



Memo

To: Report Readers

From: Bryan Garcia, Director of Energy Market Initiatives

Date: 8/1/2006

Re: Comparative Assessment of Consumer Awareness of Clean Energy in Connecticut and the United States – July 2006

The attached report, entitled *Comparative Assessment of Consumer Awareness of Clean Energy in Connecticut and the United States*, submitted by Nexus Market Research, is a baseline follow-up assessment of consumer awareness of clean energy to the baseline conducted in March 2005. This report is part of the Connecticut Clean Energy Fund's monitoring and evaluation program.

The CCEF, under Program Goal 3¹ has established the following program objective:

Drawing from a baseline survey, there will be a significant increase in the knowledge and awareness of the benefits and availability of clean energy resources by Connecticut ratepayers.²

This report provides an examination of changing public awareness and attitudes towards clean energy among Connecticut ratepayers – and for a couple of key areas – among ratepayers of the U.S. as a whole.

The CCEF has put into place strategic and programmatic investments to achieve this objective including:

- SmartPower – our principal strategic investment in a non-profit organization (founded by the CCEF and several private foundations) that is working with non-governmental organization partners in communities throughout

¹ Connecticut's citizens and institutions will recognize the important role of clean renewable energy and its benefits to society by becoming actively engaged in community-based activities and programs that support clean energy throughout the state.

² This objective is to be achieved by the middle of 2007.

Connecticut on a “20% by 2010 campaign” as well as media advertising using the “Clean Energy – Let’s Make More” television and radio ads; and

- Community Innovations Grants Program – a *new* principal programmatic investment, launched in the Town of Portland in June of 2006, that provides micro grants to Connecticut’s “20% by 2010 campaign” supporting communities with a \$5,000 block grant to promote clean energy locally through community-based organizations and advocates.

There is still much more to do for the CCEF to achieve its objective, but we are well on our way as evidenced by this report. By working with our cross-sector partners and building awareness and support for clean energy among Connecticut’s residents, businesses, and institutions, we will achieve our goal.

For more information on how clean energy is growing within our communities, please visit www.ctcleanenergy.com/communities or for program progress information go to www.ctcleanenergy.com/communities/progress.

Thank you for reading this report. The more we understand how our programs are affecting the marketplace for clean energy, the better we can make clean energy a larger part of the solution to our society’s pressing challenges.



Nexus Market Research, Inc.

**Comparative Assessment of Consumer Awareness
of Clean Energy in Connecticut and the United States**

Final Report

July 27, 2006

Submitted to:

The Connecticut Clean Energy Fund

Submitted by:

Nexus Market Research, Inc.

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1 Executive Summary

Since the baseline survey, the Connecticut Clean Energy Fund (CCEF) has continued its public awareness and marketing campaigns to inform Connecticut citizens about the benefits and availability of clean energy and facilitate their ability to support and purchase clean energy (or Renewable Energy Credits, or RECS). This research, conducted at the one year mark after the launch of the Connecticut Clean Energy Options Program, provides an examination of changing public awareness of and attitudes toward clean energy among Connecticut residents, and—for a few key questions—among residents of the U.S. as a whole, including those living in states belonging to the Clean Energy States Alliance (CESA) and those in non-CESA states¹. The results of this study are summarized in the paragraph below and presented in more detail in the rest of the Executive summary; **key findings are displayed in bold.**

One year into the campaign, awareness of clean energy, the importance of global warming, recognition of CCEF and affiliated organizations, awareness of clean energy communications, and personal actions related to clean energy have all increased among Connecticut residents. However, willingness to pay a premium for clean energy has remained largely the same and appears to be limited by awareness of clean energy (despite increasing awareness) and awareness that clean energy is available over the electric grid. Further limiting clean energy purchasing is skepticism among respondents that clean energy can meet their energy needs and that they can take action in regards to supporting and/or purchasing clean energy. Connecticut residents appear to be encouraged to purchase clean energy if it supports the development of more clean energy in the state, and there appears to be an opportunity to convince Connecticut respondents that clean energy is a means to help reduce the impacts of global warming—an issue of increasing salience in the state. CCEF needs to *inform* people of the benefits of clean energy and that it is possible to purchase clean energy, *convince* them that such a purchase would achieve what is intended (i.e., increase the use of clean energy, and that this is provable and reliable), and *tell them how* to make the switch.

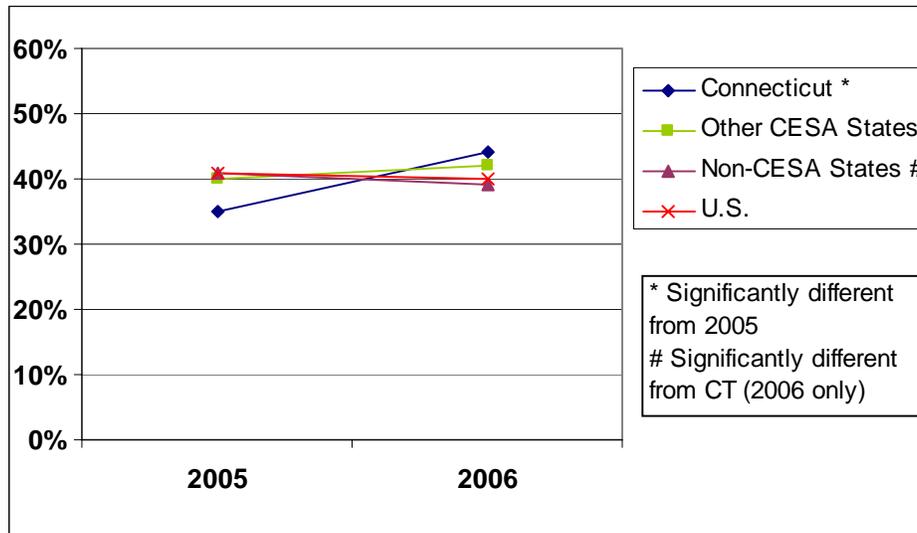
One of the key findings of this research is that, one year into the campaign, Connecticut residents are more aware of clean energy, grid delivered clean energy and clean energy technologies than in 2005, and they are more likely to be aware of grid delivered clean energy and fuel cells than people living elsewhere in the country. However, Connecticut residents are no more likely to be aware of clean energy in general and PV systems than people living elsewhere in the country. Specifically, they are more likely to be aware of fuel cells when compared to the U.S., other CESA states and non-CESA states, and they are more likely to be aware of grid-delivered clean energy than residents of non-CESA states. (Figure 1-1, Figure 1-2, Figure 1-3, Figure 1-4) Awareness of all aspects of clean energy increased significantly among residents of Connecticut from 2005 to 2006, while only awareness of PV systems increased elsewhere in the country. Moreover, the increases in awareness of clean

¹ The Clean Energy States Alliance (CESA) is a nonprofit organization of members from 16 clean energy funds and two state agencies. CESA provides information and technical services to its members and works with them to build and expand clean energy markets in the United States. Clean energy funds are funds in the United States whose objective is building markets for renewable energy and clean energy resources. (Source: <http://www.cleanenergystates.org>)

energy, PV systems, fuel cells and grid-delivered clean energy are greater in Connecticut than elsewhere. This suggests that increased awareness of clean energy, grid delivered clean energy and fuel cells is at least partially attributed to the actions of CCEF’s awareness and education programs. It is particularly interesting that there are more differences between residents of Connecticut and non-CESA states, where public awareness efforts, such as those of CCEF, are less likely to be taking place, offering a valuable comparison group to Connecticut.²

Further evidence of increased awareness of clean energy is that the percentage of Connecticut respondents who mention a specific form of clean or renewable energy (solar, wind, water, and biomass/ethanol/biodiesel) energy tripled from 2005 to 2006, when asked to define clean or renewable energy. Awareness of rebates or incentives that are available for rooftop solar PV systems more than doubled from 10% in 2005 to 23% in 2006.

Figure 1-1: Awareness of Grid Delivered Clean Energy³
(All Respondents)



² There are two primary tools for attributing effects to campaigns or programs: assessing changes over time, and assessing geographic differences. If a program is effective, one would expect the key indicators (e.g., awareness, knowledge, and behavior) to increase over time. Similarly, one would expect the indicators to be higher in program areas than in non-program areas. Hence, attribution of program effects requires data over both time and space. The pattern that would allow one to attribute effects to a program is one that shows a higher rate of increase in key indicators in program areas than in non-program areas across time.

³ Respondents were asked the following question to determine awareness of grid delivered clean energy. “Some clean energy can be generated right at people’s homes, from things like solar photovoltaic systems or fuel cells. But other clean energy sources can be used to generate large amounts of electricity at a central location—electricity that is then sent over regular power lines to individual homes like yours. Were you aware that it is possible to deliver clean energy to individual homes over regular power lines?”

Figure 1-2: Awareness of Clean Energy⁴
(All Respondents)

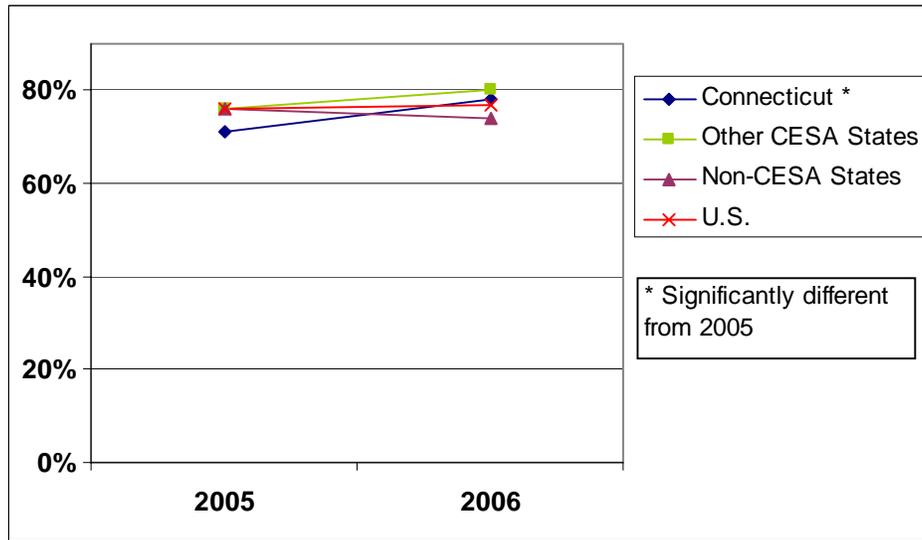
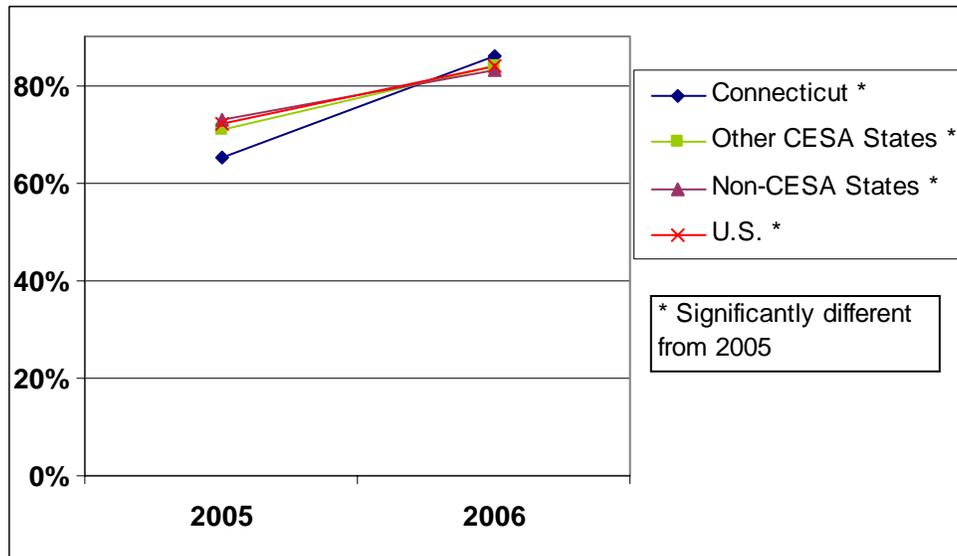
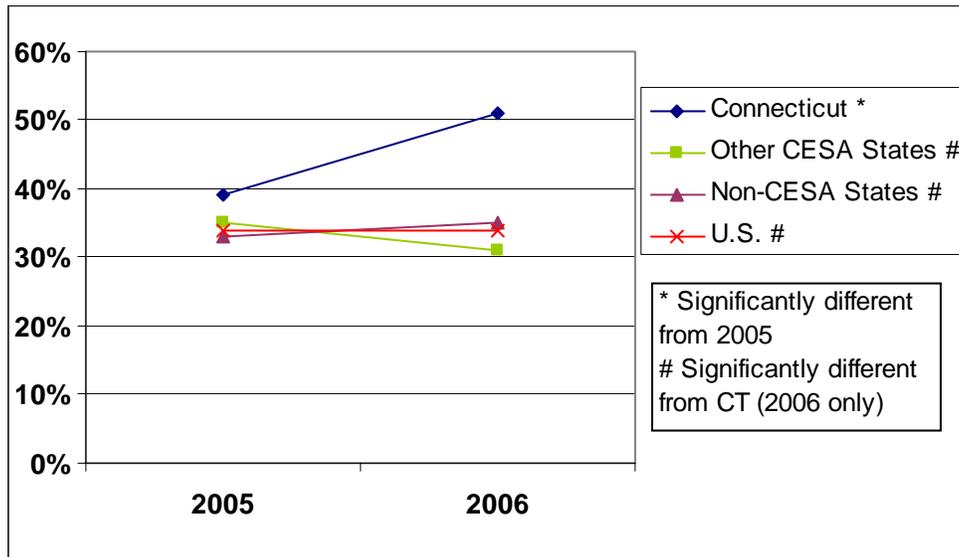


Figure 1-3: Awareness of Photovoltaic (PV) Systems
(All Respondents)



⁴ In 2005, one-half of the respondents to the Connecticut survey were asked if they were aware of “renewable energy” and one-half about “clean energy.” In 2006 Connecticut respondents were asked the following single question to measure awareness of either “clean or renewable energy”: “Have you ever heard of clean energy or renewable energy?” Responses to awareness of “clean energy” in 2005 were compared to responses in 2006.

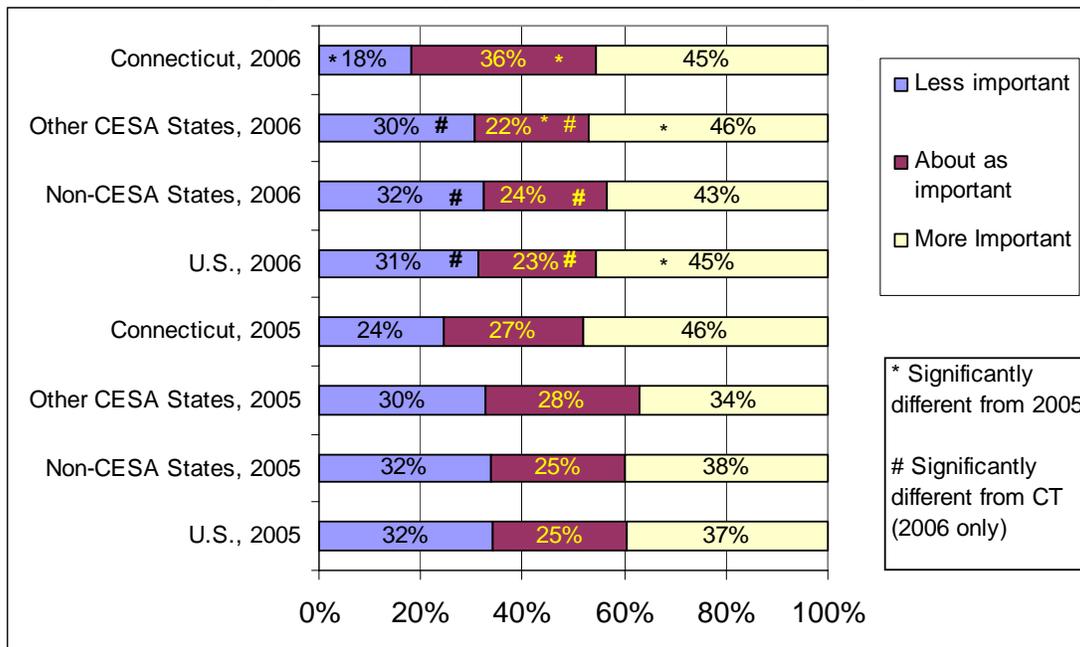
Figure 1-4: Awareness of Fuel Cells
(All Respondents)



The issue of global warming appears to be increasingly salient in Connecticut. In 2006 as in 2005, nearly half of Connecticut residents believe that global warming is more important than other major issues facing the world. There has been a significant increase in the percentage of Connecticut residents who believe that global warming is as important as other issues and a significant decrease in the percentage who think that global warming is less important than other issues.⁵ (

Figure 1-5) A larger percentage of Connecticut respondents than in other CESA states, non-CESA states and the U.S. think that global warming is as important as other issues. **A significantly larger percentage of Connecticut residents in 2006 compared to 2005 cite prevention of global warming as the single best reason for purchasing clean energy (Figure 1-6). In addition, when asked to name the single most important environmental problem in the world today,⁶ the number of Connecticut respondents citing oil or gas has increased dramatically, from 1% in 2005 to 14% in 2006, perhaps as a reaction to rising gas prices.**

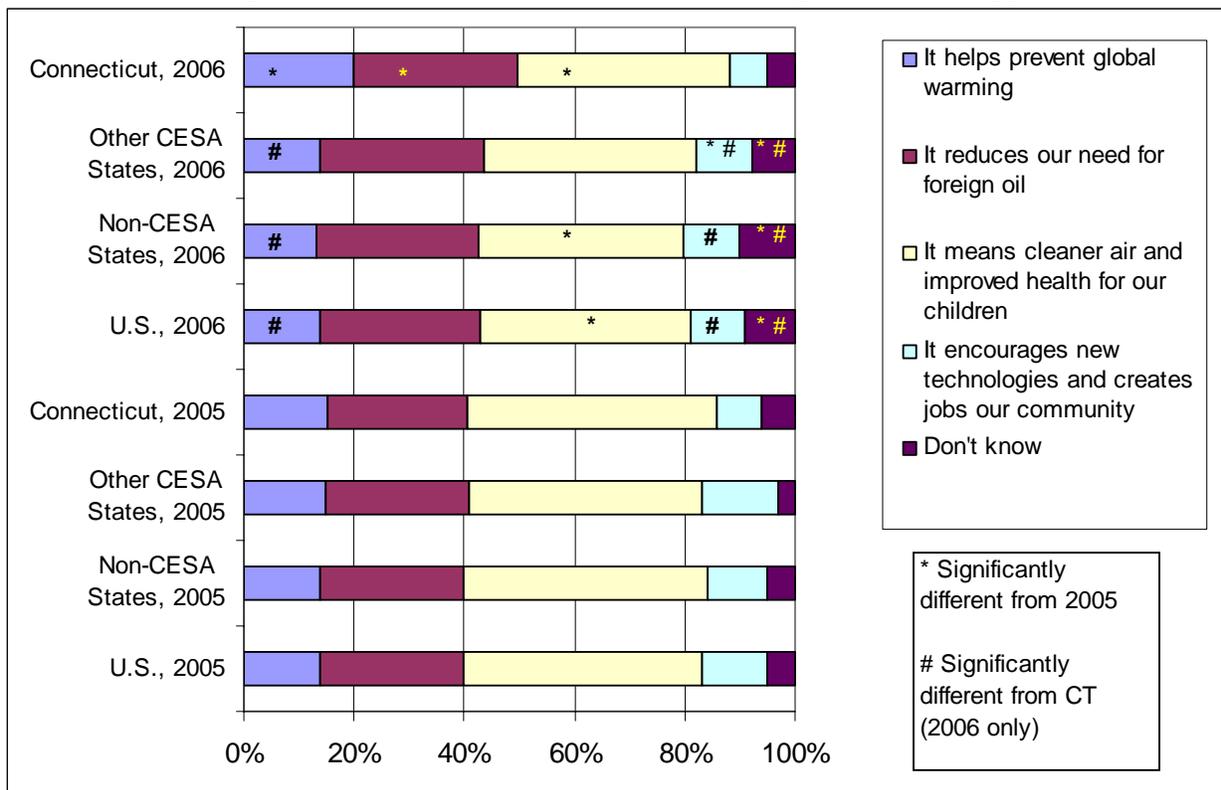
Figure 1-5: Importance of Global Warming



⁵ To gauge the importance of global warming, respondents were asked the following question: “In your judgment, how important is the issue of global warming compared to other major issues facing the world today?”

⁶ Respondents were asked the following question: “What do you consider to be the SINGLE most important environmental issue in the world today?”

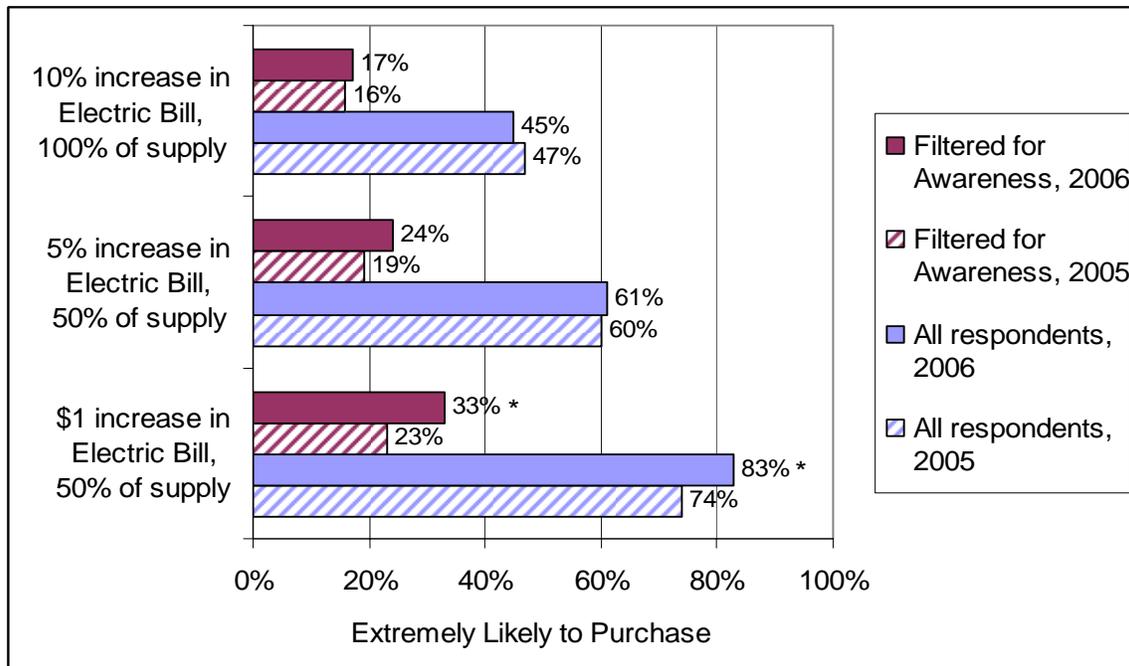
Figure 1-6: Best Reason for Purchasing Clean Energy



Half of Connecticut respondents feel that global warming has affected the state and seven in ten believe they can take action to reduce the impacts of global warming. However, a relatively small percentage of Connecticut respondents, 11%, suggest using clean energy as an action to address global warming. Because such a large percentage of Connecticut respondents feel empowered to take action to reduce the impacts of global warming but so few identify using clean energy as an action to address global warming, CCEF may want to consider additional communications informing the residents of Connecticut that purchasing clean energy is an action individuals can take to help reduce the impacts of global warming.

Consumer willingness to pay a premium for clean energy largely remained the same in 2006 as in 2005, with the exception that the percentage of respondents willing to pay a \$1 increase in their electric bill for 50% of their electrical supply from clean energy sources increased over the 2005 estimate, while the proportion who were willing to pay nothing in 2006 decreased. Similar to the findings from 2005, forty-five percent of Connecticut respondents say they are willing to purchase all their electricity from clean sources for an extra 10% on their electric bill, and sixty-one percent are willing to purchase one-half their electricity for an extra 5%. However, 83% of 2006 respondents—compared to 74% in 2005—are willing to pay an additional \$1 to purchase one-half of their electricity. Of course, only people who are aware of clean energy are truly likely to buy it. After taking into account whether people are aware of clean energy and are aware of the availability of clean energy delivered over the electric grid, only 17% are willing to pay 10% more for 100% clean electricity, 24% are willing to purchase one-half their electricity for an extra 5% and 33% are willing to pay an additional \$1—up from 23% in 2005. (Figure 1-7) **Thus, willingness to pay a premium for clean energy appears to be limited by both consumer awareness of clean energy and consumer awareness of the availability of clean energy delivered over the electric grid.**

Figure 1-7: Likelihood to Purchase Clean Energy (CT only)



*Significantly different from the 2005 sample at the 90% confidence level.

In terms of factors affecting the likelihood of purchasing clean energy, over 60% of Connecticut respondents would be more likely to purchase clean energy if it supported the development of clean energy in Connecticut and over half of Connecticut respondents would be less likely to purchase clean energy if it is not certified.⁷ When asked who would be the most credible source of information to promote clean energy, Connecticut respondents overwhelmingly choose a group of environmental non-profit organizations (44%) or a group of climate scientists (33%).

Connecticut residents continue to be relatively more aware of the benefits of clean energy than of their ability to achieve these benefits, and are largely skeptical that clean energy can meet their electricity needs and deliver environmental benefits. In 2006, belief in clean energy's benefits increased while lack of empowerment declined among Connecticut respondents.⁸ Continuing a segmentation scheme developed in 2005 to categorize Connecticut respondents into segments based on their attitudes toward clean energy. The five segments we identified are as follows:

1. **Ideals:** The Ideals are the prime target market for clean energy in Connecticut because they are the most positive about the benefits of clean energy and feel most empowered to achieve them. In addition, at 33% of the customer base, they are the largest segment. They are more educated than other respondents, somewhat younger, and, in 2006, had the highest incomes of any segment. They are more likely to be aware of clean energy, have recently heard something about it, and to have talked to others about it. They are also more likely to be aware of the availability of clean electricity supply and more likely to pay extra for it. In relation to global warming, 84% of Ideals think there are actions individuals can take to help reduce global warming. After filtering for awareness of clean energy and awareness of grid-delivered clean energy, they express the greatest willingness to purchase clean energy (27%). It should be noted, though, that the “filtered” willingness to pay among this, the most positive group, is relatively modest and statistically unchanged from 2005, indicating that expectations for penetration in the first few years should not be unrealistically high.
2. **Undecideds.** Undecideds are the secondary target group. They increased from 2005 to 2006 and now make up 18% of the population. Undecideds are skeptical about the efficacy of clean energy, but feel empowered to take action if they choose. They have high levels of education and a high proportion of high income respondents (28% have a household income of \$100,000 or more). After taking awareness of clean energy and grid-delivered clean energy into account, 15% would pay 10% more for clean energy.

⁷ Respondents were asked if they would be more or less likely to purchase clean energy if each of the following statements were true:

“The clean energy you purchase supports the development of more clean energy in your state”

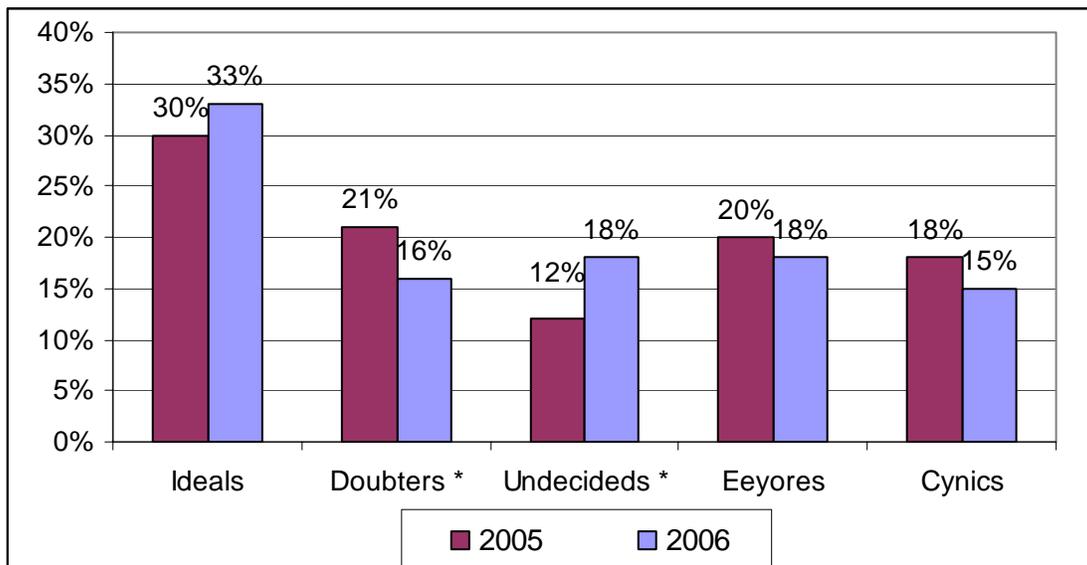
“The clean energy is not certified by an independent consumer organization as environmentally friendly”

⁸ In order to understand underlying attitudes toward clean energy, respondents were asked the extent to which they agree or disagree with eleven statements about clean energy. The statements were measures of three underlying attitudes: belief in clean energy benefits, skepticism about clean energy, and lack of empowerment or personal agency (in regards to clean energy).

3. **Doubters.** Doubters declined from 2005 to 2006, and now make up 16% of the population. While they are less enthusiastic than other segments in their belief in the benefits in clean energy, they are still positive on this factor. They feel relatively empowered to take action. However, compared to 2005, a smaller proportion are willing to pay 10% more for clean energy after taking awareness of clean energy and awareness of grid-delivered clean energy into account (10% in 2006 compared to 20% in 2005). They are also relatively affluent and well educated.
4. **Eeyores.** Eeyores, making up 18% of the population, are positive about the potential benefits of clean energy but do not feel empowered to take action. They are close to average on many demographic characteristics, except that they have a relatively low proportion of respondents with a college education and the highest proportion of respondents who watch PBS more than once a week. After taking awareness of clean energy and grid-delivered clean energy into account, 15% would pay 10% more for clean energy.
5. **Cynics:** Cynics, making up 15% of the population, are skeptical about the efficacy of clean energy and do not feel empowered to take action. They have lower incomes and lower levels of education compared to other segments. After taking awareness of clean energy and grid-delivered clean energy into account, only 10% would pay 10% more for clean energy.

With the increased belief in clean energy benefits and decreased feeling of lack of empowerment observed in the attitudinal questions, we suggest that Doubters, and perhaps some Cynics, shifted to the Undecideds and Ideals segments. (Figure 1-8)

Figure 1-8: Attitudinal Segments

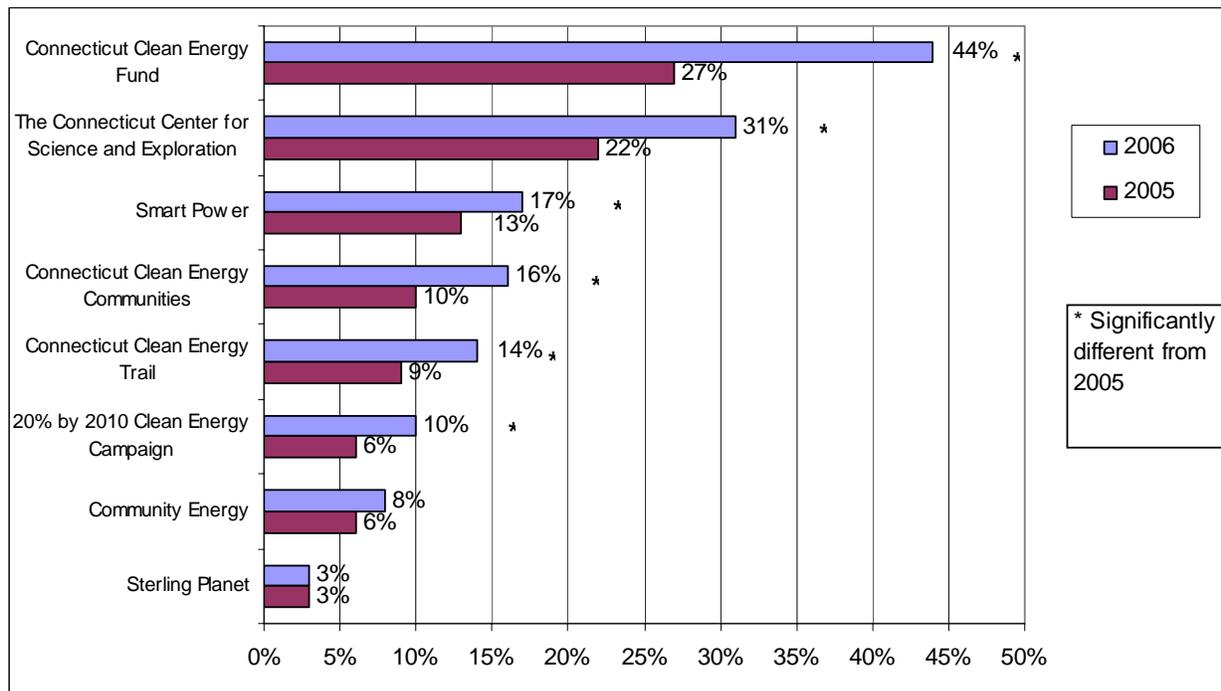


*Significantly different from the 2005 sample at the 90% confidence level.

Ideals are the “ideal” target market for CCEF, being the largest segment with the most positive attitudes. However, all five segments have positive scores on belief in clean energy benefits. Hence CCEF should place relatively less emphasis on selling its citizens on clean energy’s benefits than on empowering them to do something about it, and convincing them that clean energy can meet their electricity needs and deliver environmental benefits. In other words, CCEF should address the skepticism about clean energy expressed by the Undecideds, Eeyores and Cynics and the lack of empowerment expressed by the Doubters, Eeyores and Cynics. By reducing skepticism and lack of empowerment and increasing belief in the benefits of clean energy, more respondents will shift into the Ideal segment, the prime target audience. In summary, CCEF needs to *inform* people of the benefits of clean energy and that it is possible to purchase clean energy, *convince* them that such a purchase would achieve what is intended (i.e., increase the use of clean energy, and that this is provable), and *tell them how* to make the switch.

Recognition of CCEF increased dramatically from 2005 to 2006, indicating its increasing visibility. At the same time, however, recognition of affiliated organizations, including the CCEF, remains relatively low. (See Figure 1-9:) Awareness of clean energy communications rose as well from 2005 to 2006, as 21% of respondents recently heard about programs or organizations that sponsor clean energy (compared to 13% in 2005) and 41% have seen or heard something about clean energy in the past few months (compared to 26% in 2005). An increasing number of respondents have seen or heard clean energy communications on television, either through a news story or advertisement, in 2006 compared to 2005. This, and the proliferation of names associated with clean energy, underscores the importance of messaging—similar to branding—and suggests that the phrase “Connecticut Clean Energy” should be included in all program names—for example, not only “Connecticut Clean Energy Communities” and “Connecticut Clean Energy Trail,” but also “Connecticut Clean Energy Project 100.” Also, given that recognition of CCEF is fairly strong, since very few respondents recognize Sterling Planet and Community Energy, it is important for these organizations to feature “Connecticut Clean Energy” prominently in all of their communications with potential customers.

Figure 1-9: Recognition of Clean Energy Organizations (CT only)



Personal actions related to clean energy increased significantly from 2005 to 2006. Thirty-seven percent of Connecticut respondents reported speaking with friends, relatives, neighbors or co-workers about clean electricity over the past year, compared to 25% who did so in 2005, while 17% have sought information regarding clean information, compared to 9% in 2005.

2 Introduction

This is the second annual report to assess public awareness of clean energy in Connecticut. First in 2005 and now again in 2006, NMR fielded two separate surveys: a survey of Connecticut residents and a survey of residents from across the contiguous United States. The 2005 and 2006 national surveys each contained a subset of key questions selected from the more in-depth 2005 and 2006 surveys fielded in Connecticut, and were conducted as part of national “omnibus” surveys dealing with other topics. The Connecticut and national surveys share questions on the following topics:

- Awareness of clean energy
- Awareness of global warming
- Knowledge about clean energy
- Importance of various reasons for choosing clean energy
- Demographics

In addition, the Connecticut surveys included additional questions on the following topics:

- Unaided and aided awareness of the Connecticut Clean Energy Fund and its programs
- Knowledge about and perceptions of Connecticut Clean Energy Fund
- Recall of advertising/promotions about clean energy
- Knowledge about how and where to purchase clean energy
- Perceptions of costs and benefits of clean energy
- Likelihood to purchase clean energy at various price levels
- Actions taken with respect to clean energy
- Usage of public radio and television
- Attitudes toward climate change, clean energy programs and program sponsors

National Survey Research Plan. The national survey was a series of add-on questions to the ongoing CARAVAN[®] survey administered by Opinion Research Corporation. The current survey was conducted with residents of the 48 contiguous U.S. from April 13 to April 17, 2006, approximately one year after the first survey. A total of 946 interviews were completed with respondents who are responsible for paying their own electric bills. In order to represent the total population accurately, the survey results were weighted using a composite factor that compensates for differences between the population and the sample with respect to age, sex, geographic region, and race. In addition, for comparison purposes, the tables in the body of this report segment the national results into two groups: respondents located in states that are members of the Clean Energy States Alliance and those that are not. These designations were developed using the list of member states from the CESA website (<http://www.cleanenergystates.org>). For comparison purposes, Connecticut was excluded from the “Other CESA States” group.

Connecticut Survey Research Plan. NMR conducted a total of 600 interviews between April 10 and May 14, 2006 (approximately one year after the first survey) with Connecticut residents who are responsible for paying their own electric bills. This survey included a question to screen out those respondents who are under 18 years of age and who pay their electric bill with their rent. In addition, one-half of the surveys were done with men and one-half with women. No weighting factor was necessary in the analysis of the Connecticut survey data.

3 Awareness and Attitudes toward Global Warming

Summary

The issue of global warming appears to be increasingly salient in Connecticut. Awareness of global warming is very high in Connecticut, with 97% of respondents aware of the issue. The importance of global warming is increasing in the minds of Connecticut residents, and over two thirds of Connecticut respondents feel empowered to do something to address global warming. However, a relatively small percentage of Connecticut respondents, 11%, suggest using clean energy as an action to address global warming.

Discussion

Twenty-five percent of Connecticut respondents cite global warming, the greenhouse effect, or climate change as the single most important environmental issue, followed by air pollution in general (23%).⁹ The number citing oil or gas as the most important environmental problem has increased dramatically, from 1% in 2005 to 14%, perhaps as a reaction to rising gas prices—and in fact another 4% (up from 1%) cite oil or energy prices as the most important environmental problem. (Table 3-1) The change from 2005 to 2006 is statistically significantly at the 90% confidence level for the number of respondents citing oil/gas, depletion of the ozone layer and several other environmental issues.

Table 3-1: Single Most Important Environmental Issue
(All Connecticut Respondents)

| Issue | 2005 (Percent) | 2006 (Percent) |
|--|-------------------|-------------------|
| Air pollution in general | 26% | 23% |
| <i>Global warming</i> | 20 | 22 |
| Water pollution in general | 9 | 7 |
| <i>Greenhouse effect</i> | 5 | 2 * |
| Destruction of wildlife habitats or rainforest | 5 | 2 * |
| Depletion of ozone layer | 4 | 2 * |
| Oil/gas | 3 | 14 * |
| Urban/suburban sprawl | 3 | 1 * |
| Nuclear proliferation; spread of nuclear weapons | 2 | 1 |
| Nuclear waste | 1 | 1 |
| Mercury in water | 1 | 1 |
| Waste/recycling | 1 | 1 |
| <i>Climate change</i> | 1 | 1 |
| Oil/energy prices | 1 | 4 * |
| Energy | 1 | 1 |
| Resources | 1 | 1< |
| Biological weapons | 1 | 1 |
| WMD; spread of weapons of mass destruction | 1 | 0 * |
| Renewable energy | 0 | 1 * |
| Pollution (general) | 0 | 1 * |
| Other | 1 | 2 |
| Don't Know/NA | 16 | 14 |
| Total Respondents | 600 | 600 |

* Significantly different from Connecticut 2005 sample

⁹ Respondents were asked the following question: “What do you consider to be the SINGLE most important environmental issue in the world today?”

Ninety-seven percent of Connecticut respondents had heard of global warming, climate change, or the greenhouse effect, a statistically significant increase from 2005 and a statistically higher percentage of respondents than in Non-CESA states and the U.S. in 2006. (Table 3-2) Similarly high percentages of respondents are aware of global warming in the comparison groups, ranging from 91% in Non-CESA states to 95% in Other CESA states. The percentages of respondents in other CESA states and Non-CESA states aware of global warming were statistically significantly different from their respective samples in 2005.

Table 3-2: Awareness of Global Warming
(All Respondents)

| | Yes, 2005 (Percent) | Yes, 2006 (Percent) | Total Respondents (2005) | Total Respondents (2006) |
|------------------------------|--------------------------------|--------------------------------|---|---|
| Connecticut | 95% | 97% * | 600 | 600 |
| Other CESA States | 91% + | 95% * | 358 | 410 |
| Non-CESA States | 96% | 91% *, # | 585 | 528 |
| U.S. | 94% | 93% # | 943 | 946 |

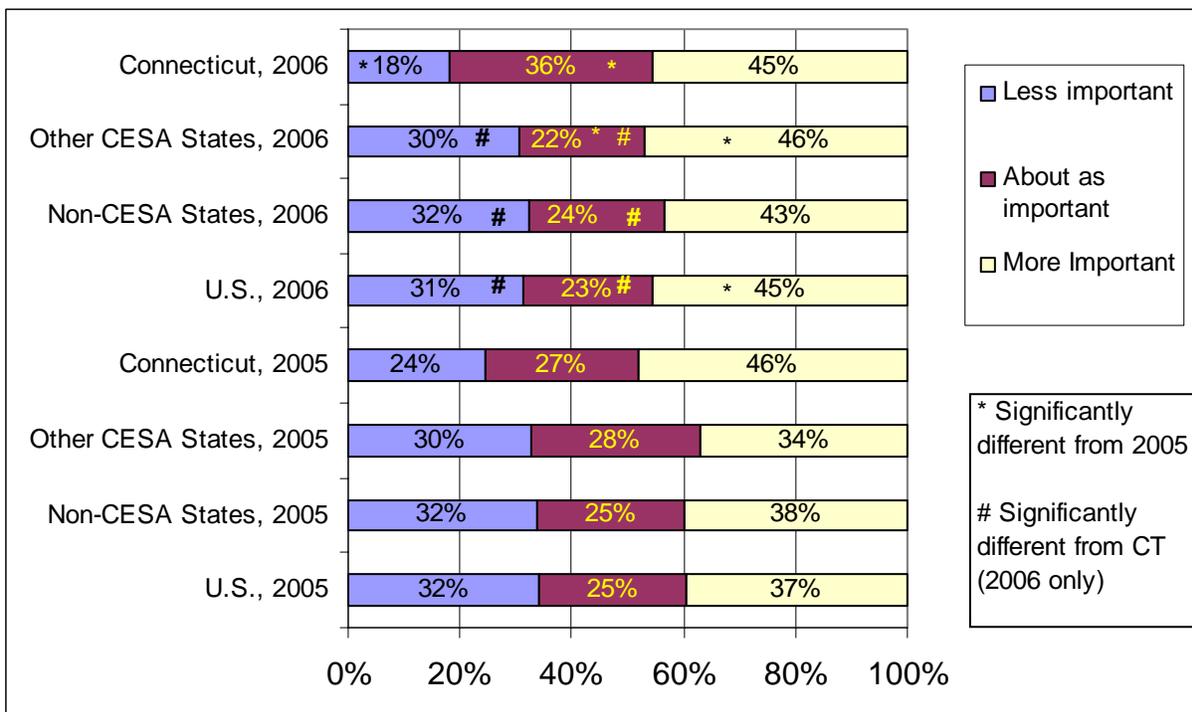
* Significantly different from corresponding 2005 sample at the 90% confidence level.

Significantly different from the 2006 Connecticut sample at the 90% confidence level.

+ Significantly different from the 2005 Connecticut sample at the 90% confidence level.

Forty-five percent of Connecticut respondents think global warming is much more important or somewhat more important than other issues, compared to 43% to 46% of respondents from comparison groups. (Figure 3-1) In 2006, a significantly larger percentage of Connecticut respondents than in 2005 believe that global warming is as important as other issues while a significantly smaller percentage think that global warming is less important than other issues. In addition, a larger percentage of Connecticut respondents than in any other comparison group think that global warming is as important as other issues. Finally, in 2006 larger percentages of respondents in other CESA states and the U.S. think that global warming is more important than other issues compared to 2005. The issue of global warming appears to be increasingly salient in Connecticut as well as in other CESA states and the U.S. in general.

Figure 3-1: Importance of Global Warming
(All Respondents)



Seventy-one percent of Connecticut respondents that are aware of global warming think that individuals can take actions to help reduce global warming compared to 68% to 75% from the comparison groups. (Table 3-3) Thus, seven in ten residents of Connecticut feel empowered to take actions to help reduce global warming.

Table 3-3: Individuals Can Take Actions to Help Reduce Global Warming
(Respondents Aware of Global Warming)

| | Yes (Percent) | Total Respondents |
|--------------------------|--------------------------|------------------------------|
| Connecticut | 71% | 582 |
| Other CESA States | 75% | 388 |
| Non-CESA States | 68% | 480 |
| U.S. | 71% | 876 |

Fifty-two percent of Connecticut respondents that are aware of global warming think that global warming has affected Connecticut while significantly fewer respondents in all other comparison groups think that global warming has affected their home state. (Table 3-4)

Table 3-4: The Impacts of Global Warming Have Affected Your State
(Respondents Aware of Global Warming)

| | Yes (Percent) | Total Respondents |
|--------------------------|--------------------------|------------------------------|
| Connecticut | 52% | 582 |
| Other CESA States | 38% * | 388 |
| Non-CESA States | 46% * | 480 |
| U.S. | 43% * | 876 |

*Significantly different from the Connecticut sample at the 90% confidence level.

Thirty-nine percent of Connecticut respondents think that Connecticut leaders can do a great deal about global warming, and 74% think that Connecticut leaders could do at least something. (Table 3-5) However, only 4% of respondents believe Connecticut leaders actually *have* done a great deal and less than a third (32%) think that Connecticut leaders have done at least something. (Table 3-6)

Table 3-5: Extent to Which Connecticut Leaders Could Do Something about Global Warming

(Connecticut Respondents Aware of Global Warming)

| | Percent |
|----------------------------------|----------------|
| 0 to 4 (Could do nothing at all) | 19% |
| 5 to 7 (Could do something) | 35 |
| 8 to 10 (Could do a great deal) | 39 |
| Don't Know | 7 |
| Total Respondents | 582 |

Table 3-6: Extent to Which Connecticut Leaders Have Done Something About Global Warming

(Connecticut Respondents Aware of Global Warming)

| | Percent |
|-----------------------------------|----------------|
| 0 to 4 (Have done nothing at all) | 51% |
| 5 to 7 (Have done something) | 28 |
| 8 to 10 (Have done a great deal) | 4 |
| Don't Know | 18 |
| Total Respondents | 582 |

When asked what actions they can take to reduce global warming, the most common response from residents of Connecticut is driving less (43%), followed by reducing energy use, buying or driving a hybrid car, recycling and using clean or renewable energy. A relatively small percentage of Connecticut respondents, 11%, named using clean energy. (Table 3-7)

Table 3-7: Actions to Reduce Global Warming
(Respondents Aware of Global Warming and Believe Individuals Can Take Action to Reduce Global Warming)

| Actions | Connecticut | Other CESA States | Non-CESA States | U.S. |
|---|-------------|-------------------|-----------------|------------|
| Drive less/cut down on driving | 43% | 36% * | 36% * | 35% * |
| Buy/drive a hybrid car | 22 | 22 | 15 * | 18 |
| Reduce energy use | 28 | 24 | 19 * | 21 * |
| Recycling | 11 | 18 * | 14 | 15 * |
| Use renewable or clean energy | 11 | 10 | 9 | 9 |
| Politics (contact politicians, advocate for policies) | 6 | 3 * | 4 | 4 |
| Use smaller, more efficient or cleaner cars | 2 | 2 | 3 | 2 |
| Use alternative or cleaner fuels | 2 | 1 | 1 | 1 |
| Preserve forests or plant trees | 2 | 5 * | 2 | 4 * |
| Less consumption or waste | 1 | 1 | 1 | 1 |
| Be more aware environmentally | 1 | 3 * | 1 | 2 |
| Change habits; change purchasing habits | 1 | 2 | 2 | 2 |
| Use less fossil fuel | 3 | 1 * | 0 * | 1 * |
| Reduce pollution or emissions | 4 | 8 * | 7 * | 8 * |
| More education and research | 1 | 1 | 2 | 2 |
| Take care of the environment | 1 | 2 | 1 | 2 |
| Reduce or restrict use of aerosol cans | 5 | 6 | 7 | 6 |
| Buy locally grown food/products | 3 | 3 | 3 | 3 |
| Restrict or reduce use of CFCs | 0 | 2 * | 1 * | 1 * |
| Don't burn leaves or plastics | 0 | 1 * | 2 * | 1 * |
| Other | 6 | 12 * | 14 * | 13 * |
| Don't Know | 10 | 10 | 16 * | 13 |
| Total Respondents | 416 | 291 | 327 | 629 |

*Significantly different from the Connecticut sample at the 90% confidence level.

4 Awareness of Clean Energy

Summary

Awareness of clean energy increased in Connecticut from 2005 to 2006. More respondents are aware of clean energy, and more respondents are able to define and identify clean energy in terms of clean energy sources and technologies such as wind and ethanol. When asked who would be the most credible source of information to promote clean energy, Connecticut respondents overwhelmingly choose a group of environmental non-profit organizations (44%) or a group of climate scientists (33%).

Discussion

Seventy-eight percent of Connecticut respondents were aware of “clean energy or renewable energy” in 2006, a statistically significant difference from 2005.¹⁰ Moreover, the increase is greater in Connecticut than elsewhere. (Table 4-1)

Table 4-1: Awareness of Clean Energy¹¹
(All Respondents)

| Region | Yes, 2005 (Percent) | Yes, 2006 (Percent) | Total Respondents (2005) | Total Respondents (2006) |
|------------------------------|------------------------|------------------------|--------------------------------|--------------------------------|
| Connecticut | 71% | 78% * | 300 | 600 |
| Other CESA States | 76% + | 80% | 358 | 410 |
| Non-CESA States | 76% + | 74% | 585 | 528 |
| U.S. | 76% + | 77% | 943 | 946 |

* Significantly different from corresponding 2005 sample at the 90% confidence level.

+ Significantly different from the 2005 Connecticut sample at the 90% confidence level.

Demographic analyses show that 80% of homeowners in Connecticut compared to 68% of renters are aware of either clean energy. In addition, awareness is 65% among those with only a high school degree, compared to 73% among those with some college, 82% of those with a four-year college degree, and 90% of those with post-graduate experience. Awareness of clean energy follows a similar pattern for income: awareness is 65% for those with household incomes less than \$25,000, 64% for incomes between \$25,000 and \$50,000, 78% with incomes between \$50,000 and \$75,000, 84% with incomes between \$75,000 and \$100,000 and 90% with incomes over \$100,000. Lastly, 82% of men are aware of clean energy compared to 74% of women.

¹⁰ In 2005, one-half of the respondents to the Connecticut survey were asked if they were aware of “renewable energy” and one-half about “clean energy.” In 2006 Connecticut respondents were asked one single question regarding their awareness of either “clean energy or renewable energy.” Responses to awareness of “clean energy” in 2005 were compared to responses in 2006.

¹¹ Note that Table 4.1 presents tests on statistical significance despite the fact that for a subset of the sample population in 2005, the questions were asked differently (See Footnote 1).

Connecticut respondents who are aware of clean energy were asked the meaning of those terms. In 2006 a statistically significant larger percentage of respondents replied “reusable /recyclable /won’t deplete,”¹² solar energy, wind power, water power, and biomass/ethanol/biodiesel. Altogether, 26% of Connecticut respondents in 2006 compared to 8% in 2005 mention some specific form of clean energy (shaded in the table below). (Table 4-2)

Table 4-2: Meaning of Clean Energy¹³
(All Connecticut Respondents)

| Meaning | Percent (2005) | Percent (2006) |
|---|------------------------|----------------|
| Reusable/recyclable/won't deplete/renewable | 4% | 13% * |
| Less polluting/cleaner air | 24% | 22% |
| Solar energy; energy from the sun; photovoltaics, PV; active solar; passive solar | 6% | 16% * |
| Wind power; windmills; wind farms | 4% | 16% * |
| Better for environment | 6% | 7% |
| Less fossil fuel/oil | 6% | 7% |
| Water power; hydroelectric; use of dams | 1% | 5% * |
| Recycling | 1% | 2% |
| Energy efficiency | 1% | 2% |
| From natural resources | 1% | 2% |
| Biomass; burning organic matter / ethanol; corn / biodiesel | 0% | 7% * |
| Costs more/less | 0% | 1% * |
| Hybrid/electric cars | 2% | 4% |
| Hydrogen | 1% | 2% |
| Geothermal | 0% | 1% |
| Less waste | 2% | 1% |
| Clean fossil fuels | 1% | 0% * |
| Less climate change/global warming | 1% | 1% |
| Tidal or wave power; using the tides or waves | 1% | 0% |
| Nuclear/nuclear energy/nuclear power/nuclear plants | 1% | 1% |
| Natural gas | 1% | 1% |
| Less climate change/global warming | 1% | 1% |
| Less CO2 | 1% | 0% * |
| Ozone layer | 0% | 1% |
| Electricity | 0% | 1% * |
| Fuel cells | 0% | 1% * |
| Conservation | 0% | 4% * |
| Alternative Fuels / Other fuels | 7% | 7% |
| Other | 12% | 10% |
| Don't know | 4% | 13% * |
| Not aware | 29% | 22% * |
| Total Respondents | 300¹ | 600 |

* Significantly different from 2005 Connecticut sample at the 90% confidence level.

¹² It should be noted that in 2005, 35% of respondents asked about the meaning of “renewable energy” cited “reusable/recyclable/won’t deplete”

¹³ This table includes data from 2005 respondents who were asked about the meaning of “clean energy” only.

When asked to provide specific examples of clean energy, 34% of Connecticut respondents cite some form of solar energy and wind power (Table 4-3). These are both statistically significantly different from the comparison groups in 2006 (except for solar energy for other CESA states), while the number of Connecticut respondents citing wind power in 2006 is statistically significantly different from 2005. Another 21% mention hydropower. Respondents from Connecticut and all comparison groups were more likely to mention Ethanol in 2006 compared to 2005, and Connecticut residents were more likely to mention hybrid or electric cars.

Table 4-3: Examples of Clean Energy
(All Respondents)

| Examples | 2005 | | | | 2006 | | | |
|---|-------------|-------------------|-----------------|------------|-------------|-------------------|-----------------|------------|
| | Connecticut | Other CESA States | Non-CESA States | U.S. | Connecticut | Other CESA States | Non-CESA States | U.S. |
| Solar energy; energy from the sun; photovoltaics, PV; active solar; passive solar | 30% | 32% | 32% | 31% | 34% | 29% | 24% *, # | 27% *, # |
| Wind power; windmills; wind farms | 23% | 26% | 23% | 24% | 34% * | 23% # | 25% # | 25% # |
| Water power; hydroelectric; use of dams | 16% | 11% + | 14% + | 13% + | 21% | 10% # | 12% # | 12% # |
| Solar water heating | 8% | 4% + | 4% + | 4% + | 6% | 6% | 3% # | 4% |
| Wood; wood stoves | 3% | 2% | 2% + | 2% + | 3% | 2% | 2% # | 2% |
| Biomass; burning organic matter | 1% | 3% + | 3% | 3% + | 2% | 4% # | 3% *, # | 3% |
| Geothermal | 3% | 2% | 2% | 2% | 3% | 3% | 2% | 2% |
| Nuclear/nuclear energy/nuclear power | 4% | 4% | 5% | 5% | 6% * | 6% | 5% | 6% |
| Ethanol/Corn | 2% | 4% + | 5% + | 5% + | 10% * | 18% *, # | 15% *, # | 16% *, # |
| Fuel cells | 5% | 2% + | 4% | 3% | 5% | 5% * | 4% | 5% * |
| Tidal or wave power; using the tides or waves | 1% | 2% | 2% | 2% | 2% | 2% | 1% | 1% |
| Landfill gas | 1% | 1% | 2% | 1% | 1% | 0% | 1% | 1% |
| Natural gas | 3% | 6% + | 9% + | 8% + | 7% * | 8% | 5% * | 6% * |
| hybrid/electric cars | 0% | 0% | 0% | 0% | 6% * | 0% # | 0% # | 0% # |
| hydrogen | 0% | 0% | 0% | 0% | 2% * | 1% * | 1% * | 1% * |
| Electricity | 0% | 0% | 0% | 0% | 1% * | 1% * | 1% * | 1% * |
| Recycling | 0% | 0% | 0% | 0% | 1% * | 1% * | 1% * | 1% * |
| Biodiesel | 0% | 0% | 0% | 0% | 1% * | 0% | 1% * | 1% * |
| Clean Fossil Fuels | 0% | 0% | 0% | 0% | 1% * | 0% # | 0% | 1% * |
| Less polluting/cleaner air | 0% | 0% | 0% | 0% | 1% * | 0% | 0% # | 0% |
| Other | 0% | 0% | 0% | 0% | 3% * | 6% # | 2% * | 4% * |
| Don't know | 10% | 16% + | 14% + | 15% + | 11% | 17% # | 18% *, # | 18% *, # |
| Not aware of clean energy | 36% | 22% + | 24% + | 23% + | 22% * | 20% | 26% | 23% |
| Total Respondents | 600 | 358 | 585 | 943 | 600 | 410 | 528 | 946 |

* Significantly different from corresponding 2005 sample at the 90% confidence level.

Significantly different from the 2006 Connecticut sample at the 90% confidence level.

+ Significantly different from the 2005 Connecticut sample at the 90% confidence level.

When asked which group or individual is the most credible source of information to promote clean energy, Connecticut respondents are most likely to choose a group of environmental non-profit organizations (44%), followed by a group of climate scientists (33%).¹⁴ (Table 4-4) A significantly higher percentage of Connecticut respondents chose a group of environmental non-profit organizations than respondents from the comparison groups.

Table 4-4: Most Credible Source of Information to Promote Clean Energy
(All Respondents)

| | Connecticut | Other CESA States | Non-CESA States | U.S. |
|---|-------------|-------------------|-----------------|------------|
| The president of the United States | 7% | 6% | 9% | 8% |
| A group of Fortune 100 CEO's | 4% | 5% | 3% | 4% |
| A coalition of religious leaders | 2% | 3% | 2% | 3% |
| A group of climate scientists | 33% | 36% | 31% | 33% |
| A group of environmental non-profit organizations | 44% | 36% * | 37% * | 37% * |
| A group of your friends | 2% | 5% * | 5% * | 5% * |
| Other | 3% | 2% | 2% | 2% |
| Don't Know | 6% | 7% | 10% * | 8% |
| Total Respondents | 600 | 410 | 528 | 946 |

*Significantly different from the Connecticut sample at the 90% confidence level.

¹⁴ The question read: “Which of the following groups or individuals do you believe would be the most credible source of information to promote clean energy?” Respondents were asked to choose one of the following responses: The president of the United States; A group of Fortune 100 CEO’s; A coalition of religious leaders; A group of climate scientists; A group of environmental non-profit organizations; A group of your friends; Some other source (please specify)

5 Awareness of Household-level Clean Energy

Summary

Awareness of household-level clean energy increased in Connecticut from 2005 to 2006, while only awareness of PV systems increased in other parts of the country. Awareness of fuel cells in 2006 for Connecticut citizens increased significantly over the estimate in 2005, and is significantly higher than all comparison groups (the U.S., CESA states, and non-CESA states).

Discussion

Forty-four percent of Connecticut respondents in 2006 are aware of grid-delivered clean electricity, significantly different from 2005 and from non-CESA states in 2006. Moreover, the increase is greater in Connecticut than elsewhere. (Table 5-1)

Table 5-1: Awareness of Grid-Delivered Clean Energy
(All Respondents)

| | Yes (2005) | Yes (2006) | Total Respondents (2005) | Total Respondents (2005) |
|--------------------------|------------|------------|--------------------------|--------------------------|
| Connecticut | 35% | 44 % * | 600 | 600 |
| Other CESA States | 40% | 42% | 358 | 410 |
| Non-CESA States | 41% + | 39% # | 585 | 528 |
| U.S. | 41% + | 40% | 943 | 946 |

* Significantly different from corresponding 2005 sample at the 90% confidence level.

Significantly different from the 2006 Connecticut sample at the 90% confidence level.

+ Significantly different from the 2005 Connecticut sample at the 90% confidence level.

Within Connecticut, education is associated with recognition: 56% for those having attended graduate school, 47% for those with four-year college degrees, 44% for those with some college, and 30% for those with high school degrees. Similarly, a high level of income is associated with recognition: awareness is 36% for those with household incomes less than \$75,000 and 57% over \$75,000. Lastly, 53% of men were aware compared to 35% of women. Unlike 2005, in 2006 people who think global warming is an important issue are no more likely to have heard of grid-delivered clean energy than those who think global warming is less important.

Awareness of “Renewable Energy Certificates” or “RECS” increased slightly from 6% to 10% of Connecticut residents from 2005 to 2006, but the change was statistically significant. (Table 5-2).

Table 5-2: Awareness of Renewable Energy Certificates
(All Respondents)

| | Yes (2005) | Yes (2006) | Total Respondents (2005) | Total Respondents (2006) |
|----------------|------------|------------|--------------------------|--------------------------|
| Percent | 6% | 10% * | 600 | 600 |

* Significantly different from 2005 Connecticut sample at the 90% confidence level.

Though the percentage of respondents who are aware of RECS increased slightly in 2006, a smaller percentage of those respondents who say they are familiar with RECs could identify a characteristic of RECs. (Table 5-3) In addition, nearly half of those who are familiar with RECS (46%) do not know what it means. Characteristics of RECs that a few respondents are aware of (no more than 1% of all respondents for any one characteristic) include certifying type of clean energy, price, amount of electricity generated, ownership, new vs. existing, level of emissions, location of renewable generating sources, and protecting against double counting. As in 2005, 4% of respondents are aware of at least one characteristic of RECs, though not one person is able to name all eight.

Table 5-3: Understanding of Renewable Energy Certificates
(Multiple Response)

| Meaning | Percent of those aware of Tradable Renewable Certificates (2005) | Percent of all Respondents (2005) | Percent of those aware of Tradable Renewable Certificates (2006) | Percent of all Respondents (2006) |
|--|---|--|---|--|
| Certifies TYPE of renewable/clean energy – e.g., wind, solar, biomass, small hydro | 21% | 1% | 9% | 1% |
| Certifies PRICE | 15 | 1 | 4 * | <1 |
| Certifies TOTAL AMOUNT/kWh/kilowatt-hours of electricity generated by renewables | 12 | 1 | 4 | <1 |
| Certifies OWNERSHIP | 12 | 1 | 7 | 1 |
| Certifies percentage of renewables that are NEW rather than previously existing | 6 | <1 | 2 | <1 |
| Certifies level of EMISSIONS | 3 | <1 | 12 | 1 |
| Certifies LOCATION of renewable generation sources | 0 | 0 | 4 | <1 |
| Protects against DOUBLE COUNTING of renewable generation sources | 0 | 0 | 2 | <1 |
| Other | 0 | 0 | 16 * | 2 * |
| DK/NA | 38 | 4 | 46 | 4 |
| Mention all eight characteristics | 0% | 0% | 0% | 0% |
| Mention at least one characteristic | 62% | 4% | 39% * | 4% |
| Total Respondents | 34 | 600 | 57 | 600 |

* Significantly different from 2005 Connecticut sample at the 90% confidence level.

Eighty-six percent of Connecticut respondents are aware of rooftop solar photovoltaic systems in 2006, a statistically significant increase from 2005. (Table 5-4) Awareness among the comparison groups also increased significantly from 2005 to 2006, though the increase is greater in Connecticut than elsewhere.

Table 5-4: Awareness of Solar PV Systems
(All Respondents)

| | Yes (2005) | Yes (2006) | Total Respondents (2005) | Total Respondents (2005) |
|--------------------------|------------|------------|--------------------------|--------------------------|
| Connecticut | 65% | 86 % * | 600 | 600 |
| Other CESA States | 71% + | 83% * | 358 | 410 |
| Non-CESA States | 73% + | 83% * | 585 | 528 |
| U.S. | 72% + | 84% * | 943 | 946 |

* Significantly different from corresponding 2005 sample at the 90% confidence level.

Significantly different from the 2006 Connecticut sample at the 90% confidence level.

+ Significantly different from the 2005 Connecticut sample at the 90% confidence level.

As in 2005, in Connecticut homeowners are likelier than renters to be aware of PV, as are more-educated people more than less-educated people, higher income earners more than those who earn less money, and men more than women. Unlike 2005, in 2006 people who think global warming is an important issue are no more likely to have heard of PV than those who think it is less important.

Fifty-one percent of Connecticut respondents are aware of fuel cells systems in 2006, statistically significantly different from 2005 and from all comparison groups in 2006. Moreover, the increase is greater in Connecticut than elsewhere, which is probably related to the relative concentration of fuel cell companies in Connecticut. (Table 5-5)

Table 5-5: Awareness of Fuel Cells
(All Respondents)

| | Yes (2005) | Yes (2006) | Total Respondents (2005) | Total Respondents (2005) |
|--------------------------|------------|------------|--------------------------|--------------------------|
| Connecticut | 39% | 51 % * | 600 | 600 |
| Other CESA States | 35% | 31% # | 358 | 410 |
| Non-CESA States | 33% + | 35% # | 585 | 528 |
| U.S. | 34% + | 34% # | 943 | 946 |

* Significantly different from corresponding 2005 sample at the 90% confidence level.

Significantly different from the 2006 Connecticut sample at the 90% confidence level.

+ Significantly different from the 2005 Connecticut sample at the 90% confidence level.

Within Connecticut, 54% of homeowners versus 32% of renters are aware of fuel cells. In addition, a high level of education is correlated with recognition: 59% of those having attended graduate school are aware, compared to 48% of those with four-year college degrees, 49% of

those with some college, and 43% of those with high school degrees. Similarly, a high level of income is associated with recognition: awareness is 43% for those with household incomes less than \$25,000, 36% for incomes between \$25,000 and \$50,000, 47% with incomes between \$50,000 and \$75,000, 61% with incomes between \$75,000 and \$100,000 and 60% with incomes over \$100,000. Sixty-one percent of men are aware compared to 40% of women. Also, people who think global warming is an important issue are likelier to have heard of fuel cells than those who think it is less important. As in 2005, educating consumers on global warming might be an effective tactic at raising awareness of fuel cell technologies.

6 Likelihood to Purchase Clean Energy

Summary

Consumer willingness to pay a premium for clean energy remained largely the same in 2006 as in 2005, except for the lowest willingness to pay category (for a \$1 increase in their electric bill for 50% of their electrical supply from clean energy sources) which increased relative to those who would not pay anything for clean energy in 2005. Cost is the most commonly mentioned barrier to purchasing clean energy while improving the environment or the planet is the most commonly mentioned reason for wanting to purchase clean energy. In terms of factors affecting the likelihood of purchasing clean energy, over 60% of Connecticut respondents would be more likely to purchase clean energy if it supported the development of clean energy in Connecticut and over half of Connecticut respondents would be less likely to purchase clean energy if it is not certified.

Discussion

We asked respondents a battery of “willingness-to-pay” questions to establish some basic market pricing segments for clean energy purchasing potential.¹⁵ First we asked how likely they would be, on a scale of 0 to 10, to purchase all of their electricity from clean sources if it added an amount that equaled 10% of their monthly electric bill (or \$10 for those who did not know the size of their electric bill). Among those who responded a seven or below, we asked if they would be willing to purchase one-half their electricity from clean sources if it added an amount that equaled 5% of their monthly electric bill (or \$5 for those who did not know the size of their electric bill). Lastly, among those who again responded a seven or below, we then asked if they would be willing to purchase one-half their electricity from clean sources if it added \$1 to their monthly electric bill.

¹⁵ The format of the “Willingness To Pay” question series was neither intended to establish price elasticities nor could the response data be used for such purposes.

Table 6-1 displays the results of these questions, and reveals that in 2006 forty-five percent of respondents report willingness to purchase all their electricity from clean sources for 10% more on their electric bill. Sixty-one percent indicate willingness to purchase at least half their electricity for a 5% increase. Lastly, another 22% report a willingness to do so for an extra \$1, resulting in a cumulative proportion of 83%, significantly different from 2005. This implies that 83% of respondents perceive some value in using clean energy over energy from conventional sources as expressed through a willingness to pay of at least one dollar a month. Seventeen percent of respondents either do not know or do not value using clean energy over energy from conventional sources.

Table 6-1: Willingness to Pay for Clean Electricity Supply
(All Respondents)

| | 8 to 10 (extremely likely, 2005) | 8 to 10 (extremely likely, 2006) | Total Respondents (2005) | Total Respondents (2006) |
|---------------------------------------|---|---|---|---|
| 10% increase | 47% | 45% | 600 | 600 |
| Cumulative 10% + 5% increase | 60% | 61% | 600 | 600 |
| Cumulative 10% + 5% + \$1 increase | 74% | 83% * | 600 | 600 |

* Significantly different from 2005 Connecticut sample at the 90% confidence level.

However, people are not likely to pay for clean energy if they are not aware of it, so the actual potential market is even smaller. We therefore filtered out respondents who are not aware of clean energy and who are not aware of the ability to purchase clean electricity at home. As in 2005, this reveals the current potential market to be much smaller in 2006: only 17% of respondents who show awareness of clean energy say they would be willing to pay 10% more for an entirely clean electricity supply, 24% say they would be willing to purchase at least one-half clean electricity for at least an additional 5% on their bill, and 33% say they would be willing to pay at least an extra \$1 for some clean energy. In 2006, the 33% who are willing to pay an extra \$1 for some clean energy are significantly greater than the 23% of respondents who said so in 2005.

In 2006, those respondents who are not interested in purchasing clean electricity at any level are better able to articulate why they are not interested. Nearly one-third mention cost, 11% are wary of the reliability of clean energy, 11% would like more information and 7% cite the inconvenience of switching. (Table 6-2).

Table 6-2: Reasons to Not Purchase Clean Electricity
(Those Not Willing to Purchase Clean Electricity, Multiple Response)

| Reason | 2005 (Percent) | 2006 (Percent) |
|---|---------------------------|---------------------------|
| Cost | 14% | 32% * |
| Need more info | 13 | 11 |
| Inconvenience/time of switching | 6 | 7 |
| Nothing | 4 | 14 * |
| Satisfied with current service | 3 | 1 |
| Lack confidence in the reliability of clean power | 3 | 11 * |
| Don't control my bill | 1 | 1 |
| Other | 11 | 18 |
| Don't Know | 46 | 14 * |
| Total Respondents | 153 | 103 |

*Significantly different from the 2005 sample at the 90% confidence level.

In 2006, nearly two-thirds of all respondents who are interested in purchasing clean electricity would do so to “improve the environment or the planet,” while 21% to pollute less, 13% to reduce oil dependency, and 11% to help reduce the impacts of global warming (Table 6-3).

Table 6-3: Reasons to Purchase Clean Electricity
(Those Willing to Purchase Clean Electricity, Multiple Response)

| Reasons | 2005 (Percent) | 2006 (Percent) |
|---------------------------------------|---------------------------|---------------------------|
| Improve environment/Save planet/world | 50% | 65% * |
| Reduce pollution/cleaner air/water | 15 | 21 * |
| Reduce oil dependency | 9 | 13 * |
| Help global warming/climate change | 7 | 11 * |
| Healthier | 4 | 6 |
| Save money/reduce costs | 3 | 8 * |
| For the future, for my children | 3 | 8 * |
| Right thing to do, conscience | 2 | 6 * |
| Save energy | 1 | 1 |
| Other | 10 | 4 * |
| Don't Know | 14 | 1 * |
| Total respondents | 447 | 497 |

*Significantly different from the 2005 sample at the 90% confidence level.

We provided respondents a list of four reasons for purchasing clean electricity and asked which they think is the best (Table 6-4). In 2006 there were subtle shifts in attitudes about global warming as 20% of respondents cite prevention of global warming as the most important reason for purchasing clean electricity. Thirty-nine percent of Connecticut respondents cite cleaner air and improved health for our children and 30% cite the reduced dependency on foreign oil. The connection between clean electricity and foreign oil may be more emotional than real, in that only a small portion of electricity in Connecticut is generated by oil.¹⁶ In addition, both the percentages of Connecticut residents who cite global warming and encouraging new technologies and creating new jobs (7%) are statistically significantly different than all comparison groups in 2006.

In 2006, those under 34 are more likely to cite prevention of global warming and reducing the need for foreign oil than are those in other age groups, women are more likely than men to cite cleaner air and improved health for children, and those with annual household incomes over \$100,000 are more likely than other income groups to cite prevention of global warming as reasons to purchase clean energy.

¹⁶ Energy Information Administration (2002). Electricity generated in MWh (CT): Coal: 10.3%; petroleum: 7.5%; natural gas: 28.3%; other gas: 0.0%; nuclear: 47.6%; hydro: 1.0%; other renewables: 5.2%.

Table 6-4: Best Reason to Purchase Clean Electricity
(All Respondents)

| Reason | 2005 | | | | 2006 | | | |
|---|-------------|-------------------|-----------------|------------|-------------|-------------------|-----------------|------------|
| | Connecticut | Other CESA States | Non-CESA States | U.S. | Connecticut | Other CESA States | Non-CESA States | U.S. |
| It means cleaner air and improved health for our children | 45% | 42% | 44% | 43% | 39% * | 39% | 37% | 38% * |
| It reduces our need for foreign oil | 25 | 26 | 26 | 26 | 30 * | 30 | 29 | 29 |
| It helps prevent global warming | 15 | 15 | 14 | 14 | 20 * | 14 # | 13 # | 14 # |
| It encourages new technologies and creates jobs for our community | 8 | 14 + | 11 + | 12 + | 7 | 10 *, # | 10 # | 10 # |
| Don't Know | 6 | 3 + | 5 | 5 | 5 | 8 *, # | 10 *, # | 9 *, # |
| Total Respondents | 600 | 358 | 585 | 943 | 600 | 410 | 528 | 946 |

* Significantly different from corresponding 2005 sample at the 90% confidence level.
 # Significantly different from the 2006 Connecticut sample at the 90% confidence level.
 + Significantly different from the 2005 Connecticut sample at the 90% confidence level.

Respondents were read a series of six statements about clean energy and asked if would be more or less likely to purchase clean energy if the statement were true. The results are displayed in Table 6-5. Over 60% of Connecticut respondents would be more likely to purchase clean energy if the clean energy supported the development of clean energy in Connecticut than for any other statement about clean energy, while 45% and 39% of Connecticut respondents would be more likely to purchase clean energy if the clean energy is endorsed by a national environmental organization or if it is licensed and regulated by the state, respectively. Over half of Connecticut respondents would be less likely to purchase clean energy if it is not certified by an independent consumer organization.

Table 6-5: Clean Energy Factors Affecting Likelihood to Purchase Clean Energy (All Respondents)

| | Connecticut | Other CESA States | Non-CESA States | U.S. |
|---|-------------|-------------------|-----------------|------------|
| The clean energy is generated outside state | | | | |
| Less likely to purchase (0 to 4) | 22% | 34% * | 31% * | 32% * |
| About as likely to purchase (5 to 7) | 42% | 37% | 41% | 39% |
| More likely to purchase (8 to 10) | 29% | 22% * | 20% * | 21% * |
| Don't Know | 7% | 6% | 9% | 8% |
| Clean energy purchase supports development of clean energy in your state | | | | |
| Less likely to purchase (0 to 4) | 8% | 11% | 13% * | 12% * |
| About as likely to purchase (5 to 7) | 29% | 34% * | 32% | 33% * |
| More likely to purchase (8 to 10) | 61% | 48% * | 49% * | 49% * |
| Don't Know | 3% | 6% * | 6% * | 6% * |
| Clean energy is not certified by a consumer organization | | | | |
| Less likely to purchase (0 to 4) | 54% | 48% * | 48% * | 48% * |
| About as likely to purchase (5 to 7) | 28% | 29% | 32% | 30% |
| More likely to purchase (8 to 10) | 12% | 15% | 13% | 14% |
| Don't Know | 6% | 8% | 7% | 8% |
| Clean energy is licensed and regulated by your state | | | | |
| Less likely to purchase (0 to 4) | 16% | 22% * | 24% * | 21% * |
| About as likely to purchase (5 to 7) | 41% | 42% | 36% * | 39% |
| More likely to purchase (8 to 10) | 39% | 30% * | 33% * | 32% * |
| Don't Know | 5% | 6% | 7% | 7% |
| Clean energy is endorsed by a national environmental organization | | | | |
| Less likely to purchase (0 to 4) | 15% | 26% * | 29% * | 28% * |
| About as likely to purchase (5 to 7) | 36% | 39% | 31% * | 35% |
| More likely to purchase (8 to 10) | 45% | 30% * | 33% * | 32% * |
| Don't Know | 5% | 5% | 7% | 6% |
| Could not purchase clean energy from your current utility | | | | |
| Less likely to purchase (0 to 4) | 30% | 38% * | 34% | 36% * |
| About as likely to purchase (5 to 7) | 36% | 33% | 36% | 34% |
| More likely to purchase (8 to 10) | 28% | 21% * | 22% * | 21% * |
| Don't Know | 7% | 8% | 8% | 8% |
| Total Respondents | 600 | 410 | 528 | 946 |

*Significantly different from the Connecticut sample at the 90% confidence level.

7 Clean Energy Organizations

Summary

Recognition of CCEF increased dramatically from 2005 to 2006, from 27% to 44% of respondents. At the same time, however, recognition of affiliated organizations and programs, including the CCEF and the Connecticut Clean Energy Options Program, remain relatively low. Awareness of clean energy communications from various sources rose as well from 2005 to 2006, as 21% of respondents recently heard about programs or organizations that sponsor clean energy (compared to 13% in 2005) and 41% have seen or heard something about clean energy in the past few months (compared to 26% in 2005).

Discussion

In 2006 21% of all respondents have recently heard about programs or organizations that sponsor clean energy as a way of generating electricity, a statistically significant increase from 2005 (Table 7-1).

Table 7-1: Recently Heard About Clean Electricity Programs or Organizations
(All Respondents)

| | Yes (2005) | Yes (2006) | Total Respondents (2005) | Total Respondents (2006) |
|----------------|---------------|---------------|--------------------------------|--------------------------------|
| Percent | 13% | 21% * | 600 | 600 |

*Significantly different from the 2005 sample at the 90% confidence level.

In 2006, 5% of respondents are able to recall the names of the clean energy programs or organizations; this represents 25% of those who had recently heard about clean electricity programs or organizations (Table 7-2). Of those who could actually recall a name, the most often-cited are the two major Connecticut Utilities, probably due to the biannual bill-stuffers sent to ratepayers about the Clean Energy Options Program, followed by the federal government. (Table 7-3).

Table 7-2: Recall of Names of Clean Electricity Programs or Organizations

| | Yes (2005) | Yes (2006) | Total Respondents (2005) | Total Respondents (2006) |
|-----------------------------------|---------------|---------------|--------------------------------|--------------------------------|
| Percent of All Respondents | 3% | 5% * | 600 | 600 |
| Percent of Those Asked | 25% | 25% | 77 | 125 |

*Significantly different from the 2005 sample at the 90% confidence level.

Table 7-3: Names of Clean Electricity Programs or Organizations
 (Those Recalling Clean Electricity Programs or Organizations, Multiple Response)

| Organizations/Programs | Number of Responses (2005) | Number of Responses (2006) |
|---|-----------------------------------|-----------------------------------|
| Utility; Connecticut Light & Power; United Illuminating | 3 | 12 * |
| Connecticut Clean Energy Fund | 2 | 1 |
| Federal government general | 2 | 2 |
| President Bush's Clear Skies Initiative | 2 | 0 |
| City/town government | 1 | 0 |
| State government general | 1 | 0 |
| Connecticut Clean Energy Trail | 1 | 0 |
| U.S. Environmental Protection Agency | 1 | 1 |
| 20% by 2010 Clean Energy Campaign | 0 | 1 |
| Environmental groups | 0 | 1 |
| Other | 6 | 12 |
| Don't Know | 5 | 2 |
| Total Respondents | 19 | 32 |

*Significantly different from the 2005 sample at the 90% confidence level.

We read the names of a variety of organizations and programs that might promote clean energy and asked respondents if they had heard of them (Table 7-4). Awareness of CCEF and many affiliated programs and organizations increased from 2005 to 2006, with 44% of Connecticut residents aware of CCEF and 31% aware of the Connecticut Center for Science and Exploration. Though increasing, awareness of other CCEF programs and affiliations—such as Smart Power, Connecticut Clean Energy Communities, the Connecticut Clean Energy Trail, the 20% by 2010 Clean Energy Campaign—remains relatively low. Awareness of Community Energy and Sterling Planet has remained statistically unchanged.

Table 7-4: Recognition of Selected Clean Energy Programs and Organizations
(All Respondents; n=600)

| Organizations/Programs | Yes (2005) | Yes (2006) |
|--|------------|------------|
| EPA | 83% | 89% * |
| Connecticut Clean Energy Fund | 27% | 44% * |
| President Bush's Clear Skies Initiative | 25% | 23% |
| The Connecticut Center for Science and Exploration | 22% | 31% * |
| Smart Power | 13% | 17% * |
| Connecticut Clean Energy Communities | 10% | 16% * |
| Connecticut Clean Energy Trail | 9% | 14% * |
| 20% by 2010 Clean Energy Campaign | 6% | 10% * |
| Community Energy | 6% | 8% |
| Sterling Planet | 3% | 3% |
| The Regional Greenhouse Gas Initiative (“Reggie”) ¹ | NA | 18% |

¹ Awareness of The Regional Greenhouse Gas Initiative (“Reggie”) was not asked in 2005

*Significantly different from the 2005 sample at the 90% confidence level.

Among age groups, awareness of the CCEF is highest in the 35 to 44 age group (51%), followed by the 45-54 bracket (48%). Lowest awareness is in the youngest and oldest age groups with 38% of those younger than 35 and 34% of those over 65 being aware. Respondents who attended graduate school had higher levels of awareness (51%) than those with less education, while those with annual household incomes between \$75,000 and \$100,000 had the highest level of awareness of any income group (50%).

In 2006 a higher percentage of respondents who were aware of specific clean energy organizations or programs were able to describe what each organization or program is and what it does, except for Sterling Planet (Table 7-5). However, as in 2005, the majority of respondents could not describe what each organization or program is and what it does, while those who could tend to say simply that these organizations or programs promote clean energy.

Table 7-5: Understanding of Selected Clean Energy Programs and Organizations
 (Those Aware of Specific Clean Electricity Programs or Organizations, Multiple Response)

| Function | 2005 | | | | | 2006 | | | | |
|---------------------------------------|----------------------|-------------|------------------|-----------------|---------------------------|----------------------|-------------|------------------|-----------------|---------------------------|
| | CT Clean Energy Fund | Smart Power | Community Energy | Sterling Planet | CT Clean Energy Community | CT Clean Energy Fund | Smart Power | Community Energy | Sterling Planet | CT Clean Energy Community |
| Promote clean energy | 12% | 3% | 3% | 0% | 5% | 27% * | 10% * | 6% | 6% | 8% |
| Promote clean air/reduce pollution | 4 | 1 | 0 | 0 | 3 | 7 | 0 | 6 | 6 | 4 |
| Help environment | 3 | 3 | 3 | 0 | 2 | 3 | 0 * | 2 | 0 | 7 |
| Solicits donations | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 0 |
| Saves energy | 1 | 1 | 3 | 0 | 0 | <1 | 7 * | 2 | 0 | 1 |
| Use taxes or funds | 3 | 0 | 0 | 0 | 0 | 10 * | 1 | 0 | 0 | 0 |
| Use resources wisely | 0 | 3 | 0 | 0 | 0 | 0 | 0 * | 0 | 0 | 0 |
| Wind, solar, water energy; fuel cells | 0 | 2 | 0 | 0 | 2 | 3 * | 4 | 0 | 0 | 0 |
| Associated with CCEF | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Energy Monitoring System | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| Other | 4 | 7 | 0 | 11 | 5 | 5 | 10 | 16 * | 19 | 1 |
| Don't Know | 75 | 80 | 91 | 89 | 87 | 57 * | 68 * | 67 * | 69 | 76 * |
| Total Respondents | 161 | 75 | 35 | 18 | 60 | 261 | 126 | 49 | 16 | 97 |

*Significantly different from the 2005 sample at the 90% confidence level.

In 2006 three percent of all respondents believe that their town or city is a Connecticut Clean Energy Community. Of those respondents that have heard of Connecticut Clean Energy Communities (16% of all respondents), 15% believe that their town or city is a Connecticut Clean Energy Community. (Table 7-6).

Table 7-6: Belief that Respondent’s Town is a Connecticut Clean Energy Community

| | Yes (2005) | Yes (2006) | Total Respondents (2005) | Total Respondents (2006) |
|---------------------------------------|-----------------------|-----------------------|---|---|
| Percent of All Respondents | 2% | 3% | 600 | 600 |
| Percent of Those Aware of CCEC | 20% | 15% | 60 | 97 |

We asked respondents what organizations or companies they would turn to for information regarding clean electricity. In 2006, thirty-two percent mention the two major investor-owned utilities in Connecticut (Connecticut Light & Power or United Illuminating), 9% would look on the internet or ask an environmental organization. However, 42% say they do not know where they would look (Table 7-7). As more than four in ten Connecticut residents do not know where to turn to for information regarding clean electricity, CCEF may want to consider additional communication strategies that provide residents with information sources for clean electricity and inform residents how to sign up for clean electricity.

Table 7-7: Sources of Information Regarding Clean Electricity
(All Respondents, Multiple Response)

| Organization | Percent (2005) | Percent (2006) |
|---|-----------------------|-----------------------|
| Utility: Connecticut Light & Power; United Illuminating | 30% | 32% |
| Would look on Internet | 7 | 9 |
| Other | 6 | 3 * |
| Connecticut Clean Energy Fund | 4 | 2 * |
| City/town government | 3 | 2 |
| State government general | 2 | 4 * |
| Federal government general | 2 | 2 |
| EPA, U.S. Environmental Protection Agency | 2 | 4 * |
| Scientists | 0 | 3 * |
| Media sources | 0 | 2 * |
| Friends, family, co-workers | 0 | 1 * |
| Smart Power | 1 | 0 * |
| Contractor | 1 | 0 * |
| Would look in Yellow Pages | 1 | 0 * |
| Connecticut Energy Cooperative | 1 | 1 |
| Connecticut Department of Public Utilities | 1 | 1 |
| Environmental Organizations | 1 | 9 * |
| Green Mountain Energy | 0 | 0 |
| Clear Skies Initiative, President Bush | 0 | 0 |
| Community Energy | 0 | 1 * |
| CT Clean Energy Trail | 0 | 1 * |
| CT Clean Energy Communities | 0 | 1 * |
| Don't Know | 50 | 42 * |
| Total Respondents | 600 | 600 |

Awareness of rebates or incentives that are available for rooftop solar photovoltaic systems increased from 10% in 2005 to 23% in 2006. (Table 7-8)

Table 7-8: Aware of Rebates or Incentives for Solar Photovoltaic Systems
(All Respondents)

| | Yes (2005) | Yes (2006) | Total Respondents (2005) | Total Respondents (2006) |
|----------------|------------|------------|--------------------------|--------------------------|
| Percent | 10% | 23% * | 600 | 600 |

*Significantly different from the 2005 sample at the 90% confidence level.

Homeowners, people who have attended graduate school, people making more than \$75,000 per year, and men are likelier than others to be aware of rebates for PV systems.

As in 2005, twenty-nine percent of those who believe that there are rebates or incentives available think the federal government provides them (Table 7-9). Sixteen percent believe that state government provides rebates or incentives and 11% believe that the Connecticut utilities would be the sponsor. None of the estimated changes are statistically measurable, however.

Table 7-9: Organizations Providing Rebates for Solar Photovoltaic Systems
(Those Who were Aware of Solar PV Systems, Multiple response)

| Organizations | Percent (2005) | Percent (2006) |
|---|----------------|----------------|
| Federal government | 29% | 29% |
| Utility; Connecticut Light & Power; United Illuminating | 14 | 11 |
| State government general | 9 | 16 |
| Connecticut Clean Energy Fund | 7 | 3 |
| Smart Power | 2 | 0 |
| Connecticut Department of Public Utilities | 2 | 1 |
| Manufacturers | 2 | 2 |
| Contractors | 2 | 0 |
| Other | 0 | 1 |
| Don't Know | 40 | 45 |
| Total Respondents | 58 | 139 |

8 Clean Energy Communications

Summary

In 2006 the percentage of respondents who have seen or heard something about clean energy in the past few months increased in 2006, as did the percentage of respondents who have seen or heard about clean energy on television. Recognition of the phrase “It’s real, it’s here, it’s working” did not change from 2005 to 2006.

Discussion

In 2006, 41% of all respondents have seen or heard something about clean energy in the past few months, a statistically significant increase from 2005 (Table 8-1).

Table 8-1: Percent Seen or Heard about Clean Energy in Past Few Months
(All Connecticut Respondents)

| | Yes (2005) | Yes (2006) | Total Respondents (2005) | Total Respondents (2006) |
|---------------------------------------|-----------------------|-----------------------|---|---|
| Percent of All Respondents | 26% | 41% * | 600 | 600 |

*Significantly different from the 2005 sample at the 90% confidence level.

Younger respondents—those under the age of 45—were more likely to have recently heard something about clean energy than older respondents, and respondents who have attended graduate school were more likely to have heard something about clean energy than other education groups. Respondents with annual household incomes above \$75,000 and between \$25,000 and \$50,000 were most likely to have heard something about clean energy, and lastly, 62% of men compared to 42% of women have heard something recently.

As in 2005, among those who have recently heard something about clean energy, a variety of topics are mentioned, including hybrid cars, fuel cells, wind, and solar (Table 8-2).

Table 8-2: What Seen or Heard About Clean Energy
(Connecticut Respondents Who Had Heard or Seen Something About Clean Energy in Past Few Months, Multiple Response)

| What Heard | Percent (2005) | Percent (2006) |
|---|-----------------------|-----------------------|
| Hybrid/hydrogen cars | 14% | 15% |
| General clean/renewable energy | 12 | 15 |
| Hydrogen/fuel cells | 8 | 7 |
| Wind mills | 7 | 15 * |
| Politics/legislation/standards | 7 | 7 |
| Solar power | 3 | 11 * |
| Cost | 3 | 4 |
| Buying clean energy | 3 | 0 * |
| Natural gas | 1 | 1 |
| Landfill gas | 1 | 0 |
| Hydro | 1 | 1 |
| Cleaner/better | 1 | 7 * |
| Ethanol/corn | 0 | 9 * |
| Less fossil fuels/alternative fuels | 0 | 5 * |
| CCEF, slogans, utility mailers, sign-up | 0 | 6 * |
| Global warming | 0 | 3 * |
| Biodiesel | 0 | 2 * |
| Nuclear | 0 | 2 * |
| Other | 9 | 16 * |
| Don't Know | 33 | 9 * |
| Total Respondents | 154 | 246 |

*Significantly different from the 2005 sample at the 90% confidence level.

As in 2005, most of these respondents say they have seen or heard a news story about clean energy, primarily via newspapers and television (Table 8-3). The percentage of respondents who have seen or heard about clean energy on television, either through a news story or an advertisement, increased significantly from 2005 to 2006.

Table 8-3: Where Seen or Heard Something About Clean Energy
(Connecticut Respondents Who Had Seen or Heard Something About Clean Energy in Past Few Months, Multiple Response)

| Where Heard | Percent (2005) | Percent (2006) |
|--|----------------|----------------|
| News stories-newspapers | 31% | 35% |
| News stories-television | 30 | 45 * |
| News stories-magazines | 16 | 18 |
| News stories-radio | 11 | 11 |
| Internet | 10 | 10 |
| Advertising-newspapers | 7 | 6 |
| Articles-scientific journals | 6 | 1 * |
| Advertising-television | 4 | 13 * |
| Conversations with friends, family, or co-workers | 4 | 3 |
| Advertising-magazines | 3 | 4 |
| Advertising-radio | 2 | 6 * |
| Newsletter from organization | 1 | 2 |
| Builder/contractor | 1 | 0 |
| Materials/information that children brought home from school | 1 | 0 |
| Information from my town or city government | 1 | 1 |
| Bill inserts from my utility/electric | 1 | 6 * |
| Advertising-billboards | 0 | 2 * |
| Library | 0 | 1 |
| Science center or museum | 0 | 1 |
| Other | 2 | 2 |
| Don't Know | 8 | 3 * |
| Total Respondents | 154 | 251 |

*Significantly different from the 2005 sample at the 90% confidence level.

CCEF has been using the phrase “It’s real, it’s here, it’s working” in communications. We tested awareness of this phrase against two other phrases that are not in use.¹⁷ Recognition of the phrase “It’s real, it’s here, it’s working” did not change from 2005 to 2006. More than three-quarters of respondents are either somewhat or completely certain that they have not seen or heard CCEF’s phrase, a significant increase in those who did not recognize the phrase from 2005. (Table 8-4) As in 2005, claimed recognition is highest for the following fictitious slogan: “Clean energy: for Connecticut, for the Earth” slogan—with 22% being somewhat or completely certain they have seen or heard it. Fifteen percent are somewhat or completely

¹⁷ The phrase “It’s real, it’s here, it’s working” was developed by the Clean Energy States Alliance and SmartPower and has been used by CCEF in communications.

certain they have heard the actual CCEF slogan “It’s real, it’s here, it’s working” as well as “Green up,” which has been used in Massachusetts and Rhode Island in the past for voluntary clean energy initiatives.

Table 8-4: Recall of Slogans
(All Respondents)

| Slogan | 2005 | | | | | 2006 | | | | |
|---|---|---|--------------------------------------|---|---|---|---|--------------------------------------|---|---|
| | Completely certain you did see or hear it | Somewhat certain you did see or hear it | Not sure whether you saw or heard it | Somewhat certain you did not see or hear it | Completely certain you did not see or hear it | Completely certain you did see or hear it | Somewhat certain you did see or hear it | Not sure whether you saw or heard it | Somewhat certain you did not see or hear it | Completely certain you did not see or hear it |
| “It’s real, it’s here, it’s working.” | 8% | 7 | 16 | 10 | 60 | 8% | 7 | 10 * | 9 | 67 * |
| “Green up.” | 7% | 4 | 17 | 8 | 65 | 7% | 8 * | 11 * | 7 | 68 |
| “Clean energy: for Connecticut, for the earth.” | 11% | 9 | 15 | 10 | 55 | 9% | 13 * | 12 | 12 | 54 |

*Significantly different from the 2005 sample at the 90% confidence level.

9 Personal Actions Related to Clean Energy

Summary

Personal actions related to clean energy increased significantly from 2005 to 2006, as a higher percentage of Connecticut respondents reported speaking with friends, relatives, neighbors or co-workers about clean electricity over the past year, and a higher percentage of Connecticut respondents have sought information regarding clean information.

Discussion

In 2006 the percentage of respondents who reported speaking with friends, relatives, neighbors, or co-workers about clean electricity over the past year increased to 37% from 25% in 2005. (Table 9-1).

Table 9-1: Talked with Others About Clean Electricity
(All Respondents)

| | Yes (2005) | Yes (2006) | Total Respondents (2005) | Total Respondents (2006) |
|----------------|-----------------------|-----------------------|-------------------------------------|-------------------------------------|
| Percent | 25% | 37% * | 600 | 600 |

*Significantly different from the 2005 sample at the 90% confidence level.

In 2006 11% brought up the topic of clean electricity themselves, 12% said someone else brought it up, and 10% said it was some combination (Table 9-2).

Table 9-2: Who Brought Up Clean Electricity
(All Respondents)

| | Percent (2005) | Percent (2006) |
|---------------------------|---------------------------|---------------------------|
| I brought it up | 8% | 11% * |
| They brought it up | 7 | 12 * |
| Both I/they brought it up | 8 | 10 |
| Total Respondents | 600 | 600 |

*Significantly different from the 2005 sample at the 90% confidence level.

In 2006 age is correlated with degree of proactivity: 32% of those under the age of 45 say they brought it up themselves, compared to 18% of those 45 to 54, 21% of those 55 to 64 and only 9% of those 65 years of age or older. Income is also correlated, with 27% of those with annual household incomes over \$75,000 being proactive compared to 18% with annual household incomes below \$25,000, 13% with incomes between \$25,000 and \$50,000 and 21% with incomes between \$50,000 and \$75,000. Twenty-one percent of those with at least some college are proactive compared to 14% of those with a high school degree or less, 25% of men are proactive compared to 17% of women, and 23% of homeowners are proactive compared to 13% of renters.

Over the past year, a higher percentage of Connecticut respondents have taken one of the actions listed in Table 9-3. Even so, a relatively low percentage of respondents took action, with the most common activities being visiting a website (15%) and making a charitable donation (12%).

Table 9-3: Actions Taken or Information Sought Regarding Clean Energy
(All Respondents)

| In the past year or so, have you... | Yes (2005) | Yes (2006) | Total Respondents (2005) | Total Respondents (2006) |
|---|------------|------------|--------------------------|--------------------------|
| ...written letters to elected officials about clean energy? | 3% | 4% | 600 | 600 |
| ...written letters to newspapers or magazines about clean energy? | 2% | 2% | 600 | 600 |
| ...made a donation to a charitable organization because of its commitment to clean energy as a way of generating electricity? | 8% | 12% * | 600 | 600 |
| ...joined or participated in an organization because of its commitment to clean energy as a way of generating electricity? | 5% | 5% | 600 | 600 |
| ...called an 800 number to find out about purchasing clean energy to supply your electricity? | 2% | 4% * | 600 | 600 |
| ...visited a website dealing with clean energy as a way of generating electricity? | 9% | 15% * | 600 | 600 |

*Significantly different from the 2005 sample at the 90% confidence level.

Overall, 16% of respondents have taken some action regarding clean energy (including the first four actions listed above in Table 10.3), while 17% have sought information regarding clean energy, whether through an 800 number or a website (Table 9-4).

Table 9-4: Activities Taken Regarding Clean Energy
(All Respondents)

| In the past year or so, have ... | Yes (2005) | Yes (2006) | Total Respondents (2005) | Total Respondents (2006) |
|--|------------|------------|--------------------------|--------------------------|
| ..taken some type of action regarding clean energy | 12% | 16% * | 2 | 600 |
| ..sought some type of information regarding clean energy | 9% | 17% * | 0 | 600 |

In terms of demographics, those with a high school education or less are less likely to have taken action or sought information, while higher income is associated with a higher likelihood of taking action or seeking information. Homeowners are more likely to be active than renters. Respondents under the age of 45 are more likely to seek information than older respondents, and men are more likely to seek information than women.

10 Attitudinal Segments

Summary

In 2006, belief in clean energy increased and lack of empowerment declined among Connecticut respondents. With the increased belief in clean energy benefits and decreased feeling of lack of empowerment observed in the attitudinal questions, we suggest that Doubters, and perhaps some Cynics, shifted to the Undecideds and Ideals segments. Given these attitudinal shifts, the target market segments appear to be the Ideals (as in 2005) and the Undecideds.

Discussion

In order to understand underlying attitudes toward clean energy, we read a series of eleven statements to respondents and asked them the extent to which they agree or disagree. Table 10-1 displays their responses. As in 2005, the highest level of agreement for any of the statements is that clean energy will reduce our dependency on foreign oil, with 83% of respondents somewhat or strongly agreeing. Seventy-two percent of respondents somewhat or strongly agree that clean energy is reliable and 73% would like to find out how they can do more to increase clean energy usage in their homes. In contrast, 66% somewhat or strongly disagree that clean energy does not help address global warming and 67% somewhat or strongly disagree that using clean energy makes little difference to the environment.

Table 10-1: Attitudes toward Clean Energy, 2006
(All Respondents; n=600)

| Statement | Agree | | | Disagree | | | Don't Know |
|---|----------|----------|----------|----------|----------|----------|------------|
| | Strongly | Somewhat | Slightly | Slightly | Somewhat | Strongly | |
| Using clean energy to provide my electricity will help reduce our need for foreign oil | 70% | 13 | 5 | 3 | 2 | 3 | 4 |
| The use of clean energy can provide a reliable source of electricity for my home | 47% | 25 | 10 | 2 | 5 | 5 | 5 |
| I'd like to find out how I personally can do more to increase the actual use of clean energy sources to supply the electricity in my home | 46% | 27 | 8 | 4 | 5 | 5 | 5 |
| I have no way of knowing if the electricity I purchase comes from clean sources like wind, solar, water power, and biomass, or from other sources like natural gas, oil, coal and nuclear | 30% | 15 | 7 | 7 | 12 | 18 | 11 |
| If I weren't satisfied with using clean energy in my home, I could easily go back to what I was using before | 28% | 25 | 10 | 6 | 9 | 10 | 13 |
| There is enough clean energy to provide electricity for thousands of homes and businesses in Connecticut | 28% | 17 | 9 | 5 | 11 | 13 | 18 |
| It would be easy to use clean energy to supply the electricity in my home | 28% | 22 | 9 | 6 | 10 | 9 | 16 |
| There's nothing much I can do to increase the use of clean energy sources in this area of the country | 12% | 16 | 8 | 9 | 21 | 29 | 8 |
| Whether or not I use clean energy to supply my electricity makes little difference to the environment | 11% | 10 | 6 | 4 | 16 | 51 | 3 |
| Clean energy could NOT meet all of my household's electricity needs | 12% | 15 | 7 | 7 | 15 | 29 | 16 |
| I don't believe using clean energy sources to generate electricity does very much to reduce global warming. | 9% | 8 | 4 | 5 | 16 | 50 | 9 |

There are a few differences in the attitudes of respondents in 2006 that are worth noting (Table 10-1, Table 10-2). Nearly half (46%) of all respondents strongly agree that they want to find out how they personally can do more to increase the use of clean energy in their homes (an increase of 10% from 2005). Further, nearly half (47%) of all respondents strongly agree that clean energy can provide a reliable source of electricity (an increase of 10% from 2005) and 58% disagree with the statement that there's nothing much I can do to increase the use of clean energy in this area of the country (an increase of 10% from 2005). In summary, respondents in 2006 appear to be more interested in clean energy, have more confidence in clean energy as a source of electricity, and feel more empowered to increase the use of clean energy.

Table 10-2: Attitudes toward Clean Energy, 2005 and 2006
(All Respondents; n=600)

| Statement | Agree, 2005 (percent) | Disagree, 2005 (percent) | Agree, 2006 (percent) | Disagree, 2006 (percent) |
|---|-----------------------------|--------------------------------|-----------------------------|--------------------------------|
| Using clean energy to provide my electricity will help reduce our need for foreign oil | 86% | 8% | 88% | 8% |
| The use of clean energy can provide a reliable source of electricity for my home | 77 | 12 | 82 * | 10 |
| I'd like to find out how I personally can do more to increase the actual use of clean energy sources to supply the electricity in my home | 71 | 20 | 81 * | 14 * |
| I have no way of knowing if the electricity I purchase comes from clean sources like wind, solar, water power, and biomass, or from other sources like natural gas, oil, coal and nuclear | 55 | 33 | 52 | 37 |
| If I weren't satisfied with using clean energy in my home, I could easily go back to what I was using before | 64 | 19 | 63 | 25 * |
| There is enough clean energy to provide electricity for thousands of homes and businesses in Connecticut | 47 | 26 | 54 * | 29 |
| It would be easy to use clean energy to supply the electricity in my home | 54 | 23 | 59 * | 25 |
| There's nothing much I can do to increase the use of clean energy sources in this area of the country | 38 | 48 | 36 | 58 * |
| Whether or not I use clean energy to supply my electricity makes little difference to the environment | 22 | 69 | 27 * | 71 |
| Clean energy could NOT meet all of my household's electricity needs | 28 | 45 | 34 * | 51 * |
| I don't believe using clean energy sources to generate electricity does very much to reduce global warming. | 21 | 65 | 21 | 71 * |

*Significantly different from the 2005 sample at the 90% confidence level.

For the 2005 report, we performed factor analysis on the responses to these statements. Factor analysis assumes that survey responses are imperfect measures of some deeper underlying attitudes, and provides a way to reduce variables to these underlying attitudes or factors. Three factors emerged from this analysis, as shown in Table 10-3 below.

Table 10-3: Factors Underlying Attitudes toward Clean Energy

| Underlying Factor | Associated Statement |
|--|---|
| Belief in clean energy benefits | Using clean energy to provide my electricity will help reduce our need for foreign oil |
| | There is enough clean energy to provide electricity for thousands of homes and businesses in Connecticut |
| | It would be easy to use clean energy to supply the electricity in my home |
| | If I weren't satisfied with using clean energy in my home, I could easily go back to what I was using before |
| | I'd like to find out how I personally can do more to increase the actual use of clean energy sources to supply the electricity in my home |
| | The use of clean energy can provide a reliable source of electricity for my home |
| Skepticism about clean energy | Whether or not I use clean energy to supply my electricity makes little difference to the environment |
| | I don't believe using clean energy sources to generate electricity does very much to reduce global warming. |
| | Clean energy could NOT meet all of my household's electricity needs |
| Lack of empowerment or personal agency | I have no way of knowing if the electricity I purchase comes from clean sources like wind, solar, water power, and biomass, or from other sources like natural gas, oil, coal and nuclear |
| | There's nothing much I can do to increase the use of clean energy sources in this area of the country |

In the 2005 report we grouped respondents, using cluster analysis, into segments on the basis of similar factor scores. This analysis revealed five clusters or segments of respondents. For 2006 we calculated factor scores for each respondent based upon the same factors as 2005.

Respondents were then grouped by the same cluster values through discriminant analysis. (Table 10-4) Ideals are still the largest segment, but compared to 2005 there are fewer Doubters (16%) and more Undecideds (18%) in 2006. With the increased belief in clean energy benefits and decreased feeling of lack of empowerment observed in the attitudinal questions, we suggest that Doubters, and perhaps some Cynics, shifted to the Undecideds and Ideals segments.

Table 10-4: Clusters Descriptions
(All Respondents)

| Clusters | Percent | | Description | Belief in Clean Energy Benefits | Skepticism about Clean Energy | Lack of Empowerment |
|--------------------------|------------|------------|--|---------------------------------|-------------------------------|---------------------|
| | 2005 | 2006 | | | | |
| Ideals | 30% | 33% | Positive about the benefits of clean energy and their ability to take action | Very High | Very Low | Very Low |
| Undecideds | 12 | 18* | Skeptical about the efficacy of clean energy, but feel empowered to take action if they choose | Medium-High | High | Low |
| Doubters | 21 | 16* | Limited belief in benefits of clean energy | Medium-Low | Medium | Medium |
| Eeyores | 20 | 18 | Positive about potential benefits but do not feel empowered to take action | High | Low | Very high |
| Cynics | 18 | 15 | Skeptical about efficacy of clean energy and do not feel empowered to take action | High | Very high | Very high |
| Total categorized | 559 | 584 | | | | |
| Uncategorizable | 41 | 16 | | | | |
| Total | 600 | 600 | | | | |

*Significantly different from the 2005 sample at the 90% confidence level.

Table 10-5 displays some of the key demographic characteristics of the clusters. The demographic characteristics of the clusters are comparable between 2005 and 2006. As in 2005, Ideals and Undecideds have high proportions of respondents earning over \$100,000 or more a year and high proportions of respondents with college degrees. Cynics as a group still have lower proportions of respondents with college degrees, but they do not stand out from the others as much as 2005 by levels of income or age. Notable changes in demographic profiles between 2005 and 2006 include a larger proportion of Eeyores who watch PBS more than once per week (44% in 2006 compared to 11% in 2005) and a smaller proportion of Doubters who listen to NPR for six or more hours per week (10% in 2006 compared to 20% in 2005).

Table 10-5: Cluster Demographics
(All Respondents)

| Category | Ideals | Undecideds | Doubters | Eeyores | Cynics | Overall |
|---|----------------|---------------|--------------|----------------|--------------|----------------|
| Household income: \$75,000 or more | 52% | 39% | 41% | 40% | 37% | 44% |
| Household income: \$100,000 or more | 34% | 28% | 19% | 24% | 22% | 27% |
| Total Respondents | 153 | 82 | 58 | 83 | 65 | 441 |
| Home ownership | 84% | 83% | 90% | 84% | 84% | 85% |
| Education: four-year college degree or higher | 59% | 52% | 54% | 38% | 39% | 50% |
| Age: 34 or under | 16% | 11% | 11% | 15% | 7% | 13% |
| Age: 35 to 54 | 48% | 44% | 52% | 43% | 41% | 46% |
| Age: 55 or over | 37% | 46% | 37% | 43% | 52% | 42% |
| Gender: Male | 47% | 49% | 50% | 55% | 58% | 51% |
| NPR: Listen more than 6 hours/week | 22% | 21% | 10% | 18% | 14% | 18% |
| PBS: Watch more than once/week | 38% | 38% | 37% | 44% | 32% | 38% |
| Total Respondents | 190-194 | 99-105 | 86-91 | 103-105 | 84-87 | 563-584 |

Table 10-6 displays how the five clusters differ on key measures of awareness, understanding, and knowledge regarding clean energy. Compared to the other clusters, a higher proportion of Ideals are aware of clean energy, are able to mention an example of clean energy, have recently seen/heard something about it, and have talked with others about clean energy. Ideals are more likely to be aware of the availability of clean electricity supply at home and are more likely to pay extra for it. In addition, 70% of Ideals are more likely to purchase clean energy if it supports the development of more clean energy in Connecticut while 60% of Ideals and Doubters are less likely to purchase clean energy if it is not certified by an independent consumer organization. In relation to global warming, 84% of Ideals think there are actions individuals can take to help reduce global warming and nearly half of Ideals think that Connecticut's leaders could do a great deal to help reduce global warming.

Compared to 2005, higher proportions of all cluster groups have recently seen or heard about clean energy, higher proportions of all cluster groups except Undecideds are aware of CCEF, and higher proportions of Ideals, Eeyores and Cynics have talked with others about clean energy. However, a smaller proportion of Doubters are now willing to pay an extra 10% on their electric bill for 100% Clean Energy Supply.

Table 10-6: Analysis of Key Questions by Cluster
(All Respondents)

| Category | Ideals | Undecideds | Doubters | Eeyores | Cynics | Overall |
|---|------------------|------------------|----------------|------------------------------|-----------|------------------|
| Aware of Clean Energy | 85% * | 71% | 81% * | 77% | 65% | 78% |
| Mention Clean Energy Example | 64% | 51% | 60% | 57% | 44% | 57% |
| Recently Seen/Heard about Clean Energy | 56% * | 53% * | 55% * | 52% * | 46% * | 53% * |
| Talked with Others about Clean Energy | 50% * | 29% | 33% | 31% * | 32% * | 37% * |
| Aware of the Availability of Clean Energy Supply for Home | 49% | 45% | 47% | 38% * | 45% | 45% |
| Willing to Pay extra 10% on bill for 100% Clean Energy Supply | 60% | 39% | 29% ** | 46% | 37% | 54% * |
| Aware of CCEF | 47% * | 44% | 42% * | 40% * | 41% * | 44% * |
| Aware of clean energy <i>and</i> aware of ability to purchase grid-delivered clean energy at home <i>and</i> willing to pay 10% more for clean energy | 27% | 15% | 10% ** | 15% | 10% | 18% |
| More likely to purchase clean energy if it supports more clean energy in CT | 70% | 50% | 59% | 63% | 56% | 61% |
| Less likely to purchase clean energy if it is not certified by a consumer organization | 60% | 49% | 60% | 53% | 46% | 55% |
| Think there are actions individuals can take to help reduce global warming | 84% | 64% | 69% | 74% | 57% | 72% |
| Leaders could do a great deal about global warming | 48% | 34% | 33% | 43% | 31% | 40% |
| Total respondents¹⁸ | 190 - 194 | 100 - 107 | 88 - 91 | 102 - 105¹ | 87 | 567 - 584 |

¹ Number of respondents for recently seen/heard about clean energy is 81

*Significantly greater than the 2005 sample at the 90% confidence level.

**Significantly less than the 2005 sample at the 90% confidence level.

Implications

For message and promotion targeting, there is no substitute for analyzing data on actual purchasers. The attitudinal analysis, without actual purchasing data, is an attempt to understand potential program targets without actual market data on clean energy purchasers. To develop a stronger basis for program targeting would require a geodemographic analysis of the attitudinal segments and actual purchasers.

As in 2005, CCEF should place relatively less emphasis on selling its citizens on clean energy's benefits than on empowering them to do something about it, and convincing them that clean energy can meet their electricity needs and deliver environmental benefits. In other words, CCEF should address the skepticism about clean energy expressed by the Undecideds, Eeyores and Cynics and the lack of empowerment expressed by the Doubters, Eeyores and Cynics (see Table 10-4). All five clusters have positive scores on Belief in Clean Energy Benefits. Some score higher than others—notably Ideals—but even Doubters, the cluster with the lowest score on this factor, show that they essentially believe in the benefits of clean energy. However, we should

also note that belief in clean energy increased significantly from 2005 to 2006, suggesting that messaging emphasizing the benefits of clean energy may be resonating with respondents. By reducing skepticism and lack of empowerment and increasing belief in the benefits of clean energy, more respondents will shift into the Ideal segment, the prime target audience.

The Ideals continue to be the prime target audience for clean energy in Connecticut because they are the most positive about the benefits of clean energy and feel most empowered to achieve them. In addition, at 33% of the customer base, they are the largest segment. They are more educated than other respondents, somewhat younger, and have the highest incomes. They are more likely to be aware of clean energy, have recently heard something about it, and to have talked to others about it. They are also more likely to be aware of the availability of clean electricity supply and more likely to pay extra for it. After filtering for awareness of clean energy and awareness of grid-delivered clean energy, they express the greatest willingness to purchase clean energy. Further, Ideals are more likely to believe that there are actions individuals can take to help reduce global warming, and more likely to purchase clean energy if it supports the development of more clean energy in Connecticut

Undecideds, an additional 18% of the population, are the second target group. They are skeptical about the efficacy of clean energy, but feel empowered to take action if they choose. They have high levels of education and a high proportion of high income respondents (28% have a household income of \$100,000 or more). After taking awareness of clean energy and grid-delivered clean energy into account, 15% would pay 10% more for clean energy.

Doubters, making up an additional 16% of the population, are also a potential target group, but lower priority than the Undecideds. While they are less enthusiastic than other segments in their belief in the benefits in clean energy, they are still positive on this factor. They feel relatively empowered to take action, but their willingness to pay 10% more for clean energy after taking awareness of clean energy and awareness of grid-delivered clean energy into account declined significantly from 2005 to 2006. They are also relatively affluent and well-educated.

The attitudinal segments and demographic analysis suggest a general targeting strategy. The following basic targeting strategy should safely cover the Ideals, probably a large portion of the Undecideds, and some of the Doubters. The suggested targeting parameters include:

- Household income of \$75,000 and higher (even \$100,000 or higher)
- Home ownership
- Education levels of at least four years of college/college degree
- Age of 55 and under

As in 2005, the target segments offer no insight that gender is a reliable targeting strategy, although the lowest priority target segments (Eeyores and Cynics) tend to be male. Unlike 2005, the preferred target segments (Ideals and Undecideds) may listen to NPR more frequently than other segments; however, the frequency of listening is still low. For all segments, few watch PBS any more frequently than the other segments.

11 Demographics

Connecticut respondents have a higher homeownership rate than respondents from the comparison groups: 82% of Connecticut respondents own their own home, compared to 74% in Other CESA states, 79% in Non-CESA states, and 77% nationally (Table 11-1). According to Census 2000 data, home ownership rates in Connecticut are 67%; given that the survey excluded those households in which do not pay their own electric bill, it is to be expected that more renters would be screened out in the process. In addition, note that the survey is based on households whereas the Census data measures population. Lastly, note that the Census data is from the year 2000 (the most recent year in which complete data is available). Nonetheless, comparing the survey results to the Census data is valuable in order to ensure that the survey sample appears to reasonably reflect the Connecticut population.

Table 11-1: Home Ownership
(All Respondents)

| Home Ownership | Connecticut | Other CESA States | Non-CESA States | U.S. |
|--------------------------|-------------|-------------------|-----------------|------------|
| Own | 82% | 74% | 79% | 77% |
| Rent | 15 | 23 | 19 | 21 |
| Don't Know/Refused | 4 | 3 | 2 | 2 |
| Total Respondents | 600 | 410 | 528 | 946 |

Connecticut survey respondents also are more educated than respondents from the comparison groups, with nearly one-half holding a four-year college degree or higher (49%) compared to 34%-35% for the other respondents (Table 11-2). The Connecticut survey respondents are also more likely to have attained a higher education level than Connecticut residents as a whole, again likely due to the issues mentioned earlier.

Table 11-2: Education Level of Respondents
(All Respondents)

| Level of Education | Connecticut | Connecticut (per Census 2000) | Other CESA States | Non-CESA States | U.S. |
|-----------------------------------|-------------|-------------------------------|-------------------|-----------------|-------------|
| High School Graduate or below | 26% | 44% | 35% | 37% | 36% |
| Some college or associates degree | 23 | 25 | 28 | 25 | 27 |
| Four-year college graduate | 20 | 18 | 23 | 23 | 23 |
| Graduate experience | 29 | 13 | 11 | 12 | 12 |
| Refused | 2 | 0 | 2 | 3 | 3 |
| Total Respondents | 600 | n/a | 442 | 549 | 1000 |

Table 11-3 displays the detailed education level of the Connecticut survey respondents.

**Table 11-3: Detailed Education Level of Respondents from Connecticut
(All Respondents)**

| Level of Education | Connecticut |
|--------------------------------------|-------------|
| Less than High School | 2% |
| High School Graduate | 21 |
| Technical or trade school graduate | 4 |
| Some college | 15 |
| Two-year college graduate | 8 |
| Four-year college graduate | 20 |
| Some graduate or professional school | 8 |
| Graduate or professional degree | 21 |
| Refused | 2 |
| Total Respondents | 600 |

Table 11-4 displays the ages of the survey respondents. Connecticut survey respondents tend to be slightly older than respondents from the comparison groups. As expected, the Connecticut survey respondents are also older than Connecticut residents according to Census 2000 data; younger respondents are more likely to be renters or otherwise not in charge of their electric bills.

**Table 11-4: Age Category of Respondents
(All Respondents)**

| Age Category | Connecticut | Connecticut (per Census 2000) | Other CESA States | Non- CESA States | U.S. |
|--------------------------|-------------|-------------------------------------|-------------------------|------------------------|-------------|
| 18 to 34 | 12% | 32% | 30% | 29% | 29% |
| 35 to 44 | 21 | 21 | 20 | 19 | 20 |
| 45 to 54 | 23 | 18 | 20 | 19 | 19 |
| 55 to 64 | 20 | 11 | 12 | 15 | 14 |
| 65 or over | 21 | 18 | 17 | 16 | 16 |
| Refused | 3 | 0 | 2 | 3 | 2 |
| Total Respondents | 600 | n/a | 442 | 549 | 1000 |

Table 11-5 displays the total 2004 pre-tax household income of respondents, excluding those who refused to provide an answer. As might be expected, Connecticut survey respondents tend to earn higher incomes than respondents from the comparison groups, with 44% earning at least \$75,000 compared to 25%-28% in Other CESA States, Non-CESA States, and the U.S. Note that the Connecticut survey respondents earn higher incomes than do Connecticut residents according Census 2000, though the differences seem reasonable given the issues discussed earlier.

Table 11-5: Household Income Level of Respondents
(Excluding Those Respondents who Refused)

| Income Category | Connecticut | Connecticut (per Census 2000) | Other CESA States | Non- CESA States | U.S. |
|--------------------------|-------------|-------------------------------------|-------------------------|------------------------|------------|
| \$24,999 or below | 11% | 27% | 17% | 16% | 17% |
| \$25,000 to \$49,999 | 23 | 23 | 30 | 33 | 32 |
| \$50,000 - \$74,999 | 22 | 19 | 25 | 25 | 25 |
| \$75,000 - \$99,999 | 17 | 13 | 9 | 10 | 10 |
| \$100,000 or more | 27 | 18 | 19 | 15 | 17 |
| Total Respondents | 448 | n/a | 328 | 426 | 761 |

Table 11-6 displays the detailed income levels for Connecticut survey respondents, including those who refused to answer the question.

Table 11-6: Detailed Household Income Level of Respondents from Connecticut
(All Respondents)

| Income Category | Connecticut |
|--------------------------|-------------|
| Less than \$15,000 | 4% |
| \$15,000 - \$24,999 | 4 |
| \$25,000 to \$34,999 | 6 |
| \$35,000 - \$49,999 | 11 |
| \$50,000 - \$74,999 | 16 |
| \$75,000 - \$99,999 | 13 |
| \$100,000 - \$149,999 | 11 |
| \$150,000 or more | 10 |
| Refused | 25 |
| Total Respondents | 600 |

Table 11-7 displays the gender of survey respondents, which are about evenly split for all segments. According the Census 2000 data, 48% of Connecticut residents were male and 52% were female, similar to the 50-50 split achieved in the Connecticut survey.

Table 11-7: Gender of Respondents
(All Respondents)

| | Female | Male | Total Respondents |
|--------------------------|--------|------|-------------------|
| Connecticut | 50% | 51 | 600 |
| Other CESA States | 51% | 49 | 410 |
| Non-CESA States | 53% | 47 | 528 |
| U.S. | 52% | 48 | 946 |

Over one-half of Connecticut respondents spend at least a few hours listening to National Public Radio each week (Table 11-8).

Table 11-8: Weekly Listening to National Public Radio
(All Respondents)

| Number of Hours | Percent |
|--------------------------|------------|
| Zero | 45% |
| One or two | 22 |
| Three to five | 13 |
| Six to Nine | 7 |
| Ten or more | 11 |
| Don't Know | 2 |
| Total Respondents | 600 |

Three-quarters of respondents watch Public Television at least occasionally (Table 11-9).

Table 11-9: Frequency of Watching Public Television
(All Respondents)

| Frequency | Percent |
|--------------------------|------------|
| Almost never | 25% |
| Once a month or less | 18 |
| About once a week | 17 |
| A few times a week | 24 |
| Almost every day | 13 |
| Don't Know | 3 |
| Total Respondents | 600 |

The average monthly electric bill for respondents increased from \$105 to 121. Nearly 60% of respondents have bills between \$50 and \$150 per month, while a quarter have bills of \$150 or more (Table 11-10).

Table 11-10: Monthly Electric Bills of Respondents

| Monthly Electric Bill | Percent, 2005 | Percent, 2006 |
|------------------------------|--------------------------|--------------------------|
| Less than \$50 | 12% | 8% |
| \$50 to \$99 | 32 | 29 |
| \$100 to \$149 | 24 | 27 |
| \$150 or more | 18 | 25 |
| Don't Know | 15 | 11 |
| Mean | \$105 | \$121 |
| Total Respondents | 600 | 600 |

Appendix A: Connecticut Survey Form

Hello, my name is _____. I'm calling on behalf of a non-profit organization. This is NOT a sales call or a call for donations. We are asking people around the state some questions about energy and the environment, and the information will be used to help develop energy programs and policies for Connecticut.

Your telephone number was generated at random by a computer and your responses will be kept strictly confidential. [IF ASKED: RESPONSES WILL BE COMBINED WITH OTHERS FOR STATISTICAL ANALYSIS—NO RESPONSES WILL BE EXAMINED INDIVIDUALLY.] This should take about fifteen minutes.

[QUOTA: 50% MALE, 50% FEMALE]

[IF RESPONDENT STOPS YOU OFFER TO SCHEDULE A CALLBACK]

0A. I want to verify that you are over 18 years old.

1. Yes [CONTINUE]
2. No [ASK TO SPEAK TO SOMEONE OVER 18 AND BEGIN AGAIN]

0B. Does your household pay your electric bill to the electric company or is it part of your rent?

1. Pay bill directly to electric company [CONTINUE]
2. Part of rent [TERMINATE]
3. Don't know/Refused [TERMINATE]

1. What do you consider to be the SINGLE most important environmental issue in the world today? [DO NOT READ RESPONSES]

1. (Global warming)
2. (Greenhouse effect)
3. (Climate change)
4. (Mercury in water)
5. (Depletion of ozone layer)
6. (Destruction of wildlife habitats; destruction of the rainforest)
7. (Water pollution general)
8. (Air pollution general)
9. (Urban/suburban sprawl)
10. (Nuclear proliferation; spread of nuclear weapons)
11. (Storage/transportation/disposal of nuclear waste; leakage of nuclear materials; radiation)
12. (Biological weapons)
13. (WMD; spread of weapons of mass destruction)
14. (Other [SPECIFY: _____])
99. (Don't know)

2. Have you ever heard of global warming, sometimes called climate change or the greenhouse effect?
 1. Yes
 2. No
 3. (Don't know)

3. [IF "YES" TO Q.#2] In your judgment, how important is the issue of global warming compared to other major issues facing the world today? [READ RESPONSES; RANDOMIZE—HALF THE TIME READ 1-2-3-4-5, HALF THE TIME READ 5-4-3-2-1]
 1. Much less important than other issues
 2. Somewhat less important
 3. About as important
 4. Somewhat more important
 5. Much more important than other issues
 6. (Don't know)

- 3A. [IF "YES" TO Q.#2] Do you think there are any actions individuals can take to help reduce global warming?
 1. Yes
 2. No
 3. (Don't know)

- 3B. [IF "YES" TO Q.#3A] What actions do you think individuals can take to help reduce global warming? [MULTIPLE RESPONSE; PROBE EXTENSIVELY; DO NOT READ RESPONSES]
 1. (Use renewable energy, clean energy)
 2. (Reduce energy use)
 3. (Drive less, cut down on driving)
 4. (Buy/drive a hybrid car)
 5. (Recycling)
 6. (Buy locally grown foods/products)
 7. (Other [SPECIFY: _____])
 8. (Don't know)

- 3C. [IF "YES" TO Q.#2] As far as you know, have the impacts of global warming affected Connecticut?
 1. Yes
 2. No
 3. (Don't know)

- 3D. [IF "YES" TO Q.#2] To what extent do you think Connecticut's elected leaders could enact laws and establish programs that would help reduce global warming? Use a scale from 0 to 10, where 0 is "they could do nothing at all" and 10 is "they could do a great deal."
[11=DON'T KNOW]

- 3E. [IF “YES” TO Q.#2] To what extent do you think Connecticut’s elected leaders HAVE enacted laws and established programs that could help reduce global warming? Use a scale from 0 to 10, where 0 is “they have done nothing at all” and 10 is “they have done a great deal.” [11=DON’T KNOW]
4. Have you ever heard of clean energy or renewable energy?
1. Yes
 2. No
 3. (Don’t know)
5. [IF “YES” TO Q.#4] What does “clean energy” or “renewable energy” mean to you? [DO NOT READ RESPONSES; MULTIPLE RESPONSE; PROBE]
6. [IF “YES” TO Q.#4] Can you give me some examples of clean energy or renewable energy? [DO NOT READ RESPONSES; MULTIPLE RESPONSE; PROBE]
1. (Solar energy; energy from the sun; photovoltaics, PV; active solar; passive solar)
 2. (Solar water heating)
 3. (Water power; hydroelectric; use of dams)
 4. (Wind power; windmills; wind farms)
 5. (Biomass; burning organic matter)
 6. (Wood; wood stoves)
 7. (Geothermal)
 8. (Tidal or wave power; using the tides or waves)
 9. (Ethanol/Corn)
 10. (Landfill gas)
 11. (Fuel cells)
 12. (Natural gas)
 13. (Nuclear/nuclear energy/nuclear power/nuclear plants)
 14. (Other [SPECIFY: _____])
 99. (Don’t know)
7. [IF “YES” TO Q.#4] Have you seen or heard anything about clean energy or renewable energy in the past few months?
1. Yes
 2. No
 3. (Don’t know)
8. [IF “YES” TO Q.#7] What have you heard about clean energy or renewable energy in the past few months? [MULTIPLE RESPONSE; PROBE]

9. [IF “YES” TO Q.#7] Where have you seen or heard about clean energy or renewable energy in the past few months? [DO NOT READ RESPONSES; MULTIPLE RESPONSE; PROBE]
1. (News stories—newspapers)
 2. (News stories—radio)
 3. (News stories—television)
 4. (News stories—magazines)
 5. (Articles—scientific journals)
 6. (Advertising—newspapers)
 7. (Advertising—radio)
 8. (Advertising—television)
 9. (Advertising—magazines)
 10. (Advertising—billboards)
 11. (Newsletter from organization)
 12. (Internet)
 13. (Library)
 14. (Architect)
 15. (Builder/contractor)
 16. (Conversations with friends, family, or coworkers)
 17. (Materials/information that children brought home from school)
 18. (Science center or museum)
 19. (Information from my town or city government)
 20. (Information from the Connecticut state government)
 21. (Information from the federal government)
 22. (Bill inserts from my utility/electric company)
 23. (Other [SPECIFY: _____])
 99. (Don’t know)

As you may know, "clean energy" or “renewable energy” as a way of generating electricity refers to the use of energy from sources such as wind, the sun, water power, fuel cells, landfill gas, and biomass—instead of sources like natural gas, oil, coal, and nuclear. Now I’m going to read you some statements, and I’d like you to tell me if you agree or disagree with each one. [FOR EACH QUESTION, FIRST ASK IF THEY DISAGREE OR AGREE, AND THEN ASK “STRONGLY, SOMEWHAT, OR SLIGHTLY.” NOTE: IF RESPONDENT SAYS NUCLEAR ENERGY IS CLEAN ENERGY, SAY: “NUCLEAR PLANTS DON’T CAUSE POLLUTION OR GLOBAL WARMING WHEN THEY GENERATE POWER, BUT THE DIFFICULTY OF STORING RADIOACTIVE WASTE KEEPS NUCLEAR POWER OUT OF THE CLEAN ENERGY CATEGORY.”]

- SCALE: 1. DISagree strongly
 2. DISagree somewhat
 3. DISagree slightly
 4. Agree slightly
 5. Agree somewhat
 6. Agree strongly
 7. (Don’t know)

[RANDOMIZE Q.#10-20]

10. Whether or not I use clean energy to supply my electricity makes little difference to the environment.
11. I don't believe using clean energy sources to generate electricity does very much to reduce global warming.
12. Using clean energy to provide my electricity will help reduce our need for foreign oil.
13. There is enough clean energy to provide electricity for thousands of homes and businesses in Connecticut.
14. It would be easy to use clean energy to supply the electricity in my home.
15. If I weren't satisfied with using clean energy in my home, I could easily go back to what I was using before.
16. I'd like to find out how I personally can do more to increase the actual use of clean energy sources to supply the electricity in my home.
17. There's nothing much I can do to increase the use of clean energy sources in this area of the country.
18. I have no way of knowing if the electricity I purchase comes from clean sources like wind, solar, water power, and biomass, or from other sources like natural gas, oil, coal and nuclear.
19. The use of clean energy can provide a reliable source of electricity for my home.
20. Clean energy could NOT meet all of my household's electricity needs.

Now I'd like to ask some other types of questions:

21. Have you ever heard of residential solar photovoltaic [PHOTO vole tay ik]systems, or solar panels, that can be put on rooftops and produce electricity for people's homes?
 1. Yes
 2. No
 3. (Don't know)
22. Have you ever heard of fuel cells—boxes about the size of refrigerators that can be placed at people's homes and produce electricity without any burning or combustion—like a large, continuously operating battery?
 1. Yes
 2. No
 3. (Don't know)

23. Some clean energy can be generated right at people's homes, from things like solar photovoltaic systems [PHOTO vole tay ik] or fuel cells. But other clean energy sources can be used to generate large amounts of electricity at a central location—electricity that is then sent over regular power lines to individual homes like yours. Were you aware that it is possible to deliver clean energy to individual homes over regular power lines?
1. Yes, aware
 2. No, not aware
 3. (Don't know)
24. Approximately how much is your average monthly electric bill? [ASK FOR A GUESS IF THEY DON'T KNOW; RECORD EXACT AMOUNT; DON'T KNOW=999]
25. In fact, it is possible to purchase clean energy—solar, wind, water power, fuel cells, landfill gas, and biomass—delivered over regular power lines. Most of the electricity you buy now comes from coal, oil, natural gas, and nuclear. How likely would you be to purchase ALL of your electricity from clean energy sources, if it increased your monthly electric bill by \$[INSERT RESULT OF Q.#24 TIMES 10%, ROUNDED TO NEAREST DOLLAR; IF Q.#24=DON'T KNOW, SUBSTITUTE \$10]? Use a scale from 0 to 10, where "0" is "not at all likely" and "10" is "extremely likely" [11=DON'T KNOW; IF 8-10, SKIP TO Q.#29]
26. How likely would you be to purchase HALF of your electricity from clean energy sources, if it increased your monthly electric bill by \$[INSERT RESULT OF Q.#24 TIMES 5%, ROUNDED TO NEAREST DOLLAR; IF Q.#24=DON'T KNOW, SUBSTITUTE \$5]? Use the same 0 to 10 scale. [IF NECESSARY, READ: "0" is "not at all likely" and "10" is "extremely likely"; 11=DON'T KNOW; IF 8-10, SKIP TO Q.#29]
27. How likely would you be to purchase HALF of your electricity from clean energy sources, if it increased your monthly electric bill by \$1? Use the same 0 to 10 scale. [IF NECESSARY, READ: "0" is "not at all likely" and "10" is "extremely likely" [11=DON'T KNOW; IF 8-10, SKIP TO Q.#29]
28. [IF DK OR 0-7 TO Q.#27] What would keep you from purchasing half of your electricity from clean energy sources, if it cost one dollar more per month? [MULTIPLE RESPONSE; PROBE]
29. [IF 8-10 TO Q.#25, 8-10 TO Q.#26, OR 8-10 TO Q.#27] What would be your reasons for purchasing electricity from clean sources? [MULTIPLE RESPONSE; PROBE]
30. Which of the following do you think is the BEST reason to purchase electricity from clean energy sources? [READ AND RANDOMIZE 1-4]
1. It helps prevent global warming
 2. It reduces our need for foreign oil
 3. It means cleaner air and improved health for our children
 4. It encourages new technologies and creates jobs for our community
 5. (Don't know)

31. Now I'm going to read you some statements about clean energy, and I'd like you to tell me how much more or less likely you would be to purchase clean energy if each statement were true. Use a scale of 0 to 10, where "0" is "much less likely to purchase" and "10" is "much more likely to purchase." [11 = DON'T KNOW]

[READ AND RANDOMIZE A – F]

- A. The clean energy is generated outside your state
- B. The clean energy you purchase supports the development of more clean energy in your state
- C. The clean energy is not certified by an independent consumer organization as environmentally friendly
- D. The clean energy is licensed and regulated by your state government.
- E. The clean energy is endorsed by a national non-profit environmental group
- F. You could not purchase the clean energy from your current electric company

32. Which of the following groups or individuals do you believe would be the most credible source of information to promote clean energy? [READ AND RANDOMIZE 1 – 6, then 7]

- 1. The president of the United States
- 2. A group of Fortune 100 CEO's
- 3. A coalition of religious leaders
- 4. A group of climate scientists
- 5. A group of environmental non-profit organizations
- 6. A group of your friends
- 7. Some other source (please specify _____)
- 8. (Don't know)

37. If you wanted to purchase clean energy delivered over regular power lines to supply the electricity you use in your home, what companies or organizations would you turn to for information? [DO NOT READ RESPONSES; MULTIPLE RESPONSE; PROBE]
1. (Connecticut Clean Energy Fund)
 2. (Smart Power)
 3. (Utility; Connecticut Light & Power; United Illuminating; any specific utility)
 4. (Contractor)
 5. (Would look in Yellow Pages)
 6. (Would look on Internet)
 7. (City/town government)
 8. (State government general)
 9. (Federal government general)
 10. (Green Mountain Energy)
 11. (Connecticut Energy Cooperative)
 12. (Community Energy)
 13. (Sterling Planet)
 14. (Connecticut Department of Public Utility Control)
 15. (Connecticut Clean Energy Trail)
 16. (20% by 2010 Clean Energy Campaign)
 17. (Connecticut Clean Energy Communities)
 18. (The Connecticut Center for Science and Exploration)
 19. (EPA, U.S. Environmental Protection Agency)
 20. (Clear Skies Initiative, President Bush's Clear Skies Initiative)
 21. (Other [SPECIFY: _____])
 99. (Don't know)
40. Have you ever heard of "RECs" or "Renewable Energy Certificates," also called "Tradable Renewable Certificates," or "green tags"?
1. Yes
 2. No
 3. (Don't know)
41. [IF "YES" TO Q.#40] What are RECs or renewable energy certificates, Tradable Renewable Certificates, or green tags? [DO NOT READ RESPONSES; MULTIPLE RESPONSE; PROBE]
1. (Certifies TYPE of renewable/clean energy—e.g., wind, solar, biomass, small hydro)
 2. (Certifies TOTAL AMOUNT/kWh/kilowatthours of electricity generated by renewables vs. other sources)
 3. (Certifies percentage of renewables that are NEW rather than previously existing)
 4. (Certifies PRICE)
 5. (Certifies level of EMISSIONS)
 6. (Certifies LOCATION of renewable generation sources)
 7. (Protects against DOUBLE COUNTING of renewable generation sources)
 8. (Certifies OWNERSHIP)
 9. (Other [SPECIFY: _____])
 99. (Don't know)

42. [IF “YES” TO Q.#21] As far as you know, are there any rebates or incentives available for people who want to purchase solar photovoltaic systems to put on their rooftops to supply electricity for their homes?
1. Yes
 2. No
 3. (Don’t know)
43. [IF “YES” TO Q.#42] What organizations provide rebates or incentives for people who want to purchase solar photovoltaic systems? [DO NOT READ RESPONSES; MULTIPLE RESPONSE; PROBE]
1. (Connecticut Clean Energy Fund)
 2. (Smart Power)
 3. (Utility; Connecticut Light & Power; United Illuminating; any specific utility)
 4. (State government general)
 5. (Connecticut Department of Public Utility Control; DPUC)
 6. (Federal government)
 7. (Banks)
 8. (Manufacturers)
 9. (Contractors)
 10. (Other [SPECIFY: _____])
 99. (Don’t know)
44. Have you recently heard about any programs or organizations that encourage clean energy as a way of generating electricity?
1. Yes
 2. No
 3. (Don’t know)
45. [IF “YES” TO Q.#44] Do you happen to recall the names of these programs or organizations?
1. Yes
 2. No
 3. (Don’t know)

46. [IF “YES” TO Q.#45] What are the names of these programs or organizations? [DO NOT READ RESPONSES; MULTIPLE RESPONSE; PROBE]
1. (Connecticut Clean Energy Fund)
 2. (Smart Power)
 3. (Utility; Connecticut Light & Power; United Illuminating; any specific utility)
 4. (City/town government)
 5. (State government general)
 6. (Federal government general)
 7. (Green Mountain Power)
 8. (Connecticut Energy Cooperative)
 9. (Community Energy)
 10. (Sterling Planet)
 11. (Connecticut Department of Public Utility Control)
 12. (Connecticut Clean Energy Trail)
 13. (20% by 2010 Clean Energy Campaign)
 14. (Connecticut Clean Energy Communities)
 15. (The Connecticut Center for Science and Exploration)
 16. (EPA, U.S. Environmental Protection Agency)
 17. (Clear Skies Initiative, President Bush’s Clear Skies Initiative)
 18. (New England Governors and Eastern Canadian Premiers climate change action plan)
 19. (The State of Connecticut’s Energy Plan)
 20. (The Regional Greenhouse Gas Initiative (sometimes referred to as “Reggie”))
 - 21.. (Other [SPECIFY: _____])
 99. (Don’t know)

Now I’m going to read the names of some programs and organizations, and I’d like you to tell me if you have heard of each one. Have you heard of: [READ AND RANDOMIZE Q.#47-56a; 1=YES, 2=NO, 3=DON’T KNOW; IF RESPONDENT MENTIONS ALL OF THE FOLLOWING IN Q#46, SKIP TO Q#56: Connecticut Clean Energy Fund, Smart Power, Connecticut Clean Energy Trail, The EPA, or U.S. Environmental Protection Agency, President Bush’s Clear Skies Initiative, 20% by 2010 Clean Energy Campaign, Connecticut Clean Energy Communities, The Connecticut Center for Science and Exploration, Community Energy, Sterling Planet The Regional Greenhouse Gas Initiative (sometimes referred to as “Reggie”)]

47. [IF NOT MENTIONED IN Q.#46] The Connecticut Clean Energy Fund?
48. [IF NOT MENTIONED IN Q.# 46] Smart Power?
49. [IF NOT MENTIONED IN Q.# 46] Connecticut Clean Energy Trail?
50. [IF NOT MENTIONED IN Q.# 46] The EPA, or U.S. Environmental Protection Agency
51. [IF NOT MENTIONED IN Q.# 46] President Bush’s Clear Skies Initiative
52. [IF NOT MENTIONED IN Q.# 46] 20% by 2010 Clean Energy Campaign?
53. [IF NOT MENTIONED IN Q.# 46] Connecticut Clean Energy Communities?
54. [IF NOT MENTIONED IN Q.# 46] The Connecticut Center for Science and Exploration?
55. [IF NOT MENTIONED IN Q.# 46] Community Energy
56. [IF NOT MENTIONED IN Q.# 46] Sterling Planet
- 56a. [IF NOT MENTIONED IN Q.# 46] The Regional Greenhouse Gas Initiative (sometimes referred to as “Reggie”)?

57. [IF “YES” TO Q.#47 OR IF MENTIONED IN Q.#46] As far as you know, what is the Connecticut Clean Energy Fund and what does it do? {MULTIPLE RESPONSE; PROBE]
58. [IF “YES” TO Q.#48 OR IF MENTIONED IN Q.#46] As far as you know, what is Smart Power and what does it do? {MULTIPLE RESPONSE; PROBE]
59. [IF “YES” TO Q.#55 OR IF MENTIONED IN Q.#46] As far as you know, what is Community Energy and what does it do? [MULTIPLE RESPONSE; PROBE]
60. [IF “YES” TO Q.#56 OR IF MENTIONED IN Q.#46] As far as you know, what is Sterling Planet and what does it do? [MULTIPLE RESPONSE; PROBE]
61. [IF “YES” TO Q.#53 OR IF MENTIONED IN Q.#46] What is a Connecticut Clean Energy Community? [MULTIPLE RESPONSE; PROBE]
62. [IF “YES” TO Q.#53 OR IF MENTIONED IN Q.#46] As far as you know, is your town or city a Connecticut Clean Energy Community?
1. Yes
 2. No
 3. (Don’t know)

Next, I’m going to read three slogans that may have been used in advertising or promotions in your area in the last few months. As I read each slogan, please tell me how certain you are whether you have seen or heard it.

[RANDOMIZE Q.#63-65]

63. The slogan, “It’s here, it’s real, it’s working.” Are you ...[READ RESPONSES]
1. Completely certain you did NOT see or hear it
 2. Somewhat certain you did NOT see or hear it
 3. Somewhat certain you DID see or hear it
 4. Completely certain you DID see or hear it
 5. Not sure whether you saw or heard it
64. The slogan, “Green up.” Are you ...[READ RESPONSES]
1. Completely certain you did NOT see or hear it
 2. Somewhat certain you did NOT see or hear it
 3. Somewhat certain you DID see or hear it
 4. Completely certain you DID see or hear it
 5. Not sure whether you saw or heard it

65. The slogan, “Clean energy: for Connecticut, for the earth.” Are you ...[READ RESPONSES]
1. Completely certain you did NOT see or hear it
 2. Somewhat certain you did NOT see or hear it
 3. Somewhat certain you DID see or hear it
 4. Completely certain you DID see or hear it
 5. Not sure whether you saw or heard it
66. In the past year or so, have you talked with friends, relatives, neighbors, or co-workers about clean energy as a way of generating electricity?
1. Yes
 2. No
 3. (Don't know)
67. [IF “YES” TO Q.#66] Did you bring up the topic of clean energy as way of generating electricity, or did your friends, relatives, neighbors, or co-workers bring it up?
1. I brought it up
 2. They brought it up
 3. (Both)
 4. (Don't know)
68. In the past year or so, have you written letters to elected officials about clean energy?
1. Yes
 2. No
 3. (Don't know)
69. In the past year or so, have you written letters to newspapers or magazines about clean energy?
1. Yes
 2. No
 3. (Don't know)
70. In the past year or so, have you made a donation to a charitable organization because of its commitment to clean energy as a way of generating electricity?
1. Yes
 2. No
 3. (Don't know)
71. In the past year or so, have you joined or participated in an organization because of its commitment to clean energy as a way of generating electricity?
1. Yes
 2. No
 3. (Don't know)

72. In the past year or so, have you called an 800 number to find out about purchasing clean energy to supply your electricity?
1. Yes
 2. No
 3. (Don't know)
73. In the past year or so, have you visited a website dealing with clean energy as a way of generating electricity?
1. Yes
 2. No
 3. (Don't know)
74. Now I have a few last questions for statistical purposes only. Do you own or rent your home?
1. Own
 2. Rent
 3. (Refused)
75. How many hours per week would you say you listen to National Public Radio, or NPR? [READ RESPONSES]
1. Zero hours (never listen to it)
 2. One or two hours
 3. Three to five hours
 4. Six to nine hours
 5. Ten hours or more
 6. (Don't know)
76. How often would you say you watch public television, or PBS? [READ RESPONSES]
1. Almost never
 2. Once a month or less
 3. About once a week
 4. A few times a week
 5. Almost every day
 6. (Don't know)
77. What is the highest level of education you have completed? [READ CATEGORIES]
1. Less than high school
 2. High school graduate
 3. Technical or trade school graduate
 4. Some college
 5. Two-year college graduate
 6. Four-year college graduate
 7. Some graduate or professional school
 8. Graduate or professional degree
 9. (Refused)

78. Which of the following categories best describes your age?

1. 18 to 24
2. 25 to 34
3. 35 to 44
4. 45 to 54
5. 55 to 64
6. 65 or over
7. (Refused)

79. What category best describes your total household income in 2004, before taxes?

1. Less than \$15,000
2. \$15,000 - \$24,999
3. \$25,000 - \$34,999
4. \$35,000 - \$49,999
5. \$50,000 - \$74,999
6. \$75,000 - \$99,999
7. \$100,000 - \$149,999
8. \$150,000 or more
9. (Refused)

80. **[DO NOT READ]** Sex

1. Female
2. Male

Thank you very much!

Appendix B: National Survey Questions

Please tell me . . .

S3B Do you own or rent the dwelling in which you live?

- 01 OWN
- 02 RENT
- 99 REFUSED/NR

On another subject . . .

[ASK IF RENT, S3B(02)]

E1 Does your household pay your electric bill to the electric company or is it part of your rent?

- 01 YOU PAY THE BILL DIRECTLY TO THE ELECTRIC COMPANY
- 02 IT IS PART OF YOUR RENT
- 99 DON'T KNOW/REFUSED

E2 Have you ever heard of global warming, sometimes called climate change or the greenhouse effect?

- 01 YES -->CONTINUE
- 02 NO
- 99 DON'T KNOW -->SKIP TO E4

VERSION A

E3A In your judgment, how important is the issue of global warming compared to other major issues facing the world today? Would you say . . . [READ LIST. RECORD ONE ANSWER]

- 01 Much less important than other issues
- 02 Somewhat less important
- 03 About as important
- 04 Somewhat more important
- 05 Much more important than other issues
- 99 DON'T KNOW

VERSION B

E3B In your judgment, how important is the issue of global warming compared to other major issues facing the world today? Would you say . . . [READ LIST. RECORD ONE ANSWER]

- 05 Much more important than other issues
- 04 Somewhat more important
- 03 About as important
- 02 Somewhat less important
- 01 Much less important than other issues
- 99 DON'T KNOW

E3C Do you think there are any actions individuals can take to help reduce global warming?

- 01 YES
- 02 NO
- 99 DON'T KNOW

[ASK IF YES IN E3C (01)]

E3D What actions do you think individuals can take to help reduce global warming? What else? Anything else? [DO NOT READ LIST. RECORD AS MANY AS APPLY]

- 01 BUY LOCALLY GROWN FOOD/PRODUCTS
- 02 BUY/DRIVE A HYBRID CAR
- 03 DRIVE LESS/CUT DOWN ON DRIVING
- 04 RECYCLING
- 05 REDUCE ENERGY USE
- 06 USE RENEWABLE ENERGY/CLEAN ENERGY
- 195 OTHER [SPECIFY]
- 199 DON'T KNOW/NONE

E3E As far as you know, have the impacts of global warming affected your state?

- 01 YES
- 02 NO
- 99 DON'T KNOW

E4 Have you ever heard of clean energy or renewable energy?

- 01 YES _____ -->CONTINUE
- 02 NO
- 99 DON'T KNOW _____ -->SKIP TO E6

E5 Can you give me some examples of clean energy or renewable energy? Any others? [DO NOT READ LIST. RECORD CHOICES WHICH MOST CLOSELY DESCRIBE RESPONDENTS ANSWERS. PROBE FULLY FOR SPECIFICS]

- 01 SOLAR ENERGY/ENERGY FROM THE SUN/PHOTOVOLTAICS/PV/ACTIVE SOLAR/PASSIVE SOLAR
- 02 SOLAR WATER HEATING
- 03 WATER POWER/HYDROELECTRIC/USE OF DAMS
- 04 WIND POWER/WINDMILLS/WIND FARMS
- 05 BIOMASS/BURNING ORGANIC MATTER
- 06 WOOD/WOOD STOVES
- 07 GEOTHERMAL
- 08 TIDAL OR WAVE POWER/USING THE TIDES OR WAVES
- 09 ETHANOL/CORN
- 10 LANDFILL GAS
- 11 FUEL CELLS
- 12 NATURAL GAS
- 13 NUCLEAR/NUCLEAR ENERGY/NUCLEAR POWER/NUCLEAR PLANTS
- 195 OTHER [SPECIFY]
- 199 DON'T KNOW

E6 As you may know, clean energy or renewable energy as a way of generating electricity refers to the use of energy from sources such as wind, the sun, water power, fuel cells, landfill gas and biomass, instead of sources like natural gas, oil, coal, and nuclear. Have you ever heard of residential solar photovoltaic [PHOTO vole tay ik] systems, or solar panels, that can be put on rooftops and produce electricity for people's homes?

- 01 YES
- 02 NO
- 99 DON'T KNOW

E7 Have you ever heard of fuel cells, boxes about the size of refrigerators that can be placed at people's homes and produce electricity without any burning or combustion, like a large, continuously operating battery?

- 01 YES
- 02 NO
- 99 DON'T KNOW

E8 Some clean energy can be generated right at people's homes, from things like solar photovoltaic systems or fuel cells. But other clean energy sources can be used to generate large amounts of electricity at a central location, electricity that is then sent over regular power lines to individual homes like yours. Were you aware that it is possible to deliver clean energy to individual homes over regular power lines?

- 01 YES
- 02 NO
- 99 DON'T KNOW

E9 Which ONE of the following do you think is the BEST reason to purchase electricity from clean energy sources? [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER. ROTATE]

- 01 It helps prevent global warming
- 02 It reduces our need for foreign oil
- 03 It means cleaner air and improved health for our children
- 04 It encourages new technologies and creates jobs for our community
- 99 DON'T KNOW/NONE OF THESE

E10 Now I'm going to read you some statements about clean energy, and I'd like you to tell me how much more or less likely you would be to purchase clean energy if each statement were true. Please use a scale of 0 to 10, where 0 is much less likely to purchase and 10 is much more likely to purchase. [READ AND ROTATE STATEMENTS]

- 00 Much less likely to purchase (00)
- 01 (01)
- 02 (02)
- 03 (03)
- 04 (04)
- 05 (05)
- 06 (06)
- 07 (07)
- 08 (08)
- 09 (09)
- 10 Much more likely to purchase (10)
- 99 DON'T KNOW

- A. The clean energy is generated outside your state
- B. The clean energy you purchase supports the development of more clean energy in your state
- C. The clean energy is not certified by an independent consumer organization as environmentally friendly
- D. The clean energy is licensed and regulated by your state government
- E. The clean energy is endorsed by a national non-profit environmental group
- F. You could not purchase the clean energy from your current electric company

E11 Which ONE of the following groups or individuals do you believe would be the MOST credible source of information to promote clean energy? [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER. ROTATE.]

- 01 The president of the United States
- 02 A group of Fortune 100 CEO's
- 03 A coalition of religious leaders
- 04 A group of climate scientists
- 05 A group of environmental non-profit organizations
- 06 A group of your friends
- 195 Some other source [SPECIFY]
- 199 DON'T KNOW/NONE