**Appendix Table 6. Actions Taken or Plan to Take As a Result of Recent Energy Price Increases in Relation to Community Size, Region and Individual Attributes.\*\*\***

|                              | <i>Cut back on<br/>necessary household<br/>spending</i> | <i>Cut back on<br/>luxury household<br/>spending</i> | <i>Cut back how<br/>much you<br/>drove</i> | <i>Changed your vacation<br/>plans by shortening or<br/>postponing the tip</i> | <i>Cancelled<br/>vacation plans</i> |
|------------------------------|---|--|--|--|-------------------------------------|
|                              |   |  | <i>Percentages</i>                         |  |                                     |
| <b><u>Community Size</u></b> | (n = 2305)  | (n = 2306)   | (n = 2304)                                 | (n = 2264)   | (n = 2252)                          |
| Less than 500                | 90  | 93   | 95   | 82   | 65                                  |
| 500 - 999                    | 87  | 97   | 93   | 78   | 61                                  |
| 1,000 - 4,999                | 90  | 95   | 91   | 77   | 60                                  |
| 5,000 - 9,999                | 86  | 92   | 90   | 76   | 56                                  |
| 10,000 and up                | 87  | 94   | 88   | 69   | 55                                  |
| <i>Significance</i>          | (.175)  | (.215)   | (.004)                                     | (.000)   | (.015)                              |
| <b><u>Region</u></b>         | (n = 2390)  | (n = 2384)   | (n = 2387)                                 | (n = 2347)   | (n = 2331)                          |
| Panhandle                    | 90  | 93   | 91   | 73   | 56                                  |
| North Central                | 87  | 91   | 89   | 74   | 55                                  |
| South Central                | 87  | 95   | 90   | 74   | 59                                  |
| Northeast                    | 88  | 95   | 91   | 76   | 60                                  |
| Southeast                    | 90  | 95   | 91   | 79   | 61                                  |
| <i>Significance</i>          | (.707)  | (.036)   | (.908)                                     | (.445)   | (.385)                              |
| <b><u>Income Level</u></b>   | (n = 2209)  | (n = 2203)   | (n = 2212)                                 | (n = 2177)   | (n = 2166)                          |
| Under \$20,000               | 93  | 95   | 93   | 80   | 76                                  |
| \$20,000 - \$39,999          | 93  | 95   | 93   | 80   | 67                                  |
| \$40,000 - \$59,999          | 88  | 96   | 92   | 75   | 57                                  |
| \$60,000 and over            | 83  | 93   | 86   | 68   | 43                                  |
| <i>Significance</i>          | (.000)  | (.049)   | (.000)                                     | (.000)   | (.000)                              |
| <b><u>Age</u></b>            | (n = 2393)  | (n = 2389)   | (n = 2393)                                 | (n = 2352)   | (n = 2335)                          |
| 19 - 29                      | 87  | 94   | 92   | 69   | 57                                  |
| 30 - 39                      | 88  | 96   | 87   | 73   | 52                                  |
| 40 - 49                      | 88  | 94   | 92   | 78   | 54                                  |
| 50 - 64                      | 89  | 95   | 91   | 77   | 60                                  |
| 65 and older                 | 88  | 93   | 90   | 77   | 66                                  |
| <i>Significance</i>          | (.970)  | (.366)   | (.067)                                     | (.021)   | (.000)                              |
| <b><u>Marital Status</u></b> | (n = 2385)  | (n = 2379)   | (n = 2383)                                 | (n = 2342)   | (n = 2326)                          |
| Married                      | 87  | 94   | 91   | 75   | 56                                  |
| Never married                | 87  | 96   | 89   | 73   | 63                                  |
| Divorced/separated           | 92  | 94   | 92   | 77   | 65                                  |
| Widowed                      | 90  | 95   | 89   | 73   | 64                                  |
| <i>Significance</i>          | (.083)  | (.478)   | (.566)                                     | (.636)   | (.005)                              |
| <b><u>Occupation</u></b>     | (n = 1677)  | (n = 1674)   | (n = 1683)                                 | (n = 1663)   | (n = 1651)                          |
| Mgt, prof or education       | 86  | 93   | 87   | 68   | 49                                  |
| Sales or office support      | 92  | 99   | 90   | 74   | 53                                  |
| Constrn, inst or maint       | 91  | 93   | 89   | 81   | 68                                  |
| Prodn/trans/warehsing        | 94  | 98   | 96   | 87   | 65                                  |
| Agriculture                  | 87  | 92   | 94   | 78   | 61                                  |
| Food serv/pers. care         | 90  | 97   | 93   | 72   | 57                                  |
| Hlthcare supp/safety         | 90  | 96   | 94   | 78   | 56                                  |
| Other                        | 84  | 92   | 89   | 84   | 69                                  |
| <i>Significance</i>          | (.033)  | (.002)   | (.005)                                     | (.000)   | (.000)                              |

\*\*\* Includes those who said they did or plan to do each item a little, some or a lot.

Appendix Table 6 continued

|                         | <i>Reduced the heat or<br/>air conditioning use<br/>in your home</i> | <i>Installed energy<br/>efficient<br/>appliances</i> | <i>Attempted to use<br/>household appliances<br/>more efficiently</i> | <i>Upgraded<br/>insulation in<br/>home</i> | <i>Changed jobs<br/>for a shorter<br/>commute</i> |
|-------------------------|--|--|---|--|---|
|                         | <i>Percentages</i>   |  |   |  |   |
| <b>Community Size</b>   | (n = 2286)   | (n = 2277)   | (n = 2268)  | (n = 2243)                                 | (n = 2186)  |
| Less than 500           | 90   | 75   | 89  | 55   | 18  |
| 500 - 999               | 93   | 70   | 89  | 61   | 20  |
| 1,000 - 4,999           | 93   | 73   | 91  | 57   | 16  |
| 5,000 - 9,999           | 93   | 73   | 90  | 53   | 21  |
| 10,000 and up           | 90   | 72   | 88  | 50   | 17  |
| <i>Significance</i>     | (.153)   | (.793)   | (.507)  | (.042)                                     | (.311)  |
| <b>Region</b>           | (n = 2367)   | (n = 2355)   | (n = 2348)  | (n = 2317)                                 | (n = 2258)  |
| Panhandle               | 92   | 77   | 90  | 55   | 13  |
| North Central           | 90   | 74   | 88  | 51   | 12  |
| South Central           | 90   | 73   | 89  | 54   | 20  |
| Northeast               | 92   | 71   | 89  | 55   | 21  |
| Southeast               | 94   | 70   | 90  | 54   | 20  |
| <i>Significance</i>     | (.205)   | (.355)   | (.902)  | (.786)                                     | (.000)  |
| <b>Income Level</b>     | (n = 2194)   | (n = 2182)   | (n = 2172)  | (n = 2155)                                 | (n = 2107)  |
| Under \$20,000          | 93   | 67   | 90  | 52   | 28  |
| \$20,000 - \$39,999     | 94   | 70   | 90  | 52   | 21  |
| \$40,000 - \$59,999     | 93   | 77   | 92  | 57   | 16  |
| \$60,000 and over       | 87   | 73   | 87  | 53   | 11  |
| <i>Significance</i>     | (.000)   | (.011)   | (.007)  | (.275)                                     | (.000)  |
| <b>Age</b>              | (n = 2373)   | (n = 2361)   | (n = 2352)  | (n = 2322)                                 | (n = 2262)  |
| 19 - 29                 | 93   | 71   | 92  | 50   | 30  |
| 30 - 39                 | 92   | 65   | 86  | 49   | 16  |
| 40 - 49                 | 91   | 71   | 87  | 56   | 17  |
| 50 - 64                 | 92   | 79   | 93  | 59   | 15  |
| 65 and older            | 89   | 74   | 88  | 54   | 12  |
| <i>Significance</i>     | (.157)   | (.000)   | (.001)  | (.018)                                     | (.000)  |
| <b>Marital Status</b>   | (n = 2361)   | (n = 2350)   | (n = 2342)  | (n = 2314)                                 | (n = 2255)  |
| Married                 | 91   | 75   | 89  | 56   | 16  |
| Never married           | 95   | 66   | 90  | 46   | 25  |
| Divorced/separated      | 94   | 69   | 89  | 53   | 25  |
| Widowed                 | 89   | 68   | 87  | 49   | 14  |
| <i>Significance</i>     | (.024)   | (.011)   | (.637)  | (.015)                                     | (.000)  |
| <b>Occupation</b>       | (n = 1668)   | (n = 1672)   | (n = 1661)  | (n = 1659)                                 | (n = 1642)  |
| Mgt, prof or education  | 91   | 72   | 89  | 53   | 17  |
| Sales or office support | 93   | 71   | 90  | 56   | 16  |
| Constrn, inst or maint  | 96   | 79   | 89  | 58   | 23  |
| Prodn/trans/warehsing   | 94   | 81   | 95  | 61   | 18  |
| Agriculture             | 89   | 71   | 87  | 56   | 14  |
| Food serv/pers. care    | 97   | 67   | 90  | 51   | 35  |
| Hlthcare supp/safety    | 94   | 71   | 87  | 56   | 21  |
| Other                   | 100  | 62   | 86  | 38   | 11  |
| <i>Significance</i>     | (.020)   | (.046)   | (.122)  | (.235)                                     | (.000)  |

\*\*\* Includes those who said they did or plan to do each item a little, some or a lot.

Appendix Table 6 continued

|                              | <i>Acquired more goods<br/>and services locally</i> | <i>Reduced the amount of money<br/>put into savings or retirement<br/>account</i> | <i>Shared rides to work<br/>or school</i> |
|------------------------------|---|---|---|
|                              |   | <i>Percentages</i>  |   |
| <b><u>Community Size</u></b> | (n = 2251)  | (n = 2254)  | (n = 2164)                                |
| Less than 500                | 76  | 54  | 41  |
| 500 - 999                    | 86  | 61  | 42  |
| 1,000 - 4,999                | 83  | 59  | 40  |
| 5,000 - 9,999                | 85  | 64  | 40  |
| 10,000 and up                | 75  | 56  | 38  |
| <i>Significance</i>          | (.000)  | (.070)  | (.751)                                    |
| <b><u>Region</u></b>         | (n = 2319)  | (n = 2332)  | (n = 2230)                                |
| Panhandle                    | 84  | 60  | 47  |
| North Central                | 77  | 55  | 40  |
| South Central                | 79  | 55  | 38  |
| Northeast                    | 80  | 59  | 37  |
| Southeast                    | 80  | 62  | 39  |
| <i>Significance</i>          | (.220)  | (.154)  | (.093)                                    |
| <b><u>Income Level</u></b>   | (n = 2158)  | (n = 2173)  | (n = 2085)                                |
| Under \$20,000               | 82  | 65  | 49  |
| \$20,000 - \$39,999          | 79  | 64  | 39  |
| \$40,000 - \$59,999          | 84  | 58  | 34  |
| \$60,000 and over            | 76  | 50  | 42  |
| <i>Significance</i>          | (.015)  | (.000)  | (.000)                                    |
| <b><u>Age</u></b>            | (n = 2324)  | (n = 2336)  | (n = 2235)                                |
| 19 - 29                      | 80  | 56  | 56  |
| 30 - 39                      | 82  | 55  | 42  |
| 40 - 49                      | 78  | 62  | 45  |
| 50 - 64                      | 82  | 60  | 35  |
| 65 and older                 | 77  | 57  | 22  |
| <i>Significance</i>          | (.138)  | (.187)  | (.000)                                    |
| <b><u>Marital Status</u></b> | (n = 2317)  | (n = 2328)  | (n = 2230)                                |
| Married                      | 80  | 56  | 39  |
| Never married                | 85  | 69  | 46  |
| Divorced/separated           | 75  | 64  | 43  |
| Widowed                      | 77  | 57  | 26  |
| <i>Significance</i>          | (.057)  | (.000)  | (.000)                                    |
| <b><u>Occupation</u></b>     | (n = 1649)  | (n = 1670)  | (n = 1638)                                |
| Mgt, prof or education       | 82  | 56  | 41  |
| Sales or office support      | 80  | 59  | 36  |
| Constrn, inst or maint       | 86  | 65  | 43  |
| Prodn/trans/warehsing        | 76  | 62  | 39  |
| Agriculture                  | 81  | 58  | 44  |
| Food serv/pers. care         | 77  | 63  | 55  |
| Hlthcare supp/safety         | 82  | 55  | 41  |
| Other                        | 83  | 58  | 24  |
| <i>Significance</i>          | (.368)  | (.523)  | (.016)                                    |

\*\*\* Includes those who said they did or plan to do each item a little, some or a lot.

**Appendix Table 7. Driving Behaviors Changed or Considering As a Result of Recent Energy Price Increases in Relation to Community Size, Region and Individual Attributes.**

|                         | <i>Purchased a hybrid vehicle</i> |            |                       |                          | <i>Converted to E-85 gasoline</i> |                                  |                       |                          |
|-------------------------|-----------------------------------|------------|-----------------------|--------------------------|-----------------------------------|----------------------------------|-----------------------|--------------------------|
|                         | <i>Yes</i>                        | <i>No</i>  | <i>Considering it</i> | <i>Chi-square (sig.)</i> | <i>Yes</i>                        | <i>No</i>                        | <i>Considering it</i> | <i>Chi-square (sig.)</i> |
| <b>Community Size</b>   |                                   | (n = 2268) |                       |                          |                                   | <i>Percentages</i><br>(n = 2255) |                       |                          |
| Less than 500           | 4                                 | 83         | 13                    |                          | 10                                | 74                               | 17                    |                          |
| 500 - 999               | 3                                 | 82         | 15                    |                          | 16                                | 66                               | 18                    |                          |
| 1,000 - 4,999           | 3                                 | 81         | 17                    | $\chi^2 =$               | 11                                | 74                               | 15                    | $\chi^2 =$               |
| 5,000 - 9,999           | 4                                 | 77         | 20                    | 9.47                     | 7                                 | 85                               | 9                     | 32.98*                   |
| 10,000 and up           | 2                                 | 80         | 18                    | (.304)                   | 12                                | 77                               | 11                    | (.000)                   |
| <b>Region</b>           |                                   | (n = 2348) |                       |                          |                                   | (n = 2331)                       |                       |                          |
| Panhandle               | 3                                 | 82         | 15                    |                          | 10                                | 76                               | 14                    |                          |
| North Central           | 4                                 | 79         | 17                    |                          | 10                                | 72                               | 19                    |                          |
| South Central           | 3                                 | 78         | 20                    | $\chi^2 =$               | 11                                | 74                               | 15                    | $\chi^2 =$               |
| Northeast               | 3                                 | 81         | 16                    | 11.88                    | 14                                | 76                               | 10                    | 31.00*                   |
| Southeast               | 2                                 | 84         | 13                    | (.157)                   | 7                                 | 81                               | 13                    | (.000)                   |
| <b>Income Level</b>     |                                   | (n = 2177) |                       |                          |                                   | (n = 2161)                       |                       |                          |
| Under \$20,000          | 2                                 | 84         | 14                    |                          | 9                                 | 77                               | 14                    |                          |
| \$20,000 - \$39,999     | 2                                 | 84         | 14                    | $\chi^2 =$               | 11                                | 77                               | 12                    | $\chi^2 =$               |
| \$40,000 - \$59,999     | 3                                 | 79         | 18                    | 18.41*                   | 12                                | 76                               | 12                    | 6.37                     |
| \$60,000 and over       | 3                                 | 75         | 21                    | (.005)                   | 11                                | 73                               | 16                    | (.383)                   |
| <b>Age</b>              |                                   | (n = 2352) |                       |                          |                                   | (n = 2334)                       |                       |                          |
| 19 - 29                 | 2                                 | 76         | 23                    |                          | 19                                | 65                               | 17                    |                          |
| 30 - 39                 | 3                                 | 76         | 21                    |                          | 9                                 | 74                               | 16                    |                          |
| 40 - 49                 | 2                                 | 78         | 20                    | $\chi^2 =$               | 7                                 | 80                               | 13                    | $\chi^2 =$               |
| 50 - 64                 | 3                                 | 81         | 16                    | 61.29*                   | 10                                | 75                               | 15                    | 57.10*                   |
| 65 and older            | 5                                 | 88         | 7                     | (.000)                   | 11                                | 81                               | 8                     | (.000)                   |
| <b>Marital Status</b>   |                                   | (n = 2342) |                       |                          |                                   | (n = 2326)                       |                       |                          |
| Married                 | 3                                 | 79         | 17                    |                          | 11                                | 75                               | 14                    |                          |
| Never married           | 0                                 | 80         | 21                    | $\chi^2 =$               | 7                                 | 78                               | 16                    | $\chi^2 =$               |
| Divorced/separated      | 1                                 | 80         | 19                    | 30.92*                   | 11                                | 73                               | 16                    | 16.28*                   |
| Widowed                 | 4                                 | 90         | 6                     | (.000)                   | 12                                | 83                               | 6                     | (.012)                   |
| <b>Education</b>        |                                   | (n = 2332) |                       |                          |                                   | (n = 2316)                       |                       |                          |
| H.S. diploma or less    | 4                                 | 86         | 10                    | $\chi^2 =$               | 9                                 | 80                               | 11                    | $\chi^2 =$               |
| Some college            | 2                                 | 79         | 19                    | 38.42*                   | 11                                | 73                               | 16                    | 17.64*                   |
| Bachelors degree        | 3                                 | 76         | 21                    | (.000)                   | 13                                | 74                               | 13                    | (.001)                   |
| <b>Occupation</b>       |                                   | (n = 1666) |                       |                          |                                   | (n = 1662)                       |                       |                          |
| Mgt, prof or education  | 3                                 | 74         | 23                    |                          | 13                                | 75                               | 12                    |                          |
| Sales or office support | 3                                 | 83         | 14                    |                          | 10                                | 79                               | 11                    |                          |
| Constrn, inst or maint  | 4                                 | 78         | 18                    |                          | 10                                | 71                               | 19                    |                          |
| Prodn/trans/warehsing   | 1                                 | 83         | 16                    |                          | 9                                 | 81                               | 10                    |                          |
| Agriculture             | 1                                 | 86         | 13                    | $\chi^2 =$               | 9                                 | 71                               | 20                    | $\chi^2 =$               |
| Food serv/pers. care    | 1                                 | 74         | 26                    | 32.25*                   | 9                                 | 75                               | 16                    | 28.94*                   |
| Hlthcare supp/safety    | 3                                 | 73         | 24                    | (.004)                   | 9                                 | 69                               | 22                    | (.011)                   |
| Other                   | 0                                 | 82         | 18                    |                          | 3                                 | 87                               | 11                    |                          |

\* Chi-square values are statistically significant at the .05 level.

Appendix Table 7 continued

| <i>Drove my most fuel-efficient vehicle more often</i> |            |           |                       |                          |
|--|------------|-----------|-----------------------|--------------------------|
|  | <i>Yes</i> | <i>No</i> | <i>Considering it</i> | <i>Chi-square (sig.)</i> |
| <b>Community Size</b>                                  | (n = 2257) |           |                       |                          |
| Less than 500  | 73         | 18        | 10                    |                          |
| 500 - 999  | 77         | 17        | 7                     |                          |
| 1,000 - 4,999  | 66         | 26        | 8                     | $\chi^2 =$               |
| 5,000 - 9,999  | 69         | 23        | 9                     | 29.20*                   |
| 10,000 and up  | 62         | 29        | 10                    | (.000)                   |
| <b>Region</b>  | (n = 2334) |           |                       |                          |
| Panhandle  | 65         | 24        | 12                    |                          |
| North Central  | 76         | 17        | 7                     |                          |
| South Central  | 62         | 28        | 11                    | $\chi^2 =$               |
| Northeast  | 67         | 25        | 7                     | 29.25*                   |
| Southeast  | 67         | 26        | 7                     | (.000)                   |
| <b>Income Level</b>                                    | (n = 2163) |           |                       |                          |
| Under \$20,000   | 58         | 31        | 11                    |                          |
| \$20,000 - \$39,999                                    | 72         | 22        | 6                     | $\chi^2 =$               |
| \$40,000 - \$59,999                                    | 68         | 24        | 8                     | 23.19*                   |
| \$60,000 and over                                      | 66         | 24        | 11                    | (.001)                   |
| <b>Age</b>   | (n = 2338) |           |                       |                          |
| 19 - 29  | 71         | 23        | 7                     |                          |
| 30 - 39  | 67         | 25        | 8                     |                          |
| 40 - 49  | 69         | 23        | 8                     | $\chi^2 =$               |
| 50 - 64  | 68         | 23        | 10                    | 18.81*                   |
| 65 and older   | 59         | 30        | 10                    | (.016)                   |
| <b>Marital Status</b>                                  | (n = 2330) |           |                       |                          |
| Married  | 70         | 21        | 9                     |                          |
| Never married  | 59         | 33        | 8                     | $\chi^2 =$               |
| Divorced/separated                                     | 63         | 32        | 5                     | 46.64*                   |
| Widowed  | 53         | 37        | 11                    | (.000)                   |
| <b>Education</b>                                       | (n = 2318) |           |                       |                          |
| H.S. diploma or less                                   | 63         | 27        | 10                    | $\chi^2 =$               |
| Some college   | 70         | 22        | 8                     | 10.09*                   |
| Bachelors degree                                       | 67         | 25        | 8                     | (.039)                   |
| <b>Occupation</b>                                      | (n = 1664) |           |                       |                          |
| Mgt, prof or education                                 | 68         | 23        | 9                     |                          |
| Sales or office support                                | 69         | 23        | 8                     |                          |
| Constrn, inst or maint                                 | 71         | 21        | 8                     |                          |
| Prodn/trans/warehsing                                  | 75         | 20        | 5                     |                          |
| Agriculture  | 75         | 20        | 5                     | $\chi^2 =$               |
| Food serv/pers. care                                   | 70         | 21        | 9                     | 9.38                     |
| Hlthcare supp/safety                                   | 68         | 21        | 11                    | (.806)                   |
| Other  | 68         | 24        | 8                     |                          |

\* Chi-square values are statistically significant at the .05 level.

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