Understanding Public Opinion about Climate Change for Energy-Efficiency Programs and Utility Communications

Carla Jackson, Abt SRBI, Fort Myers, Florida

ABSTRACT

In this paper, the results from a survey of 401 U. S. respondents nationwide are discussed with specific reference to the communications strategies and energy efficiency programs that utilities can undertake with respect to the issue of global climate change. Overall, these results suggest that utility communications strategies should balance the risk of raising awareness of the possible role of electric power plant emissions in contributing to global climate change against the opportunity to inform customers about this emerging issue. Given the amount of attention that global climate change is currently receiving in the media, individual utilities may want to make the decision about their positioning on this issue in the near term. A related issue is whether electric utilities can (or want to) leverage consumer concern about global climate change as a means of promoting and expanding energy-efficiency programs. While broad concerns about saving money and protecting the environment have historically motivated many consumers to reduce their energy usage and participate in energy-efficiency programs, global climate change may be another issue that can be used to encourage consumers to save energy.

Introduction

In spring 2007, Abt SRBI conducted a nationwide telephone survey to determine the attitudes and behaviors of residential consumers regarding global climate change, particularly as related to utility energy efficiency programs and communications. Question topics included the following:

- Knowledge about global climate change;
- Attitudes about climate change;
- Addressing climate change, especially the role of electric utilities;
- Personal responsibility in addressing climate change; and
- Demographic characteristics (including political affiliation and attendance at religious services).

A nationally-representative, random-digit dial sample was selected for the survey. A total of 401 telephone interviews were completed with an average length of 16 minutes. Up to ten attempts were made to reach each sampled telephone number. The margin of error for the survey is plus or minus 4.9 percent at the 95 percent confidence limit.

In this paper, selected results from the survey are presented and their implications for electric utilities are discussed, with specific reference to communications strategies and program offerings.

Perceived Severity of Environmental Problems

The survey began by asking respondents to characterize the severity of five specific environmental problems, including global climate change. The objective of this item was to determine perceptions about the relative importance of global climate change compared with four other environmental issues. The items were rotated to avoid potential order effects.

As shown in Table 1, 46 percent of national respondents believe that air pollution and water pollution are extremely serious (a rating of nine or ten on a zero-to-ten scale), while 43 percent believe the weakening of the ozone layer is extremely serious. Forty-two percent consider global climate change extremely serious, and 36 percent consider the extinction of species to be extremely serious. Overall, approximately four in ten consumers view each of the specified environmental issues as extremely serious. While global climate change was considered the fourth most serious problem, following air and water pollution and weakening of the ozone layer, the differences among the ratings of the top four issues are statistically insignificant.

Respondents with incomes under $20,000 are more likely than other respondents to view air and water pollution as extremely serious. More likely than other respondents to indicate that all five of the specified environmental problems are extremely serious are respondents who say that they have personally experienced climate change, believe that they can personally take action regarding climate change, and characterize themselves as Democrats.

Table 1
Perceived Severity of Environmental Problems

	Extremely serious (9, 10)	Serious (7, 8)
Air pollution	46%	30%
Water pollution	46	31
Weakening of the ozone layer in the Earth's atmosphere	43	22
Global climate change	42	22
Extinction of species	36	22

Q1. I am going to read you a list of environmental issues currently facing the United States. Please tell me how serious each of the following is, using a scale of 0 to 10, where 0 means "not at all serious" and 10 means "extremely serious".
Base: All respondents, n = 401

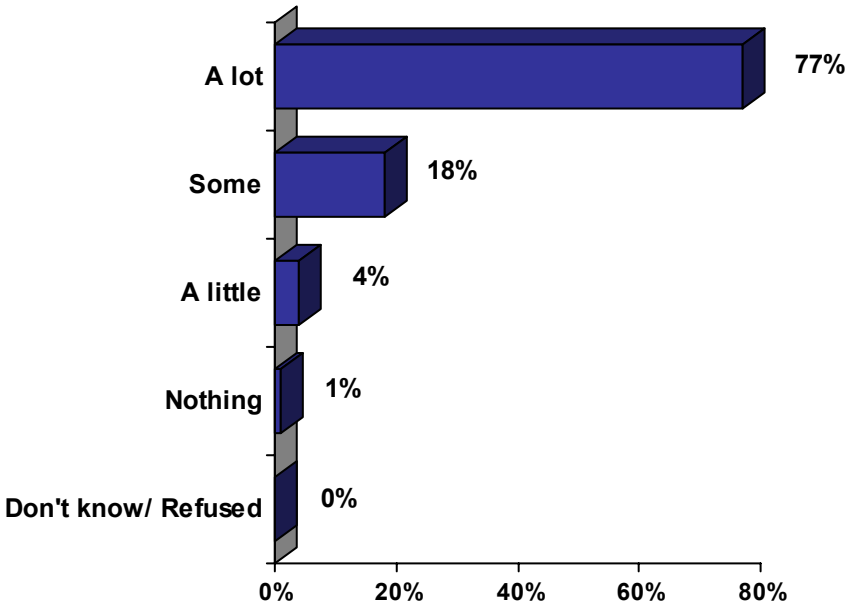
Information about Global Climate Change

The survey results indicate the increasing availability of information about global climate change. Seventy-seven percent of respondents said they had heard "a lot" about global climate change, while 18 percent had heard "some" and four percent "a little" (Figure 1). Only one percent has heard nothing about global climate change. These perceptions about the availability of information about global climate change are not surprising, given that a report by the Intergovernmental Panel on Climate Change (IPCC) was released in early 2007 and its findings were widely publicized throughout the media.

More likely than other respondents to have heard "a lot" about global climate change are those respondents who live in two-person households, have completed post-graduate study or degrees, report household income of $100,000 or more, and characterize themselves as Republicans.

Figure 1

Heard about Global Climate Change…



Q2. How much have you heard about global climate change, also sometimes referred to as "global warming" or changes in the earth's climate?

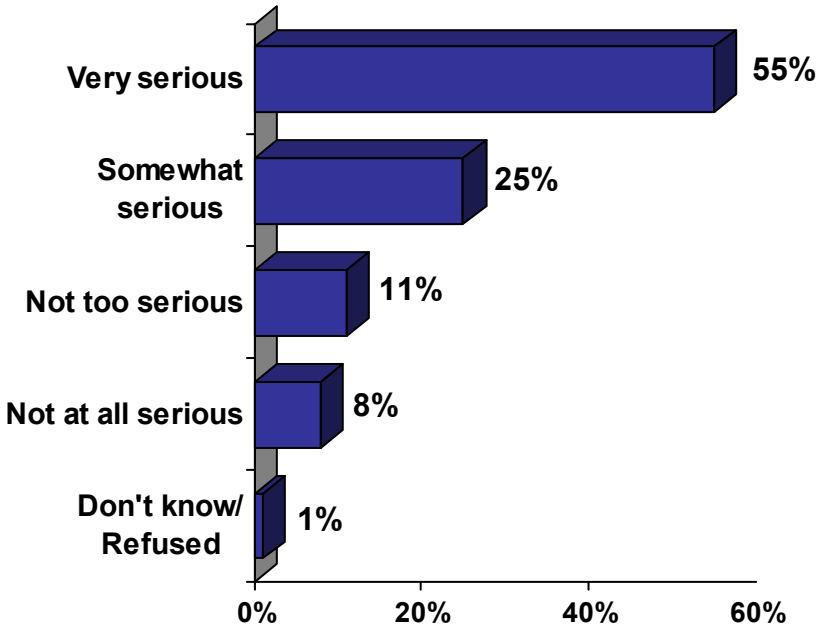
Base: All respondents, n = 401

Perceived Seriousness of Climate Change

While many respondents have heard about global climate change, differences exist with respect to its perceived severity. Fifty-five percent of respondents feel that climate change is very serious, while one-quarter feel it is somewhat serious (Figure 2). Eleven percent believes that it is not too serious, and eight percent think it is not at all serious.

Most likely to believe that global climate change is serious are respondents age 65 and over, with annual incomes under $40,000, who classify themselves as Democrats, attend religious services less than once per week, and do not consider themselves evangelical Christians. Respondents who have personally experienced climate change and believe they can take personal action to address it are also more likely than other respondents to consider climate change to be very serious.

Figure 2
Perceived Seriousness of Climate Change



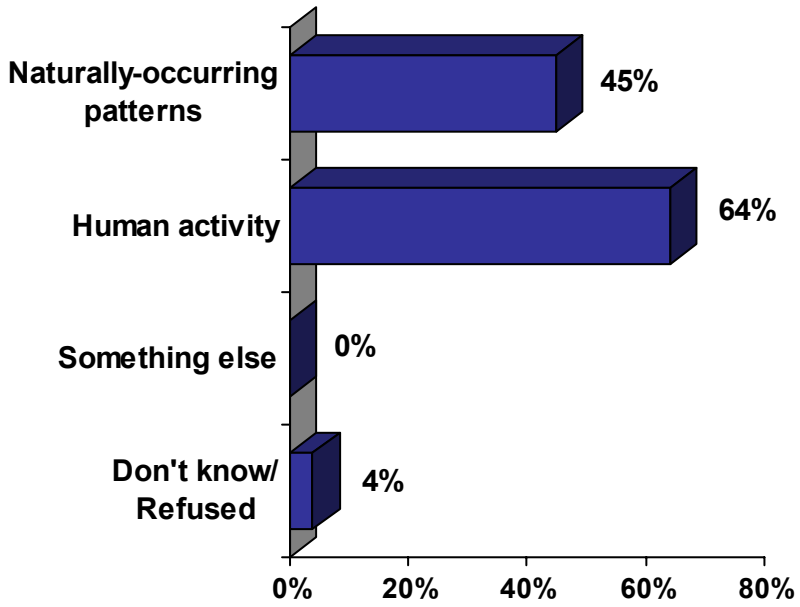
Q3. How serious is climate change?
Base: All respondents, n = 401

Causes of Global Climate Change

Respondents hold a variety of opinions about the causes of global climate change and these opinions are associated with a number of demographic characteristics. Forty-five percent of respondents nationally believe global climate change is a result of naturally-occurring patterns, while two-thirds of respondents believe it is caused by human activity (Figure 3).

Fifty-two percent of respondents with children under 18 believe that global climate change is the result of naturally-occurring patterns, compared with 41 percent of those without children under 18. Also, respondents who classify themselves as Republicans, evangelical Christians, and who attend religious services at least weekly believe climate change is naturally-occurring. In contrast, those who consider climate change very serious, have personally experienced climate change, and believe they can take personal action to address it are more likely to believe human activity causes climate change.

Figure 3
Cause of Global Climate Change



Q4. Do you think that global climate change is a result of …?
Base: All respondents, n = 401

Note: Multiple mentions permitted.

As shown in Table 2, a majority of respondents believe that automobile emissions are responsible for global climate change (55 percent), followed by emissions from manufacturing plants (38 percent). Importantly for electric utilities, only 19 percent of respondents mentioned emissions from electric power plants as a cause of global climate change. Other perceived causes of climate change include pollution, fossil fuels, chemicals/pesticides, spray cans, wasting energy, deforestation, insufficient recycling, and new technologies/space travel.

Table 2
Human Activity that Causes Global Climate Change

Automobile emissions	55%
Emissions from manufacturing plants	38
Emissions from electric power plants	19
Pollution	12
Fossil fuel	10
Chemicals/pesticides/spray cans	9
Wastage of energy resources	9
Deforestation	6
Not enough recycling	4
New technologies/space travel	3
Other	5
Don't know/Refused	4

Q4a. What kind of human activity do you believe causes global climate change?
Base: Respondents who believe that human activity causes global climate change, n = 258

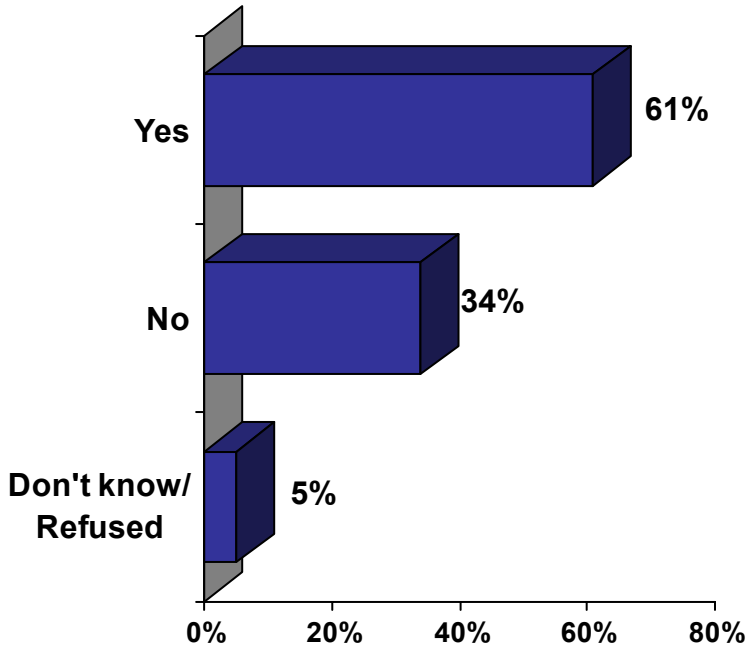
Personal Experience with Global Climate Change

Almost two-thirds of respondents in the survey believe they have personally experienced global climate change (Figure 4). Respondents who consider climate change to be very serious, believe they can take personal action, and classify themselves as Democrats or Independents are more likely than other respondents to believe they have personally experienced global climate change.

Warmer winters and summers were the primary events mentioned by respondents who believe they had experienced global climate change. Respondents also mentioned unseasonable or abnormal weather patterns, as well as less snow, drought, and severe storms (extra-tropical).

Figure 4

Personally Experienced Global Climate Change



Q13. Do you believe that you have personally experienced global climate change in any way?
Base: All respondents, n = 401

Reliability of Information Sources about Climate Change

Electric utilities do not rate highly on the list of reliable information sources about global climate change. As shown in Table 3, 42 percent of respondents consider the news media as a very or somewhat reliable source of information about climate change, followed by the Environmental Protection Agency (EPA) (40 percent), international organizations (38 percent), and the Department of Energy (DOE) (32 percent). The local electric utility company was considered a reliable source of information about global climate change by 26 percent of respondents, while 13 percent of respondents rate their electric utility company as a very unreliable source of information. At 11 percent, politicians were considered the least reliable information source.

When asked the reason for the rating of their utility, respondents who gave high ratings to their utility said it keeps them informed and does a good job. Negative reasons for the ratings included the perception that profits and self-interest are utility priorities and that customers receive little or no information. In particular, respondents who have completed post-graduate study and those age 35 to 54 were more likely than other respondents to mention negative issues, particularly utilities' perceived profit motivation and self-interest.

In contrast, those in one-person households are more likely than those in larger households to rate their electric utility as a very reliable source of information about global climate change (16 percent compared with seven percent for those in two-person households and six percent in households of three or more). Respondents who consider climate change to be very serious and those who attend religious services a few times a year or less rate all sources except their electric utility as very reliable sources of information about climate change.

Table 3
Reliability of Information Sources about Climate Change

	Very reliable (9, 10)	Somewhat reliable (7, 8)
U. S. Environmental Protection Agency (EPA)	14%	26%
International organizations	13	25
News/media	12	30
U. S. Department of Energy (DOE)	10	22
Your electric utility company	9	17
Politicians	4	7

Q6. How reliable would you consider each of the following as a source of information about climate change? Using a scale of zero to ten, where zero is "very unreliable" and ten is "very reliable", how reliable would you consider ___ as a source of information about global climate change:

Base: All respondents, n = 401

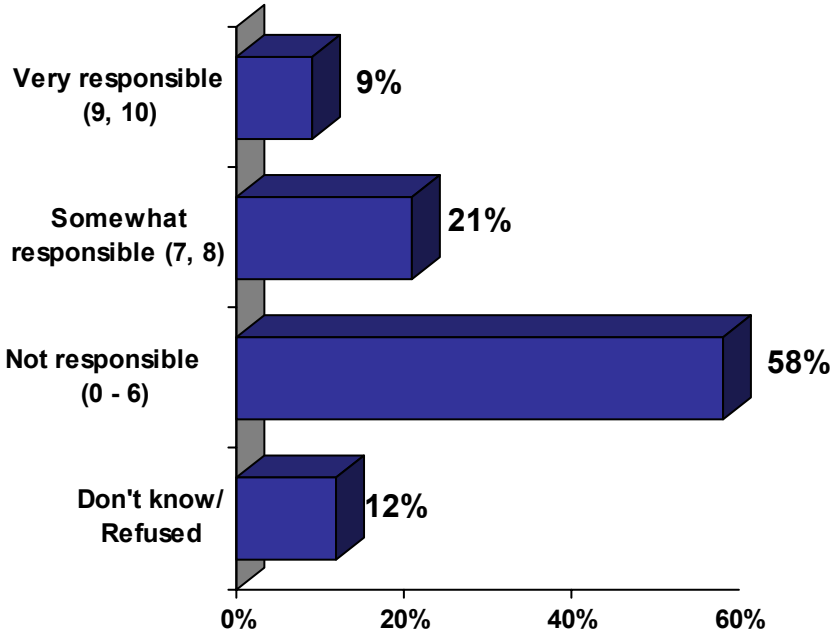
Electric Company Responsibility for Global Climate Change

As shown in Figure 5, nine percent of respondents believe that electric companies are very responsible for global climate change (a rating of 9 or 10 on a 10-point scale), while two in ten respondents feel they are somewhat responsible (a rating of 7 or 8). More than one-half believe electric companies are not responsible for global climate change.

When asked what electric utilities could do to address climate change, respondents suggested the use of alternative energy sources (21 percent) or changing to renewable/green energy sources (12 percent). Other mentions included educating consumers, using energy more efficiently, improving pollution control from energy generation, and generally taking responsibility. Respondents who consider climate change very serious, are very satisfied with their electric company, and who have personally experienced climate change believe electric companies should educate consumers. Respondents who have heard "a lot" about climate change, have personally experienced it, and believe they can take personal action think electric companies should use alternative energy sources.

Figure 5

Electric Company Responsibility for Global Climate Change



Q9. On a scale of zero to 10, where zero means "not at all responsible" and 10 means "very responsible", how responsible are electric companies for global climate change?

Base: All respondents, n = 401

Personal Actions to Lessen the Impact of Global Climate Change

Sixty-four percent of respondents believe that they can take personal action to lessen the impact of global climate change. Many of their suggested actions related to energy usage in the home. A variety of actions cited by respondents who believe they can personally impact global climate change are shown in Table 4. One-third of national respondents say they can impact global climate change by turning off unused lights and appliances. Two in ten say they can buy hybrid or electric vehicles and use compact fluorescent bulbs.

Table 4
Personal Actions that can Lessen the Impact of Global Climate Change

Turn off unused lights/appliances	35%
Buy hybrid/electric vehicles	23
Use compact fluorescent bulbs	22
Buy green or renewable energy	17
Buy more energy-efficient appliances	17
Recycle properly	17
Raise the thermostat in summer/lower in winter	15
Buy a more efficient heating/cooling system	14
Drive less	14
Reduce/conserve energy usage	14
Become more aware/involved/responsible	12
Use safer products, less/no fossil fuels/chemicals	9
Buying carbon offsets	7
Belong to an organization that is working to address climate change	4
Other	2
Don't know/refused	5

Q14a. What do you think you can do?
Base: Respondents who believe they can personally lessen the impact of global climate change, n =257

Note: Multiple mentions permitted.

Discussion

The 2007 Abt SRBI study indicates that global climate change is a concern for many respondents nationally. Sixty-four percent of respondents believe that they can take personal action to lessen the impact of global climate change. Many of their suggested actions related to energy usage in the home, such as turning off unused lights and appliances and using compact fluorescent bulbs. This interest in energy conservation and efficiency may increase consumer willingness to participate in utility programs, and suggests that utility marketing efforts can go beyond traditional messages about saving energy and money to address the impact of individual energy-saving actions on climate change. It has been more than 30 years since the Arab Oil Embargo occasioned unparalleled energy-saving efforts by American consumers, and it is possible that global climate change may create a new imperative to save energy.

Somewhat less clear, however, is the role that electric utilities should assume in communicating with their customers about this issue. It is clear that respondents are hearing a lot in the media about global climate change, and two-thirds believe it is caused by human activity.

- On one hand, 19 percent of respondents mentioned emissions from electric power plants as a cause of global climate change, well behind emissions from automobiles and manufacturing plants. This suggests that utility efforts to communicate with customers about climate change might raise the issue of whether emissions from electricity generation are a cause of climate change among respondents who otherwise tend to blame automobiles and manufacturing plants for the problem.
- Overall, only nine percent of respondents view their electric utility company as a very reliable source of information about climate change. While some respondents believe that their electric company does a good job of keeping them informed on issues of concern, others feel that profits and self-interest are a priority for their utility (37 percent). Overall, these estimates suggest that not all consumers would find climate change information from their utility to be believable or trustworthy.
- However, one-half of respondents believe that their utility should provide information about climate change and one-third expects their utility to be a leader in addressing the issue. Utility information would be welcome for these consumers.

Another consideration for utility decision-making about communications strategies regarding global climate change may be a utility's generation mix. If a utility has very little fossil fuel generation, then it is probably fairly safe to communicate with customers about climate change. Some utilities in this position have already undertaken this strategy. In contrast, those utilities with high concentrations of fossil fuels in their generation mix may want to be more circumspect in their customer communications on this topic.

Regardless of their approach to customer communications and program offerings to address global climate change in the near term, utilities should monitor public opinion on this important topic in the coming months. Continued media attention to climate change is likely to increase consumer awareness of the issue, which may in turn create both challenges and opportunities for utilities. At the very least, utilities should be monitoring the volume of telephone and email inquiries they are receiving on this topic. Optimally, utilities should also be measuring consumer opinion on this topic in their specific service territories to identify trends in public opinion which may have important implications for programmatic offerings and communications strategies.