Nexus Market Research, Inc.

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

## FINAL REPORT
## July 19, 2007

**Submitted to:**
**The Connecticut Clean Energy Fund**

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## Table of Contents

# 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 ratepayers' ability to support and purchase clean energy (or Renewable Energy Credits, or RECS). This research, conducted in two successive years 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 states.[1] 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**.

Two years 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 to support and/or purchase 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 continue 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.

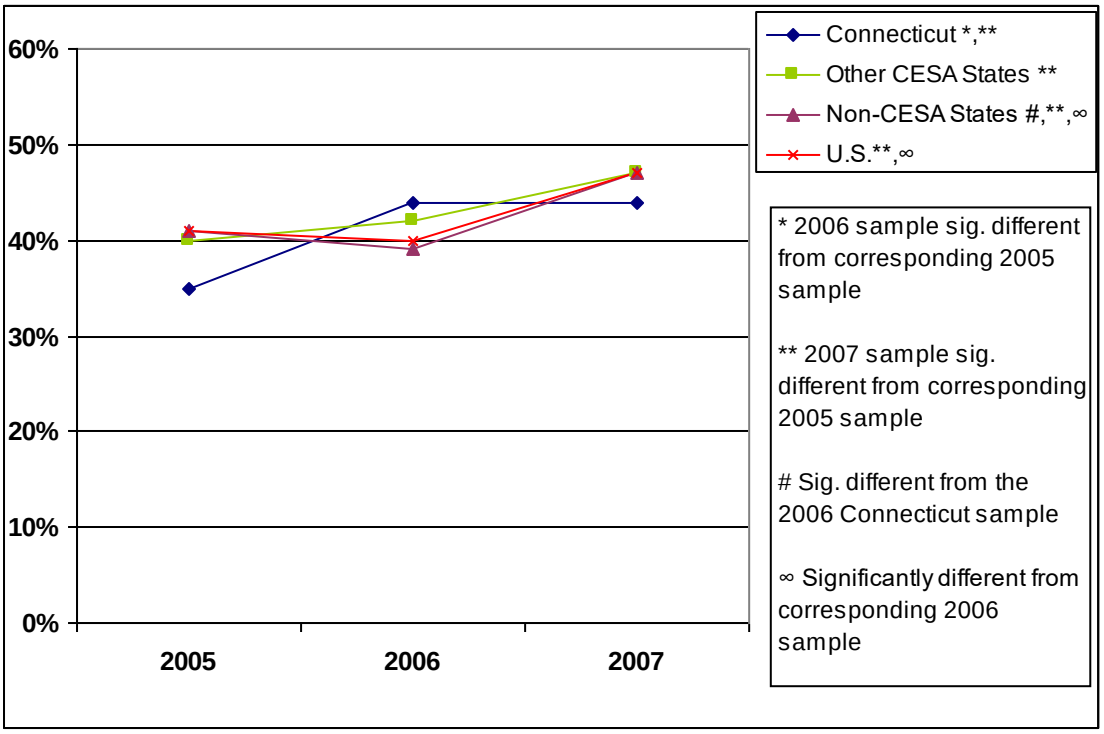
**One of the key findings of this research is that, two years into the campaign, Connecticut residents are more aware of clean energy, grid-delivered clean energy and clean energy technologies than in 2005, and they are more likely to be aware of fuel cells than people living elsewhere in the country. Although awareness levels in Connecticut, on balance, started lower and have been rising at a faster rate than the comparison groups, Connecticut residents are no more likely to be aware of grid-delivered clean energy and PV systems than people living elsewhere in the country, and are slightly less likely to be aware of clean energy in general than people in Non-CESA states and the U.S. as a whole.** (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 2007, while awareness of PV systems, grid-delivered clean energy and clean energy in general increased elsewhere in the

[1] The Clean Energy States Alliance (CESA) is a nonprofit organization of members from clean energy funds and state agencies from 15 states. 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)

country. While increased awareness of fuel cells may be partially attributed to the actions of CCEF's technology demonstration, awareness and education programs, it may also reflect the relative concentration of fuel cell companies in Connecticut. The impact of CCEF's awareness and education programs on awareness of clean energy and PV systems is unclear as comparison groups have experienced similar increases between 2005 and 2007.[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 2007, 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 2007 but remains relatively low**. Additionally, it is not clear that respondents know how to go about acquiring a rooftop solar PV system or how to participate in the rebate program.

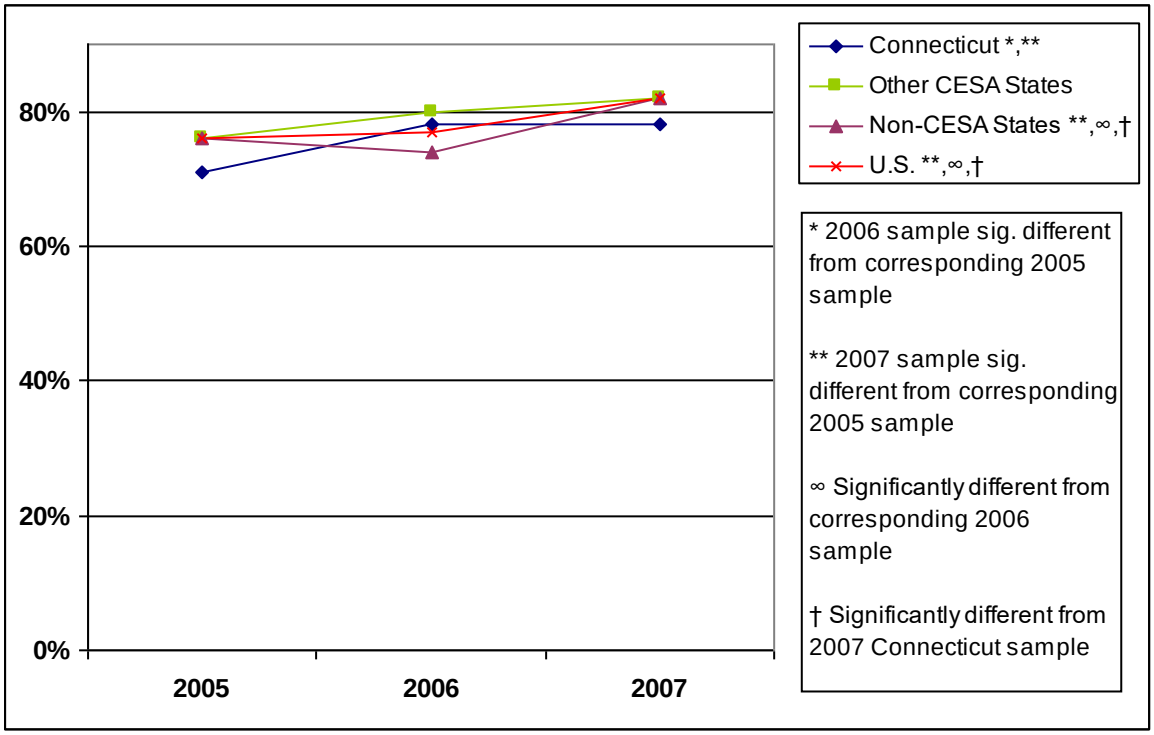
**Figure 1-1: Awareness of Grid Delivered Clean Energy[3]**
(All Respondents)




[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 Energy[4]**
(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 1-3: Awareness of Photovoltaic (PV) Systems**
(All Respondents)

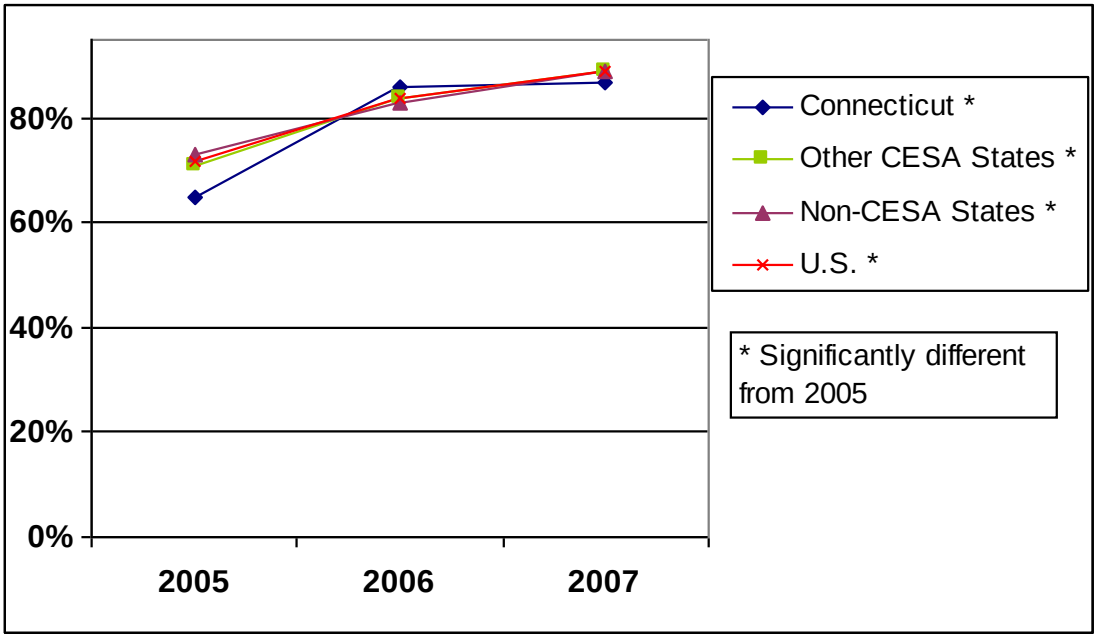
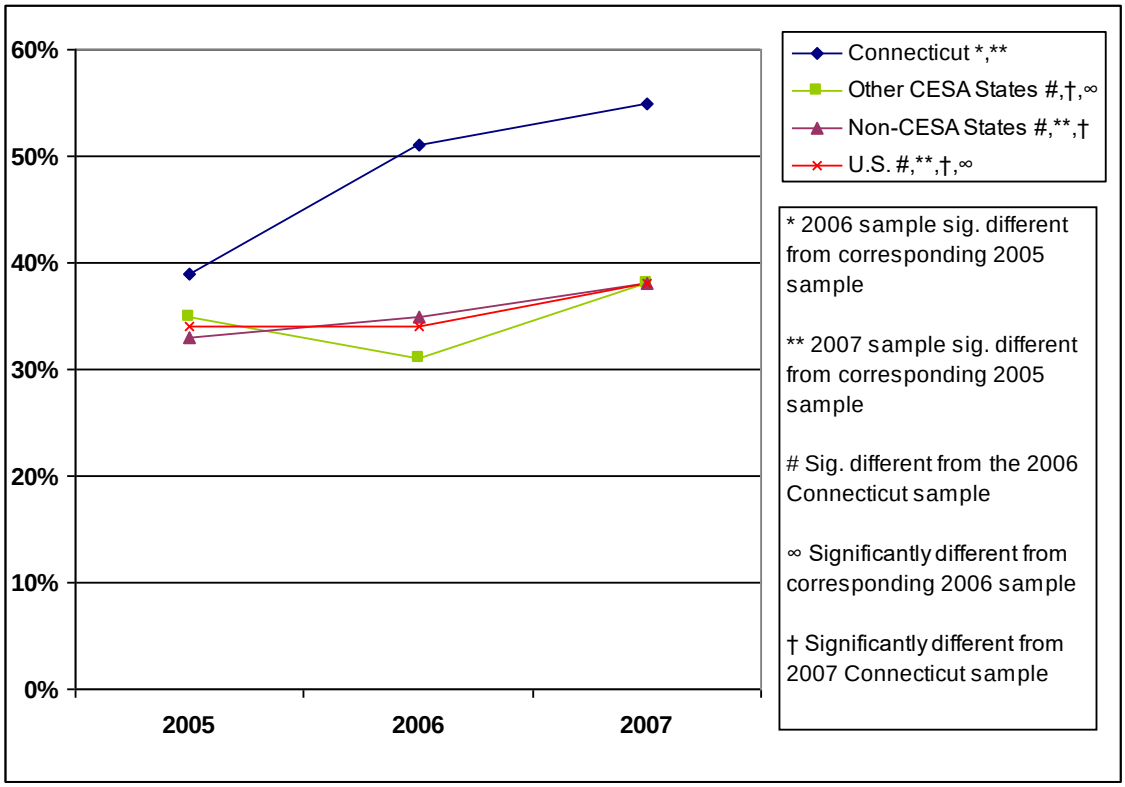
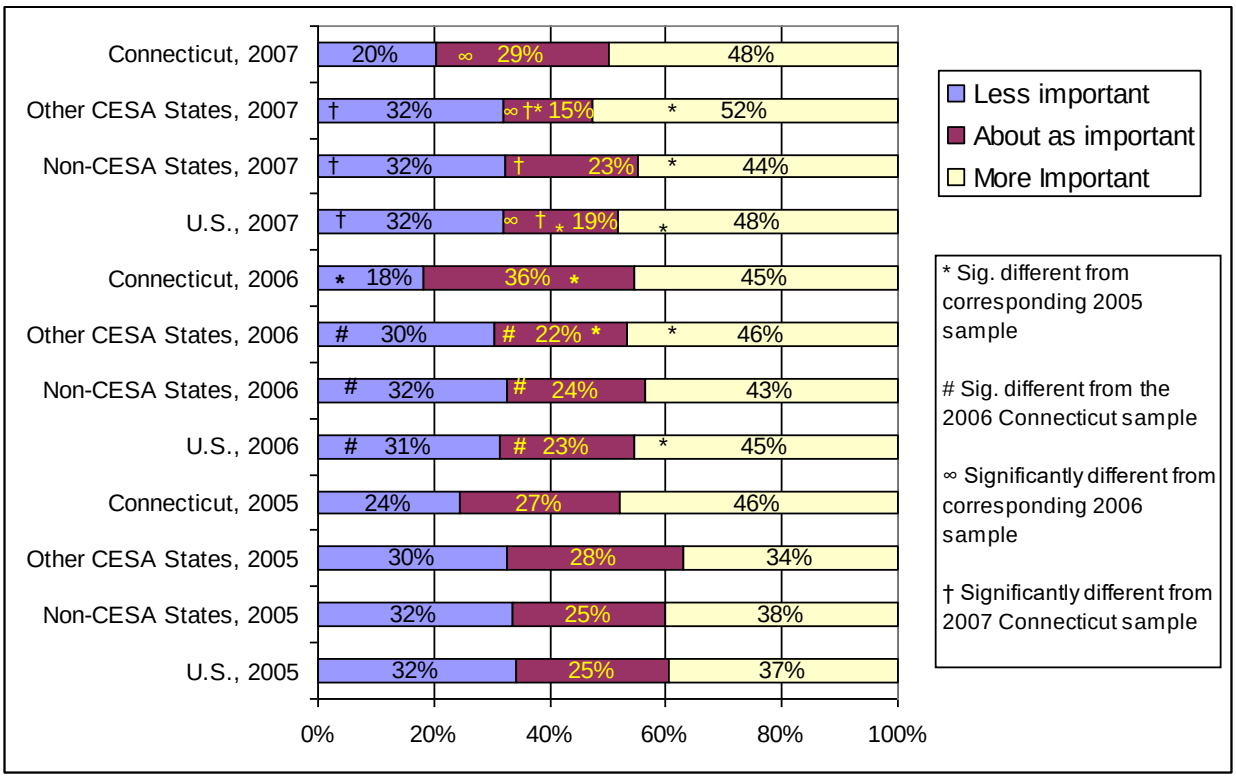



**Figure 1-4: Awareness of Fuel Cells**
(All Respondents)



**The issue of global warming continues to be increasingly salient in Connecticut.** In 2007 as in 2005 and 2006, nearly half of Connecticut residents believe that global warming is more important than other major issues facing the world, and a larger percentage of 2007 Connecticut respondents think that global warming is as important as other issues than in any other comparison group (Figure 1-5). [5] **Further, when asked to name the single most important environmental issue facing world, 45% of Connecticut respondents name global warming, the greenhouse effect or climate change compared to 25% in 2005 and 23% in 2006.** [6] However, there has been a significant decrease in the percentage of Connecticut residents who believe that global warming is as important as other issues in 2007 compared to 2006.

**Figure 1-5: Importance of Global Warming**




More than one-half of Connecticut respondents feel that global warming has affected the state and more than three-quarters believe they can take action to reduce the impacts of global warming. **When asked what actions individuals can take to reduce global warming, 20% of Connecticut respondents identify using clean or renewable energy, a significant increase from 2006 and significantly larger than all comparison groups. This suggests that more Connecticut residents are making a connection between global warming and clean energy.** Because such a large percentage of Connecticut respondents feel empowered to take action to reduce the impacts of global warming and an increasing percentage of Connecticut respondents see clean energy as something they can do to address global warming, CCEF may want to

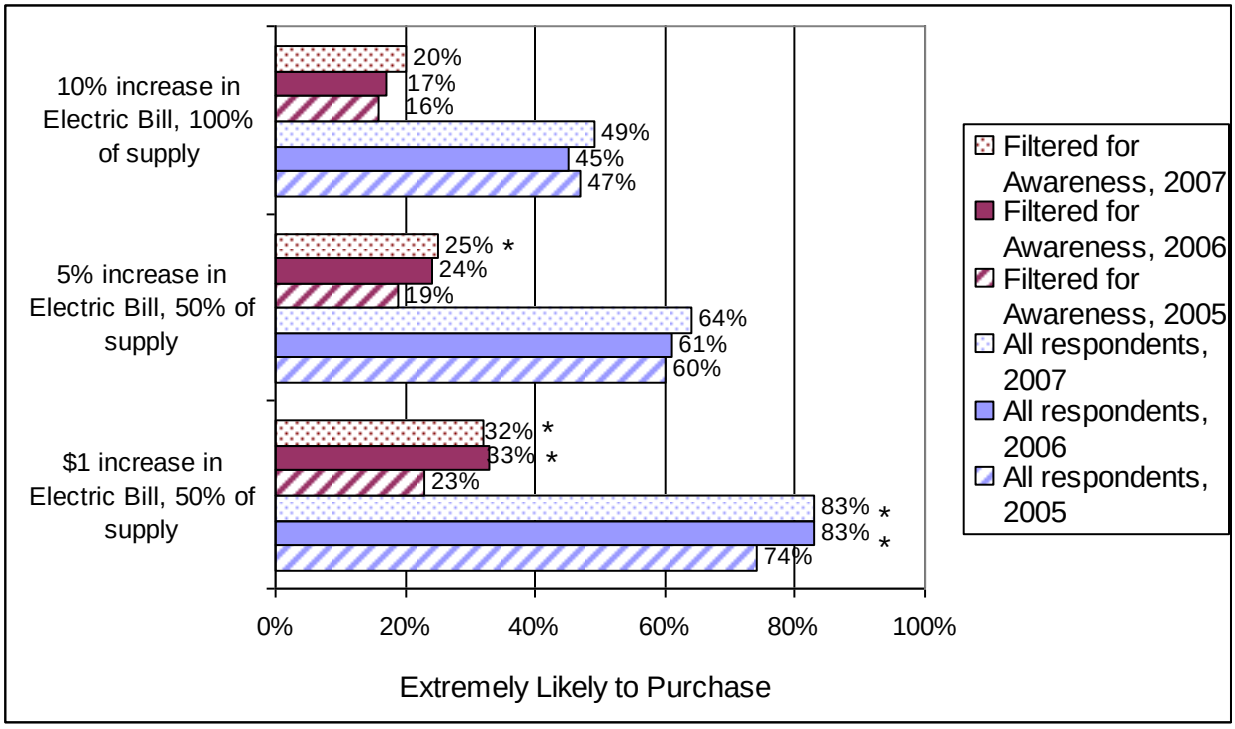
[5] To gauge the importance of global warming, respondents were asked the following question: "In your judgment, how important is the issue of global warming compared to other major issues facing the world today?"

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

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 2007 as in 2005, with two exceptions. 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. In addition, when willingness to pay is screened for awareness of clean energy, the percentage of respondents who are willing to purchase at least one-half clean electricity for at least an additional 5% on their bill increased significantly from 2005 to 2007** (Figure 1-6). Similar to the findings from 2005, 49% of Connecticut respondents say they are willing to purchase all their electricity from clean sources for an extra 10% on their electric bill, and 64% 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 20% are willing to pay 10% more for 100% clean electricity, 25% are willing to purchase one-half their electricity for an extra 5% and 32% are willing to pay an additional $1—up from 23% in 2005 (Figure 1-6). **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.**

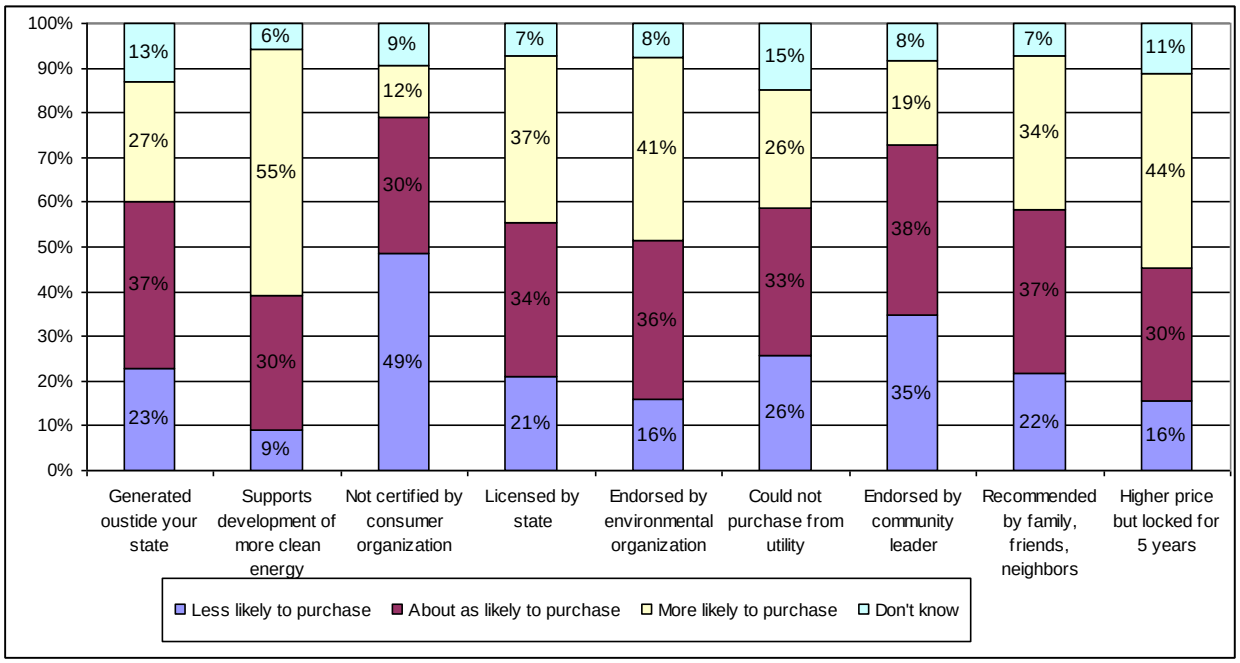
**Figure 1-6: Likelihood to Purchase Clean Energy (CT only)**




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

**In terms of factors affecting the likelihood of purchasing clean energy, over half (55%) of Connecticut respondents would be more likely to purchase clean energy if it supported the development of clean energy in Connecticut, while 44% of Connecticut respondents would be more likely to purchase clean energy if the price, though higher than conventional electricity, were locked for five years. Nearly half (49%) of Connecticut respondents would be less likely to purchase clean energy if it is not certified by an independent consumer organization (**Figure 1-7**).**[7]

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




**Connecticut residents continue to be relatively more aware of the benefits of clean energy than of their ability to achieve these benefits, but they appear less skeptical in 2007 than in 2005 that clean energy can meet their electricity needs and deliver environmental benefits. In 2007, belief in clean energy's benefits increased while skepticism and 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:

[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"

"The price for clean energy is slightly more than regular electricity, but the price is locked for five years and will not increase or decreased during that time."

[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).

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 37% of the customer base, they are more educated than nearly all 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 have high levels of awareness 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 (26%). 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. Finally, it is worth noting that seven of the nine respondents who are current subscribers to the Connecticut Clean Energy Option are Ideals, thus validating the segmentation scheme.

2. **Doubters**. Doubters, making up an additional 13% of the population, are the secondary target group. 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, and their willingness to pay 10% more for clean energy—after taking awareness of clean energy and awareness of grid-delivered clean energy into account—increased significantly from 2006 to 2007, surpassed only by Ideals (24% of Doubters). They are also relatively affluent and are the most well educated segment.

3. **Eeyores**. Eeyores, making up an additional 22% of the population, are a potential target group, but lower priority than Doubters. Eeyores believe in the benefits and efficacy of clean energy but do not feel empowered to take action. They have high levels of awareness of clean energy and the second highest level of willingness to pay 10% more for clean energy, but, perhaps critically, they have the lowest level of awareness of the availability of clean energy for their homes and are least likely to have seen or heard about clean energy recently.

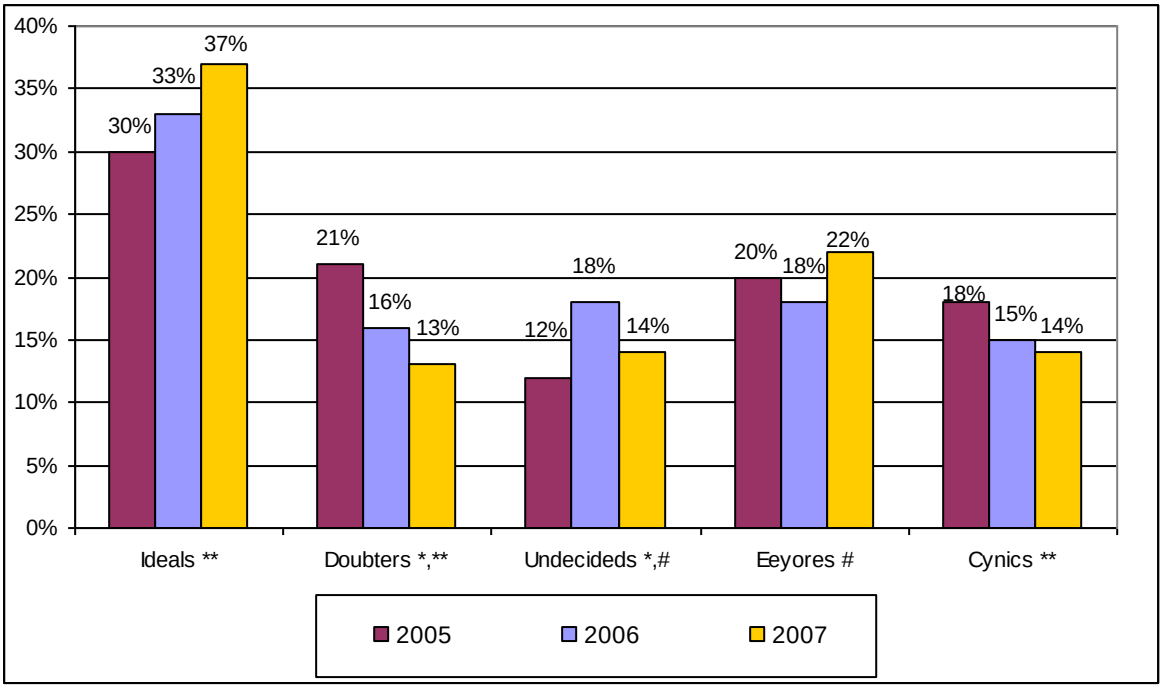
4. **Undecideds**. Undecideds, an additional 14% of the population, no longer appear to be the best choice as the second target group. They are skeptical about the efficacy of clean energy, but feel empowered to take action if they choose. After taking awareness of clean energy and grid-delivered clean energy into account, 12% would pay 10% more for clean energy, the lowest percentage of any segment.

5. **Cynics**: Cynics, making up 14% 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 13% would pay 10% more for clean energy.

With the increased belief in clean energy benefits, decreased skepticism, and decreased feeling of lack of empowerment observed in the attitudinal questions, the number of Ideals has increased

significantly from 2005 while the numbers of Cynics and Doubters has declined significantly from 2005. We suggest that Doubters, and perhaps some Undecideds and Cynics, shifted to the Ideals segment, while some Cynics and Doubters shifted to the Eeyores segment. (Figure 1-8)

**Figure 1-8: Attitudinal Segments**

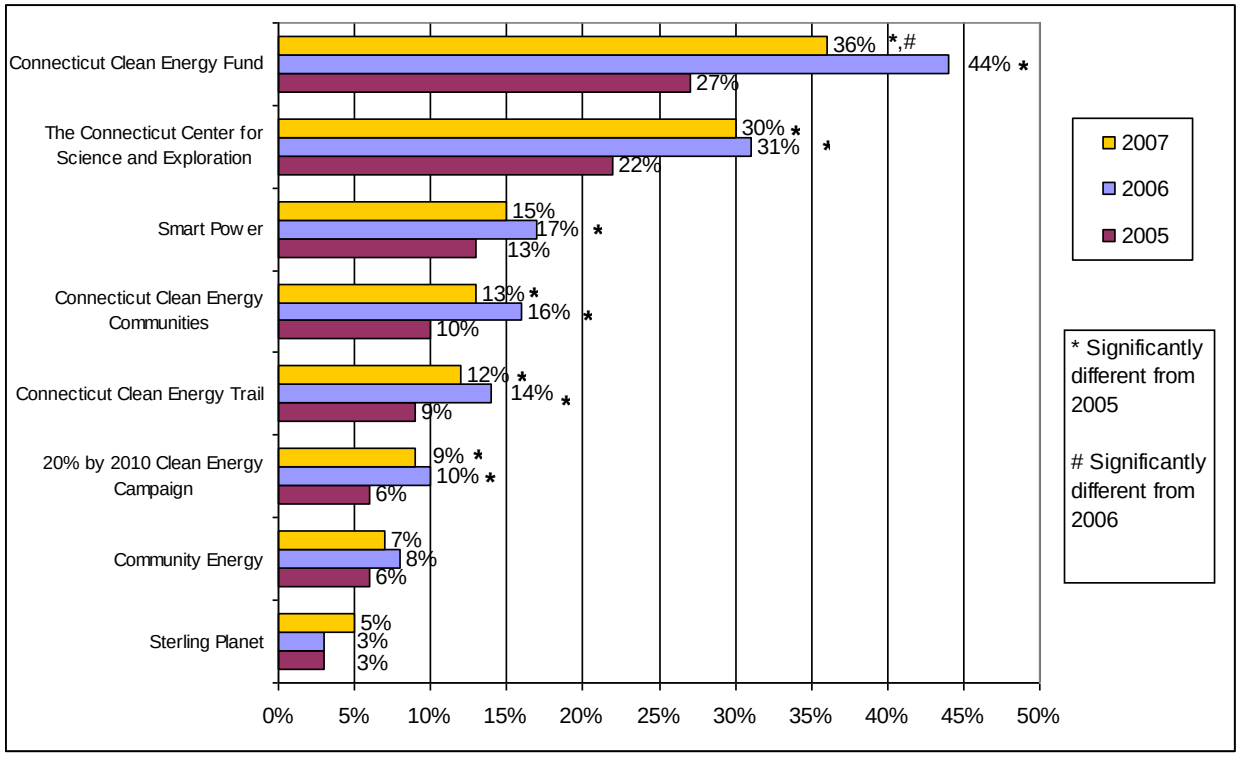



* 2006 sample significantly different from 2005 sample
** 2007 sample significantly different from 2005 sample
# 2007 sample significantly different from 2006 sample

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 from 2005 to 2007, 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 2007, as 23% of respondents recently heard about programs or organizations that sponsor clean energy (compared to 13% in 2005) and 38% 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 2007 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 2007**. Forty-two 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 16% have sought information regarding clean information, compared to 9% in 2005.

## *1.1 Conclusions*

The 2004 CCEF strategic plan laid out several program goals for Program Goal 3. The modified version of Program Goal 3B was adopted by the Advisory Committee on March 31, 2006, as follows:

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

Based on the data collected to date, NMR's assessment is that the CCEF has met its stated goal for Program Goal 3B. The justification for this assessment is as follows:

1. For many awareness indicators, the state of Connecticut started below the nation and CESA states. In nearly all cases, awareness indicators in Connecticut have, over time, risen to equal or higher levels than the comparison groups.
2. NMR's assessment is that the Connecticut data, compared to the comparison groups (national, CESA, and non-CESA states), show a steady increase over time that is not likely to be due in large part to exogenous factors. The national and regional awareness indicators clearly show an upward trend since 2005, with a rapid increase between 2006 and 2007. The Connecticut data show a rapid increase in 2006 over the 2005 baseline, with subsequent steady growth in two quarterly surveys in 2006 and in the 2007 annual survey. The additional data collected through the two quarterly surveys in Connecticut, coupled with the annual Connecticut surveys, makes the trend in Connecticut more stable and reliable than the annual national surveys alone. We speculate that the attention drawn to global warming by Al Gore's Academy Award-winning movie "An Inconvenient Truth" may have contributed to this national trend in awareness.
3. The data show a plausible causal connection between CCEF programs and increased awareness of clean energy. Anecdotally, the global warming message has been a substantial part of the CCEF's implementation efforts and messaging, and the CCEF has facilitated, partnered in, and in many instances spearheaded state-specific efforts to raise awareness. On balance, the awareness indicators for Connecticut show a linkage between the global warming issue and clean energy, whereas the national and regional data do not show such clear linkage.
4. That the linkage between clean energy and climate change can be discerned in the Connecticut survey data despite the national coverage of the global warming issue makes additional arguments for a home-grown trend. Through NMR's media tracking, print media coverage of the climate change issue in Connecticut has increased substantially in the last year; CCEF program-specific coverage more often than not includes climate change as the context behind the article.[9] Global warming was a strong messaging component of grassroots campaign efforts during 2006 conducted by SmartPower, CCEF, the Clean Water Fund, other environmental organizations, Sterling Planet and

[9] Personal communication with Daniel Lawlor, Analyst, The Cadmus Group, Inc., May 29, 2007. Cadmus is an NMR subcontractor for this project.

Community Energy.[10] SmartPower, Clean Energy Fund and Community Energy staff also used global warming awareness events to recruit participants, even setting up booths outside of movie theaters showing "An Inconvenient Truth" to sign up potential customers.[11]

Based on the survey data, and supported by the media analysis reports, NMR's assessment is that the weakest implementation of PG3B relates to the concept of agency—or the degree to which Connecticut ratepayers feel empowered to act on their support of clean energy products and achieve those benefits. Respondents show reasonably high, and ever-increasing, awareness and knowledge of clean energy technologies and its benefits. Awareness of the opportunities, however, is still lagging. On the positive side, awareness indicators of rebates for residential solar panels and grid-delivered clean energy are on the rise in Connecticut. Awareness of the Connecticut Clean Energy Options program name, however, is very low and not statistically different from awareness of two other hypothetical programs. Indeed, the media tracking and analysis show that only a very small percentage of CCEF program-specific articles include the web site in which a reader could learn more or sign up for the Clean Energy Option.

[10] Personal communication with Robert Wall, CCEF, Director, Energy Market Initiatives, May 18, 2007. Quarterly Media Analysis Reports, for Q2, Q3 and Q4 of 2006, and Q1 of 2007 show considerable direct marketing efforts by SmartPower, CCEF the Clean Water Fund Sterling Planet and Community Energy.

[11] Quarterly Media Analysis Reports, for Q3 and Q4 of 2006, and Q1 of 2007 show considerable earned media outreach and direct marketing efforts by SmartPower and CCEF employees to leverage media attention to, and screenings of, *An Inconvenient Truth* into building awareness and bringing in subscribers to the Connecticut Clean Energy Option Program.

# 2 Introduction

This is the third annual report to assess public awareness of clean energy in Connecticut. In 2005, 2006, and now again in 2007, NMR fielded two separate surveys: a survey of Connecticut residents and a survey of residents from across the contiguous United States. The 2005, 2006 and 2007 national surveys each contained a subset of key questions selected from the more in-depth 2005, 2006 and 2007 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 the 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

**Connecticut Survey Research Plan.** NMR conducted a total of 600 interviews between March 26 and April 19, 2007 (approximately one year after the 2006 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. Additionally, NMR conducted quarterly surveys of 300 Connecticut consumers for a subset of survey questions—similar to the national survey data collection instrument—in September and December of 2006 without concurrent national data collections. These quarterly data will not be presented in this report, but the results will be referenced when appropriate.[12]

**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 2007 survey was conducted with residents of the 48 contiguous U.S. from March 29 to April 1, 2007, approximately one year after the 2006 survey. A total of 901 interviews were completed with

[12] The results from the two 2006 quarterly surveys are consistent with the awareness indicator levels measured in the 2006 annual survey, and on balance, indicate increases for those indicators over levels measured in 2005.

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.

One concern of using the methodology above relates to the possibility of survey administration bias. Survey administration bias could result in systematic differences between the national and Connecticut responses and the impacts of such bias cannot be measured. Moreover, NMR believes the subcontracting ease of participating in the national omnibus survey product is well worth any potential risk of systematic differences in survey administration between the national and Connecticut surveys. The best remedy for such biases is frequent time series data collection and analysis of trends rather than a focus on specific point estimates.

# 3 Awareness and Attitudes toward Global Warming

**Summary**
The issue of global warming continues to be increasingly salient in Connecticut. Awareness of global warming is very high in Connecticut, with 98% of respondents aware of the issue, while 45% of Connecticut respondents name global warming as the single most important environmental issue in the world today. Over three-quarters of Connecticut respondents feel empowered to do something to address global warming and one-fifth of Connecticut respondents now identify using clean energy as an action to address global warming compared to one-tenth in the United States. Indeed, this particular indicator has risen significantly in Connecticut since 2006 but the national indicator has not.

**Discussion**

Forty-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 (15%).[13] The percentage of Connecticut respondents citing global warming, the greenhouse effect, or climate change increased dramatically from 2005 and 2006, when 25% and 23%, respectively, cited global warming. (Table 3-1)

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

| **Issue** | **2005 (Percent)** | **2006 (Percent)** | **2007 (Percent)** |
|---|---|---|---|
| Air pollution in general | 26% | 23% | 15%[*,#] |
| *Global warming* | *20* | *22* | *40*[*,#] |
| Water pollution in general | 9 | 7 | 6[*] |
| *Greenhouse effect* | *5* | *2*[*] | *4*[#] |
| Destruction of wildlife habitats or rainforest | 5 | 2[*] | 2[*] |
| Depletion of ozone layer | 4 | 2[*] | 1[*] |
| Oil/gas | 3 | 14[*] | 5[*,#] |
| Urban/suburban sprawl | 3 | 1[*] | 1 |
| Nuclear proliferation; spread of nuclear weapons | 2 | 1 | 1 |
| Nuclear waste | 1 | 1 | <1 |
| Mercury in water | 1 | 1 | <1 |
| Waste/recycling | 1 | 1 | 1 |
| *Climate change* | *1* | *1* | *1* |
| Oil/energy prices | 1 | 4[*] | 1[#] |
| Energy | 1 | 1 | 2 |
| Resources | 1 | <1 | 0[*] |
| Biological weapons | 1 | 1 | <1 |
| WMD; spread of weapons of mass destruction | 1 | 0[*] | 1[#] |
| Renewable energy | 0 | 1[*] | 1[*] |
| Pollution (general) | 0 | 1[*] | 0[#] |
| Other | 1 | 2 | 2 |
| Don't Know/NA | 16 | 14 | 18 |
| **Total Respondents** | **600** | **600** | **600** |

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

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

[13] Respondents were asked the following question: "What do you consider to be the SINGLE most important environmental issue in the world today?"

Ninety-eight 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 all comparison groups in 2007. (Table 3-2) Awareness of global warming has increased in non-CESA states and the U.S. as a whole from 2006 to 2007, perhaps indicating an increase in salience and awareness of the issue across the country as a whole.

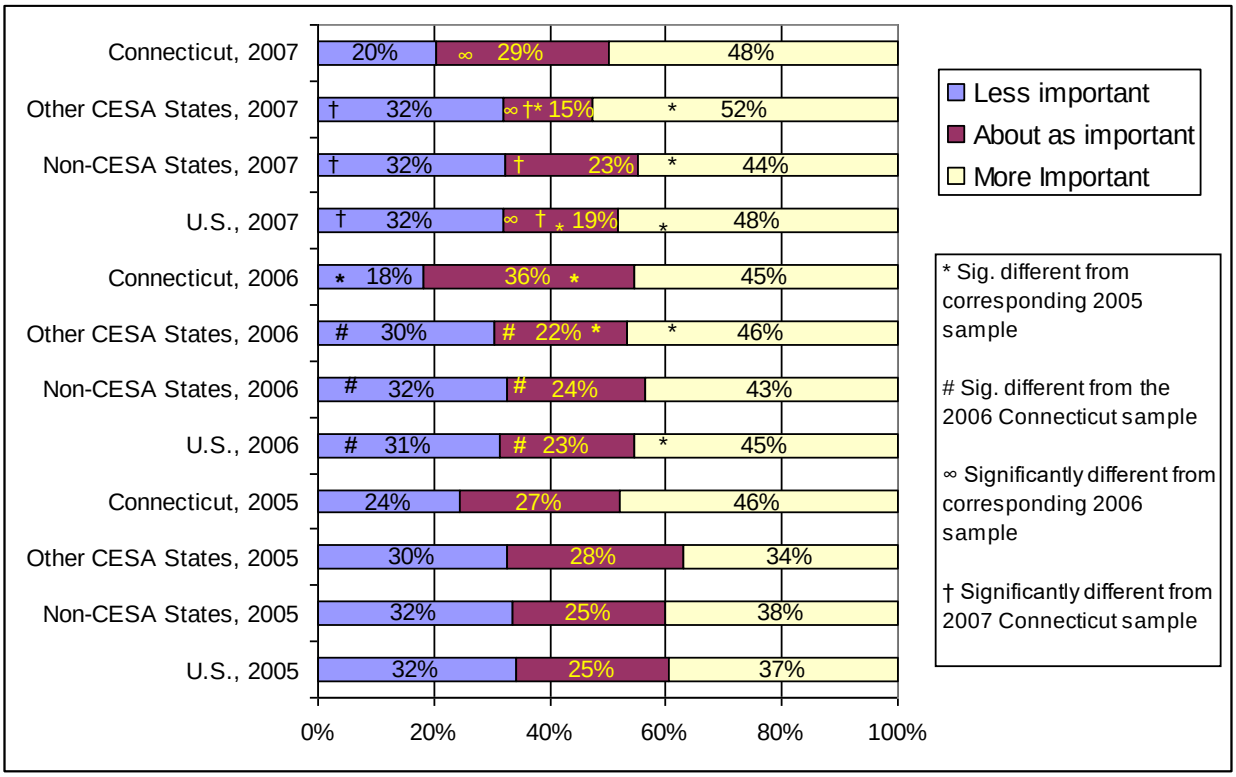
**Table 3-2: Awareness of Global Warming**
(All Respondents)

| | Yes, 2005 (Percent) | Yes, 2006 (Percent) | Yes, 2007 (Percent) | Total Respondents (2005) | Total Respondents (2006) | Total Respondents (2007) |
|---|---|---|---|---|---|---|
| **Connecticut** | 95% | 97%[*] | 98%[*] | 600 | 600 | 600 |
| **Other CESA States** | 91%[+] | 95%[*] | 96%[*,†] | 358 | 410 | 374 |
| **Non-CESA States** | 96% | 91%[*, #] | 96%[†,∞] | 585 | 528 | 518 |
| **U.S.** | 94% | 93%[#] | 96%[*,†,∞] | 943 | 946 | 901 |

[+] Significantly different from the 2005 Connecticut sample at the 90% confidence level.
[*] 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 corresponding 2006 sample at the 90% confidence level.
[†] Significantly different from 2007 Connecticut sample at the 90% confidence level.

Forty-eight percent of Connecticut respondents think global warming is much more important or somewhat more important than other issues, compared to 44% to 52% of respondents from comparison groups. (Figure 3-1) In 2007, a significantly smaller percentage of Connecticut respondents than in 2006 believe that global warming is as important as other issues. A larger percentage of 2007 Connecticut respondents think that global warming is as important as other issues as in any other comparison group. Finally, in 2007 larger percentages of respondents in other CESA states, non-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 the U.S. in general.

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



Seventy-six percent of Connecticut respondents that are aware of global warming think that individuals can take actions to help reduce global warming compared to 73% to 78% from the comparison groups. (Table 3-3) In 2007 a statistically significant larger percentage of respondents from Connecticut, Non-CESA states and the U.S. in general believe there are actions individuals can take to help reduce global warming, with over three-quarters of Connecticut respondents feeling 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, 2006 (Percent) | Yes, 2007 (Percent) | Total Respondents (2006) | Total Respondents (2007) |
|---|---|---|---|---|
| **Connecticut** | 71% | 76%[#] | 582 | 588 |
| **Other CESA States** | 75% | 73% | 388 | 358 |
| **Non-CESA States** | 68% | 78%[∞] | 480 | 499 |
| **U.S.** | 71% | 76%[∞] | 876 | 863 |

[#] Significantly different from the 2006 Connecticut sample at the 90% confidence level.
[∞] Significantly different from corresponding 2006 sample at the 90% confidence level.
[†] Significantly different from 2007 Connecticut sample at the 90% confidence level.

Fifty-four percent of those Connecticut respondents that is 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, 2006 (Percent) | Yes, 2007 (Percent) | Total Respondents (2006) | Total Respondents (2007) |
|---|---|---|---|---|
| **Connecticut** | 52% | 54% | 582 | 588 |
| **Other CESA States** | 38%[#] | 48%[†,∞] | 388 | 358 |
| **Non-CESA States** | 46%[#] | 44%[†] | 480 | 499 |
| **U.S.** | 43%[#] | 46%[†] | 876 | 863 |

[#] Significantly different from the 2006 Connecticut sample at the 90% confidence level.
[∞] Significantly different from corresponding 2006 sample at the 90% confidence level.
[†] Significantly different from 2007 Connecticut sample at the 90% confidence level.

Forty-five percent of Connecticut respondents think that Connecticut leaders can do a great deal about global warming, a statistically significant increase from 2006, and 76% 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 (28%) 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 (2006)** | **Percent (2007)** |
|---|---|---|
| 0 to 4 (Could do nothing at all) | 19% | 16% |
| 5 to 7 (Could do something) | 35 | 31 |
| 8 to 10 (Could do a great deal) | 39 | 45[#] |
| Don't Know | 7 | 8 |
| **Total Respondents** | 582 | 588 |

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

**Table 3-6: Extent to Which Connecticut Leaders Have Done Something About Global Warming**
(Connecticut Respondents Aware of Global Warming)

| | **Percent (2006)** | **Percent (2007)** |
|---|---|---|
| 0 to 4 (Have done nothing at all) | 51% | 52% |
| 5 to 7 (Have done something) | 28 | 24 |
| 8 to 10 (Have done a great deal) | 4 | 4 |
| Don't Know | 18 | 20 |
| **Total Respondents** | 582 | 588 |

When asked what actions they can take to reduce global warming, the most common response from residents of Connecticut is reducing energy use (46%), followed by driving less, buying or driving a hybrid car, using clean or renewable energy. The percentage of Connecticut respondents who identify using clean or renewable energy increased significantly from 2006 and is significantly larger than all comparison groups, suggesting that more Connecticut residents make a connection between global warming and 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)

| | 2006 | | | | 2007 | | | |
|---|---|---|---|---|---|---|---|---|
| **Examples** | **Connecticut** | **Other CESA States** | **Non-CESA States** | **U.S.** | **Connecticut** | **Other CESA States** | **Non-CESA States** | **U.S.** |
| Drive less/cut down on driving | 43% | 36%[#] | 36%[#] | 35%[#] | 39%[∞] | 44%[∞] | 31%[†] | 37% |
| Buy/drive a hybrid car | 22 | 22 | 15[#] | 18 | 22 | 13[∞,†] | 13[†] | 14[∞,†] |
| Reduce energy use | 28 | 24 | 19[#] | 21[#] | 46[∞] | 41[∞] | 41[∞] | 42[∞] |
| Recycling | 11 | 18[#] | 14 | 15[#] | 16[∞] | 24[∞,†] | 17 | 20[∞,†] |
| Use renewable or clean energy | 11 | 10 | 9 | 9 | 20[∞] | 10[†] | 13[∞,†] | 11[†] |
| Politics (contact politicians, advocate for policies) | 6 | 3[#] | 4 | 4 | 1[∞] | 3[†] | 2 | 2[∞] |
| Use smaller, more efficient or cleaner cars | 2 | 2 | 3 | 2 | 0[∞] | 4[†] | 6[∞,†] | 5[∞,†] |
| Use alternative or cleaner fuels | 2 | 1 | 1 | 1 | <1[∞] | 2[†] | <1 | 1[†] |
| Preserve forests or plant trees | 2 | 5[#] | 2 | 4[#] | 0[∞] | 2[∞,†] | 5[†] | 3[†] |
| Less consumption or waste | 1 | 1 | 1 | 1 | 0[∞] | 1 | <1 | <1[†] |
| Be more aware environmentally | 1 | 3[#] | 1 | 2 | <1 | <1[∞] | <1 | <1[∞] |
| Change habits; change purchasing habits | 1 | 2 | 2 | 2 | 0[∞] | 4[†] | 2[†] | 3[∞,†] |
| Use less fossil fuel | 3 | 1[#] | 0[#] | 1[#] | 0[∞] | 4[∞,†] | 4[∞,†] | 4[∞,†] |
| Reduce pollution or emissions | 4 | 8[#] | 7[#] | 8[#] | 1[∞] | 13[∞,†] | 11[∞,†] | 12[†] |
| More education and research | 1 | 1 | 2 | 2 | <1 | 4[∞,†] | 2[∞,†] | 2[†] |
| Take care of the environment | 1 | 2 | 1 | 2 | 0[∞] | 1 | 0 | 1[†] |
| Reduce or restrict use of aerosol cans | 5 | 6 | 7 | 6 | 1[∞] | 3[∞,†] | 5[†] | 5[†] |
| Buy locally grown food/products | 3 | 3 | 3 | 3 | 2 | 5[†] | 1[∞] | 2 |
| Restrict or reduce use of CFCs | 0 | 2[#] | 1[#] | 1[#] | 0 | <1[∞] | 1[†] | <1[†] |
| Don't burn leaves or plastics | 0 | 1[#] | 2[#] | 1[#] | 0 | 2[†] | 2[†] | 2[†] |
| Other | 6 | 12[#] | 14[#] | 13[#] | <1[∞] | 7[∞,†] | 6[∞,†] | 7[∞,†] |
| Don't Know | 10 | 10 | 16[#] | 13 | 8 | 9 | 11[∞] | 11[†] |
| **Total Respondents** | **416** | **291** | **327** | **629** | **446** | **261** | **389** | **736** |

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

[∞] Significantly different from corresponding 2006 sample at the 90% confidence level.

[†] Significantly different from 2007 Connecticut sample at the 90% confidence level.

# 4 Knowledge and Awareness of Clean Energy Issues

**Summary**
Awareness of clean energy increased in Connecticut from 2005 to 2007. 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. Awareness trends for Connecticut and the comparison groups all increased over the period of analysis, with Connecticut rising at a faster rate than the comparison groups. Although the estimates for awareness in Connecticut from the 2007 survey are significantly less than those for non-CESA states and the United States as a whole, the estimate for CESA states is statistically similar.

**Discussion**
Seventy-eight percent of Connecticut respondents were aware of "clean energy or renewable energy" in 2007, a statistically significant difference from 2005.[14] Awareness of clean or renewable energy appears to be slightly higher in non-CESA states and the U.S. in general than in Connecticut. (Table 4-1)

**Table 4-1: Awareness of Clean Energy**[15]
(All Respondents)

| Region | Yes, 2005 (Percent) | Yes, 2006 (Percent) | Yes, 2007 (Percent) | Total Respondents (2005) | Total Respondents (2006) | Total Respondents (2007) |
|---|---|---|---|---|---|---|
| **Connecticut** | 71% | 78%* | 78%* | **300** | **600** | **600** |
| **Other CESA States** | 76%+ | 80% | 82% | **358** | **410** | **374** |
| **Non-CESA States** | 76%+ | 74% | 82%*,∞,† | **585** | **528** | **518** |
| **U.S.** | 76%+ | 77% | 82%*,∞,† | **943** | **946** | **901** |

+ Significantly different from the 2005 Connecticut sample at the 90% confidence level.
* Significantly different from corresponding 2005 sample at the 90% confidence level.
∞ Significantly different from corresponding 2006 sample at the 90% confidence level.
† Significantly different from 2007 Connecticut sample at the 90% confidence level.

Demographic analyses show that 80% of homeowners in Connecticut compared to 72% of renters are aware of either clean energy or renewable energy. In addition, awareness is 63% among those with only a high school degree, compared to 75% among those with some college, and 87% of those with a four-year college degree or post-graduate experience. Awareness of

[14] 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.
[15] 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).

clean energy follows a similar pattern for income: awareness is 63% for those with household incomes less than $25,000, 76% for incomes between $25,000 and $50,000, and 84% for those with incomes of $50,000 or more. Awareness is highest among middle aged respondents, with 83% of respondents between 35 and 44 years old and 81% between 45 and 54 years old aware of clean energy (compared to 76% to 78% for all other age groups). Lastly, 85% of men are aware of clean energy compared to 71% of women.

Connecticut respondents who are aware of clean energy were asked the meaning of that term. In 2007 a statistically significant larger percentage of respondents replies "reusable /recyclable /won't deplete,"[16] solar energy, wind power, water power, and biomass/ethanol/biodiesel. Altogether, 24% of Connecticut respondents in 2007 compared to 8% in 2005 and 26% in 2006 mention some specific form of clean energy. (Table 4-2)

**Table 4-2: Meaning of Clean Energy[17]**
(All Connecticut Respondents)

| Meaning | Percent (2005) | Percent (2006) | Percent (2007) |
|---|---|---|---|
| Reusable/recyclable/won't deplete/renewable | 4% | 13%* | 13%* |
| Less polluting/cleaner air | 24 | 22 | 22 |
| Solar energy; energy from the sun; photovoltaics, PV; active solar; passive solar | 6 | 16* | 16* |
| Wind power; windmills; wind farms | 4 | 16* | 16* |
| Better for environment | 6 | 7 | 7 |
| Less fossil fuel/oil | 6 | 7 | 6 |
| Water power; hydroelectric; use of dams | 1 | 5* | 6* |
| Recycling | 1 | 2 | <1# |
| Energy efficiency | 1 | 2 | 1 |
| From natural resources | 1 | 2 | 2 |
| Biomass; burning organic matter / ethanol; corn / biodiesel | 0 | 7* | 6* |
| Costs more/less | 0 | 1* | 1* |
| Hybrid/electric cars | 2 | 4 | 2# |
| Hydrogen | 1 | 2 | 1# |
| Geothermal | 0 | 1 | 0 |
| Less waste | 2 | 1 | 1 |
| Clean fossil fuels | 1 | 0* | 1 |
| Less climate change/global warming | 1 | 1 | 1 |
| Tidal or wave power; using the tides or waves | 1 | 0 | 1 |
| Nuclear/nuclear energy/nuclear power/nuclear plants | 1 | 1 | 2 |
| Natural gas | 1 | 1 | 1 |
| Less CO2 | 1 | 0* | 2 |
| Ozone layer | 0 | 1 | 0* |
| Electricity | 0 | 1* | 0# |
| Fuel cells | 0 | 1* | 2* |
| Conservation | 0 | 1* | 2* |
| Alternative Fuels / Other fuels | 0 | 4 | 4* |
| Other | 7 | 7 | 4*, # |
| Don't know | 12 | 10 | 8* |
| Not aware | 29 | 22* | 22* |
| **Total Respondents** | **300[1]** | **600** | **600** |

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

[16] It should be noted that in 2005, 35% of respondents asked about the meaning of "renewable energy" cited "reusable/recyclable/won't deplete"
[17] 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 29% cite wind power, 14% cite hydropower (Table 4-3).Overall, 58% of respondents provide a valid example of clean energy (such as solar or wind power) compared to 50% in 2005. Respondents from Connecticut and all comparison groups were more likely to mention Ethanol in 2007 compared to 2005.

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

| | 2005 | | | | 2006 | | | | 2007 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Examples** | **CT** | **Other CESA States** | **Non-CESA States** | **U.S.** | **CT** | **Other CESA States** | **Non-CESA States** | **U.S.** | **CT** | **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%$^{*,\#}$ | 34% | 33% | 30%$^{\infty}$ | 32%$^{\infty}$ |
| Wind power; windmills; wind farms | 23 | 26 | 23 | 24 | 34$^{*}$ | 23$^{\#}$ | 25$^{\#}$ | 25$^{\#}$ | 29$^{*,\infty}$ | 39$^{*,\dagger,\infty}$ | 31$^{*,\infty}$ | 35$^{*,\dagger,\infty}$ |
| Water power; hydroelectric; use of dams | 16 | 11$^{+}$ | 14$^{+}$ | 13$^{+}$ | 21 | 10$^{\#}$ | 12$^{\#}$ | 12$^{\#}$ | 14$^{\infty}$ | 17$^{\infty}$ | 17$^{\infty}$ | 17$^{*,\infty}$ |
| Solar water heating | 8 | 4$^{+}$ | 4$^{+}$ | 4$^{+}$ | 6 | 6 | 3$^{\#}$ | 4 | 7 | 4$^{*,\dagger}$ | 3$^{\dagger}$ | 3$^{*}$ |
| Wood; wood stoves | 3 | 2 | 2$^{+}$ | 2$^{+}$ | 3 | 2 | 2$^{\#}$ | 2 | 2 | 1 | 1 | 1$^{\infty}$ |
| Biomass; burning organic matter | 1 | 3$^{+}$ | 3 | 3$^{+}$ | 2 | 4$^{\#}$ | 3$^{*,\#}$ | 3 | 4$^{*,\infty}$ | 3 | 4 | 3 |
| Geothermal | 3 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 3 | 4$^{*}$ | 4$^{*,\infty}$ | 4$^{*,\dagger,\infty}$ |
| Nuclear/nuclear energy/nuclear power | 4 | 4 | 5 | 5 | 6$^{*}$ | 6 | 5 | 6 | 7$^{*}$ | 5 | 5 | 5 |
| Ethanol/Corn | 2 | 4$^{+}$ | 5$^{+}$ | 5$^{+}$ | 10$^{*}$ | 18$^{*,\#}$ | 15$^{*,\#}$ | 16$^{*,\#}$ | 10$^{*}$ | 13$^{*,\infty}$ | 17$^{*,\dagger}$ | 15$^{*,\dagger}$ |
| Fuel cells | 5 | 2$^{+}$ | 4 | 3 | 5 | 5$^{*}$ | 4 | 5$^{*}$ | 5 | 4 | 7$^{*,\infty}$ | 6$^{*}$ |
| Tidal or wave power; using the tides or waves | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 3 | 1 | 1 | 1$^{\dagger}$ |
| Landfill gas | 1 | 1 | 2 | 1 | 1 | 0 | 1 | 1 | <1$^{*,\infty}$ | 1 | 2$^{\dagger}$ | 1$^{\dagger}$ |
| Natural gas | 3 | 6$^{+}$ | 9$^{+}$ | 8$^{+}$ | 7$^{*}$ | 8 | 5$^{*}$ | 6$^{*}$ | 3$^{\infty}$ | 4$^{*}$ | 3$^{*,\infty}$ | 3$^{*,\infty}$ |
| hybrid/electric cars | 0 | 0 | 0 | 0 | 6$^{*}$ | 0$^{\#}$ | 0$^{\#}$ | 0$^{\#}$ | 1$^{*,\infty}$ | 7$^{*,\dagger,\infty}$ | 3$^{*,\dagger,\infty}$ | 4$^{*,\dagger,\infty}$ |
| Hydrogen | 0 | 0 | 0 | 0 | 2$^{*}$ | 1$^{*}$ | 1$^{*}$ | 1$^{*}$ | <1$^{\infty}$ | 1 | 1$^{*}$ | 1$^{*}$ |
| Electricity | 0 | 0 | 0 | 0 | 1$^{*}$ | 1$^{*}$ | 1$^{*}$ | 1$^{*}$ | 0$^{\infty}$ | 1$^{*,\dagger}$ | 2$^{*,\dagger}$ | 1$^{*,\dagger}$ |
| Recycling | 0 | 0 | 0 | 0 | 1$^{*}$ | 1$^{*}$ | 1$^{*}$ | 1$^{*}$ | <1$^{\infty}$ | 3$^{*,\dagger,\infty}$ | 1$^{*,\dagger}$ | 2$^{*,\dagger}$ |
| Biodiesel | 0 | 0 | 0 | 0 | 1$^{*}$ | 0 | 1$^{*}$ | 1$^{*}$ | <1 | 3$^{*,\dagger,\infty}$ | 4$^{*,\dagger,\infty}$ | 3$^{*,\dagger,\infty}$ |
| Clean Fossil Fuels | 0 | 0 | 0 | 0 | 1$^{*}$ | 0$^{\#}$ | 0 | 1$^{*}$ | 0$^{\infty}$ | <1 | <1 | <1$^{*,\infty}$ |
| Less polluting/cleaner air | 0 | 0 | 0 | 0 | 1$^{*}$ | 0 | 0$^{\#}$ | 0 | 0$^{\infty}$ | <1 | 0 | <1 |
| Other | 0 | 0 | 0 | 0 | 3$^{*}$ | 6$^{\#}$ | 2$^{*}$ | 4$^{*}$ | 1$^{*,\infty}$ | 6$^{*,\infty}$ | 8$^{*,\dagger,\infty}$ | 7$^{*,\dagger,\infty}$ |
| Don't know | 10 | 16$^{+}$ | 14$^{+}$ | 15$^{+}$ | 11 | 17$^{\#}$ | 18$^{*,\#}$ | 18$^{*,\#}$ | 15$^{*,\infty}$ | 16 | 38$^{*,\dagger,\infty}$ | 17 |
| Not aware of clean energy | 36 | 22$^{+}$ | 24$^{+}$ | 23$^{+}$ | 22$^{*}$ | 20 | 26 | 23 | 22$^{*}$ | 18 | 18$^{*,\infty}$ | 18$^{*,\dagger,\infty}$ |
| **Total Respondents** | **600** | **358** | **585** | **943** | **600** | **410** | **528** | **946** | **600** | **374** | **518** | **901** |

$^{+}$ Sig. different from the 2005 Connecticut sample at the 90% confidence level. $^{*}$ Sig. different from corresponding 2005 sample at the 90% confidence level.
$^{\#}$ Sig. different from the 2006 Connecticut sample at the 90% confidence level. $^{\infty}$ Sig. different from corresponding 2006 sample at the 90% confidence level.
$^{\dagger}$ Sig. different from 2007 Connecticut sample at the 90% confidence level.

# 5 Awareness of Clean Energy Technologies and Products

**Summary**
Awareness of household-level clean energy increased in Connecticut from 2005 to 2007, while only awareness of grid-delivered clean energy and PV systems increased in other parts of the country. Awareness of grid-delivered clean energy rose at a higher rate in Connecticut than the comparison groups over the 2005 to 2007 period to statistically similar estimates in 2007 among all groups. Awareness of fuel cells in 2007 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 2007 are aware of grid-delivered clean electricity, significantly different from 2005. Awareness of grid-delivered clean electricity increased in all comparison regions between 2005 and 2007. (Table 5-1)

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

| | Yes (2005) | Yes (2006) | Yes (2007) | Total Respondents (2005) | Total Respondents (2006) | Total Respondents (2007) |
|---|---|---|---|---|---|---|
| **Connecticut** | 35% | 44 %* | 44 %* | **600** | **600** | **600** |
| **Other CESA States** | 40% | 42% | 47 %* | **358** | **410** | **374** |
| **Non-CESA States** | 41%+ | 39%# | 47 %*,∞ | **585** | **528** | **518** |
| **U.S.** | 41%+ | 40% | 47 %*,∞ | **943** | **946** | **901** |

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

Within Connecticut, education is associated with recognition: 53% for those having attended graduate school, 50% for those with four-year college degrees, 39% for those with some college, and 31% for those with high school degrees. Similarly, a high level of income is associated with recognition: awareness is 21% for those with household incomes les than $25,000, 31% for those with household incomes between $25,000 and $50,000 and 51% to 53% for those with household incomes $50,000 or higher. Forty six percent of homeowners compared to 32% of renters are aware of grid-delivered clean electricity while 58% of men were aware compared to 29% of women. As 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.

Compared to 2006, awareness of "Renewable Energy Certificates" or "RECS" in Connecticut remained significantly higher in 2007 (9%) than in 2005 (6%). (Table 5-2).

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

| | Yes (2005) | Yes (2006) | Yes (2007) | Total Respondents (2005) | Total Respondents (2006) | Total Respondents (2007) |
|---|---|---|---|---|---|---|
| **Percent** | 6% | 10%* | 9%* | **600** | **600** | **600** |

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

Though the percentage of respondents who are aware of RECs remained higher in 2007 compared to 2005, a smaller percentage of those respondents who say they are familiar with RECs could identify a characteristic of a REC. (Table 5-3) In addition, nearly half of those who are familiar with RECs (48%) 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, new vs. existing, and protecting against double counting. As in 2005 and 2006, 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) | Percent of those aware of Tradable Renewable Certificates (2007) | Percent of all Respondents (2007) |
|---|---|---|---|---|---|---|
| Certifies TYPE of renewable/clean energy – e.g., wind, solar, biomass, etc | 21% | 1% | 9% | 1% | 14% | 1% |
| Certifies PRICE | 15 | 1 | 4 * | <1 | 5 | 1 |
| Certifies TOTAL AMOUNT/kWh/kilowatt-hours of electricity generated by renewables | 12 | 1 | 4 | <1 | 7 | 1 |
| Certifies OWNERSHIP | 12 | 1 | 7 | 1 | 4 | 0 |
| Certifies percentage of renewables that are NEW rather than previously existing | 6 | <1 | 2 | <1 | 5 | 1 |
| Certifies level of EMISSIONS | 3 | <1 | 12 | 1 | 4 | 0* |
| Certifies LOCATION of renewable generation sources | 0 | 0 | 4 | <1 | 0 | 0 |
| Protects against DOUBLE COUNTING of renewable generation sources | 0 | 0 | 2 | <1 | 7*,# | 1 |
| Other | 0 | 0 | 16* | 2 * | 11*,# | 1 |
| DK/NA | 38 | 4 | 46 | 4 | 48 | 5 |
| **Mention all eight characteristics** | **0%** | **0%** | **0%** | **0%** | **0%** | **0%** |
| **Mention at least one characteristic** | **62%** | **4%** | **39%*** | **4%** | **41%*** | **4%** |
| **Total Respondents** | **34** | **600** | **57** | **600** | **56** | **600** |

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

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

Eighty-seven 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 2007.

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

| | Yes (2005) | Yes (2006) | Yes (2007) | Total Respondents (2005) | Total Respondents (2006) | Total Respondents (2007) |
|---|---|---|---|---|---|---|
| **Connecticut** | 65% | 86 %* | 87%* | **600** | **600** | **600** |
| **Other CESA States** | 71%+ | 83%* | 89%* | **358** | **410** | **374** |
| **Non-CESA States** | 73%+ | 83%* | 89%* | **585** | **528** | **518** |
| **U.S.** | 72%+ | 84%* | 89%* | **943** | **946** | **901** |

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

As in 2005, in Connecticut homeowners are likelier than renters to be aware of PV, as are those with some college or beyond compared to those with a high school degree, higher income earners ($25,000 or more in annual income) than those who earn less money (under $25,000), and men more than women. As in 2005 but unlike 2006, in 2007 people who think global warming is an important issue are slightly more likely to have heard of PV than those who think it is less important. Educating consumers on global warming might be an effective tactic at raising awareness of PV technologies.

Fifty-five percent of Connecticut respondents are aware of fuels cells systems in 2007, a statistically significantly higher percentage than 2005 and from all comparison groups in 2007. 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) | Yes (2007) | Total Respondents (2005) | Total Respondents (2006) | Total Respondents (2007) |
|---|---|---|---|---|---|---|
| **Connecticut** | 39% | 51 %* | 55%* | **600** | **600** | **600** |
| **Other CESA States** | 35% | 31%# | 38%†,∞ | **358** | **410** | **374** |
| **Non-CESA States** | 33%+ | 35%# | 38%*,† | **585** | **528** | **518** |
| **U.S.** | 34%+ | 34%# | 38%*,†,∞ | **943** | **946** | **901** |

+ Significantly different from the 2005 Connecticut sample at the 90% confidence level.
* 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 corresponding 2006 sample at the 90% confidence level.
† Significantly different from 2007 Connecticut sample at the 90% confidence level.

Within Connecticut, 56% of homeowners versus 43% of renters are aware of fuel cells. A high level of education is correlated with recognition: 65% of those having attended graduate school are aware, compared to 59% of those with four-year college degrees, 569% of those with some college, and 38% of those with high school degrees. Similarly, higher levels of income are associated with recognition: awareness is 40% for those with household incomes less than $25,000, 54% for incomes between $25,000 and $50,000, 53% with incomes between $50,000 and $75,000, 56% with incomes between $75,000 and $100,000 and 61% with incomes over $100,000. Respondents 35 years of age and older are more likely to be aware of fuel cells than those under the age of 35. Sixty-nine percent of men are aware compared to 41% of women. Those who think global warming is an important issue are no more likely to have heard of fuel cells than those who think it is less important.

# 6 Likelihood to Purchase Clean Energy

**Summary**
Consumer willingness to pay a premium for clean energy remained largely the same in 2007 as in 2005, with two exceptions. First, the lowest willingness to pay category (for a $1 increase in their electric bill for 50% of their electrical supply from clean energy sources) increased relative to those who would not pay anything for clean energy in 2005. Second, when willingness to pay is screened for awareness of clean energy, the percentage of respondents who are willing to purchase at least one-half clean electricity for at least an additional 5% on their bill increased significantly from 2005 to 2007. Cost is the most commonly mentioned barrier to purchasing clean energy followed by the need for more information 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 half (55%) of Connecticut respondents would be more likely to purchase clean energy if the clean energy supported the development of clean energy in Connecticut, while 44% of Connecticut respondents would be more likely to purchase clean energy if the price, though higher than conventional electricity, were locked for five years. Nearly half (49%) of Connecticut respondents would be less likely to purchase clean energy if it is not certified by an independent consumer organization.

**Discussion**
We asked respondents a battery of "willingness-to-pay" questions to establish some basic market pricing segments for clean energy purchasing potential.[18] 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 of 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.

[18] 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 2007 forty-nine percent of respondents report willingness to purchase all their electricity from clean sources for 10% more on their electric bill. Sixty-four percent indicate willingness to purchase at least half their electricity for a 5% increase. Lastly, another 19% 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) | 8 to 10 (extremely likely, 2007) | Total Respondents (2005) | Total Respondents (2006) | Total Respondents (2007) |
|---|---|---|---|---|---|---|
| 10% increase | 47% | 45% | 49% | **600** | **600** | **600** |
| Cumulative 10% + 5% increase | 60% | 61% | 64% | **600** | **600** | **600** |
| Cumulative 10% + 5% + $1 increase | 74% | 83%* | 83%* | **600** | **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 and 2006, this analysis reveals the current potential market to be much smaller in 2007, and willingness to pay in 2007 for aware respondents is largely stable compared to 2005 and 2006. Only 20% of respondents who show awareness of clean energy say they would be willing to pay 10% more for an entirely clean electricity supply, 25% say they would be willing to purchase at least one-half clean electricity for at least an additional 5% on their bill, and 32% say they would be willing to pay at least an extra $1 for some clean energy. In 2007, the 25% who are willing to purchase at least one-half clean electricity for at least an additional 5% on their bill and the 32% who are willing to pay an extra $1 for some clean energy are significantly greater than the 19% and 23% of respondents, respectively, who said so in 2005.

In 2007, those respondents who are not interested in purchasing clean electricity at any level more frequently articulate why they are not interested than in 2005. Nearly four in ten mention cost, 23% would like more information and 12% are wary of the reliability of clean energy. (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) | 2007 (Percent) |
|---|---|---|---|
| Cost | 14% | 32%* | 39%* |
| Need more info | 13 | 11 | 23*,# |
| Inconvenience/time of switching | 6 | 7 | 3 |
| Nothing | 4 | 14* | 5# |
| Satisfied with current service | 3 | 1 | 0* |
| Lack confidence in the reliability of clean power | 3 | 11* | 12* |
| Don't control my bill | 1 | 1 | 3 |
| Other | 11 | 18 | 9# |
| Don't Know | 46 | 14* | 8* |
| **Total Respondents** | **153** | **103** | **100** |

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

In 2007, nearly two-thirds of all respondents who are interested in purchasing clean electricity would do so to "improve the environment or the planet," while 15% would do so to pollute less, 14% to help global warming and 10% for the future and future generations. (Table 6-3).

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

| Reason | 2005 (Percent) | 2006 (Percent) | 2007 (Percent) |
|---|---|---|---|
| Improve environment/Save planet/world | 50% | 65%* | 63%* |
| Reduce pollution/cleaner air/water | 15 | 21* | 15# |
| Reduce oil dependency | 9 | 13* | 8# |
| Help global warming/climate change | 7 | 11* | 14* |
| Healthier | 4 | 6 | 1*,# |
| Save money/reduce costs | 3 | 8* | 8* |
| For the future, for my children | 3 | 8* | 10* |
| Right thing to do, conscience | 2 | 6* | 3# |
| Save energy | 1 | 1 | 1 |
| Other | 10 | 4* | 2*,# |
| Don't Know | 14 | 1* | 2* |
| **Total Respondents** | **447** | **497** | **500** |

*Significantly different from the 2005 sample at the 90% confidence level.
#Significantly different from the 2006 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 2007 the percentage of respondents who chose prevention of global warming returned to 2005 levels. Thirty-eight percent of Connecticut respondents cite cleaner air and improved health for our children and 27% 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.[19] In addition, the percentage of Connecticut residents who cite global warming is statistically significantly lower than all comparison groups in 2007. These estimates, however, should be viewed with some caution. Although a smaller percentage of Connecticut respondents chose global warming compared to the comparison groups, it still appears that Connecticut residents make a relatively stronger connection between global warming and clean energy compared to comparison groups as 20% identify clean energy as an action individuals can take to address global warming compared to 11% for the United States. (Table 3-7) Furthermore, two smaller surveys (n=300 each) conducted in Connecticut during 2006 (after the 2006 annual survey) show similar estimates to the 2006 annual survey, adding credence to the overall observed upward trends in awareness, knowledge, and attitudinal indicators in Connecticut.

[19] Energy Information Administration (2005). Electricity generated in MWh (CT): Coal: 11.9%; petroleum: 9.4 %; natural gas: 26.4%; other gas: 0.0%; nuclear: 46.4%; hydro: 1.4%; other renewables: 2.2%; other 2.2%.

## Table 6-4: Best Reason to Purchase Clean Electricity

(All Respondents)

| | 2005 | | | | 2006 | | | | 2007 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Examples** | **CT** | **Other CESA States** | **Non-CESA States** | **U.S.** | **CT** | **Other CESA States** | **Non-CESA States** | **U.S.** | **CT** | **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%* | 38%* | 35%* | 40% | 37%*,∞ |
| It reduces our need for foreign oil | 25 | 26 | 26 | 26 | 30* | 30 | 29 | 29 | 27 | 27 | 24∞ | 25∞ |
| It helps prevent global warming | 15 | 15 | 14 | 14 | 20* | 14# | 13# | 14# | 17 | 23*,†,∞ | 23*,†,∞ | 23*,†,∞ |
| It encourages new technologies and creates jobs for our community | 8 | 14+ | 11+ | 12+ | 7 | 10*,# | 10# | 10# | 9 | 10* | 7*,∞ | 8* |
| Don't Know | 6 | 3+ | 5 | 5 | 5 | 8*,# | 10*,# | 9*,# | 9*,∞ | 5† | 6†,∞ | 6†,∞ |
| **Total Respondents** | **600** | **358** | **585** | **943** | **600** | **410** | **528** | **946** | **600** | **374** | **518** | **901** |

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

* 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 corresponding 2006 sample at the 90% confidence level.

† Significantly different from 2007 Connecticut sample at the 90% confidence level.

In 2007, homeowners and women are more likely to cite prevention of global warming than renters and men, respectively; respondents under the age of 45 and those with a college degree are more likely to cite cleaner air and improved health for children, and respondents aged 45 to 54 and respondents with some college education are more likely to cite reducing the need for foreign oil than are those in other age and education groups.

Respondents were read a series of nine statements about clean energy and asked if they would be more or less likely to purchase clean energy if the statement were true. The results are displayed in Table 6-5. Fifty five percent of Connecticut respondents would be more likely to purchase clean energy if the clean energy supported the development of clean energy in Connecticut, while 44% of Connecticut respondents would be more likely to purchase clean energy if the price, though higher than conventional electricity, were locked for five years, and 41% would be more likely to purchase clean energy if the clean energy is endorsed by a national environmental organization. Nearly half (49%) of Connecticut respondents would be less likely to purchase clean energy if it is not certified by an independent consumer organization, and 35% would be less likely to purchase clean energy if it were recommended by a community leader.

## Table 6-5: Clean Energy Factors Affecting Likelihood to Purchase Clean Energy

(All Respondents)

| Clean Energy Factor | 2006 | | | | 2007 | | | |
|---|---|---|---|---|---|---|---|---|
| | CT | Other CESA States | Non-CESA States | U.S. | CT | 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%* | 23% | 37%† | 31%† | 34%† |
| About as likely to purchase (5 to 7) | 42 | 37 | 41 | 39 | 37∞ | 42 | 46†,∞ | 45†,∞ |
| More likely to purchase (8 to 10) | 29 | 22* | 20* | 21* | 27 | 18† | 19† | 18† |
| Don't' Know | 7 | 6 | 9 | 8 | 13∞ | 2†,∞ | 4†,∞ | 3†,∞ |
| **Clean energy purchase supports development of clean energy in your state** | | | | | | | | |
| Less likely to purchase (0 to 4) | 8 | 11 | 13* | 12* | 9 | 12 | 11 | 12 |
| About as likely to purchase (5 to 7) | 29 | 34* | 32 | 33* | 30 | 36† | 40†,∞ | 38†,∞ |
| More likely to purchase (8 to 10) | 61 | 48* | 49* | 49* | 55∞ | 50 | 46† | 48† |
| Don't' Know | 3 | 6* | 6* | 6* | 6∞ | 2†,∞ | 3†,∞ | 2†,∞ |
| **Clean energy is not certified by a consumer organization** | | | | | | | | |
| Less likely to purchase (0 to 4) | 54 | 48* | 48* | 48* | 49∞ | 44 | 42†,∞ | 43†,∞ |
| About as likely to purchase (5 to 7) | 28 | 29 | 32 | 30 | 30 | 36†,∞ | 37† | 36†,∞ |
| More likely to purchase (8 to 10) | 12 | 15 | 13 | 14 | 12∞ | 18† | 18†,∞ | 18†,∞ |
| Don't' Know | 6 | 8 | 7 | 8 | 9 | 2†,∞ | 3†,∞ | 3†,∞ |
| **Clean energy is licensed and regulated by your state** | | | | | | | | |
| Less likely to purchase (0 to 4) | 16 | 22* | 24* | 21* | 21∞ | 26 | 20 | 23 |
| About as likely to purchase (5 to 7) | 41 | 42 | 36* | 39 | 34∞ | 39 | 42†,∞ | 41† |
| More likely to purchase (8 to 10) | 39 | 30* | 33* | 32* | 37 | 33 | 35 | 34 |
| Don't' Know | 5 | 6 | 7 | 7 | 7∞ | 3†,∞ | 4†,∞ | 3†,∞ |
| **Clean energy is endorsed by a national environmental organization** | | | | | | | | |
| Less likely to purchase (0 to 4) | 15 | 26* | 29* | 28* | 16 | 27† | 23†,∞ | 25†,∞ |
| About as likely to purchase (5 to 7) | 36 | 39 | 31* | 35 | 36 | 40 | 40∞ | 40†,∞ |
| More likely to purchase (8 to 10) | 45 | 30* | 33* | 32* | 41 | 31† | 34† | 33† |
| Don't' Know | 5 | 5 | 7 | 6 | 8∞ | 2†,∞ | 3†,∞ | 3†,∞ |

| Clean Energy Factor | 2006 | | | | 2007 | | | |
|---|---|---|---|---|---|---|---|---|
| | CT | Other CESA States | Non-CESA States | U.S. | CT | Other CESA States | Non-CESA States | U.S. |
| **Could not purchase clean energy from your current utility** | | | | | | | | |
| Less likely to purchase (0 to 4) | 30 | 38* | 34 | 36* | 26∞ | 35† | 34† | 34† |
| About as likely to purchase (5 to 7) | 36 | 33 | 36 | 34 | 33 | 38 | 37 | 38† |
| More likely to purchase (8 to 10) | 28 | 21* | 22* | 21* | 26 | 24 | 24 | 24 |
| Don't' Know | 7 | 8 | 8 | 8 | 15∞ | 3†,∞ | 5†,∞ | 4†,∞ |
| **A community leader recommends purchasing the clean energy** | | | | | | | | |
| Less likely to purchase (0 to 4) | | | | | 35 | 38 | 39 | 39 |
| About as likely to purchase (5 to 7) | | | | | 38 | 38 | 42 | 40 |
| More likely to purchase (8 to 10) | | | | | 19 | 22 | 16 | 19 |
| Don't Know | | | | | 8 | 2† | 3† | 2† |
| **The clean energy is recommended by your family, friends or neighbors** | | | | | | | | |
| Less likely to purchase (0 to 4) | | | | | 22 | 26 | 23 | 24 |
| About as likely to purchase (5 to 7) | | | | | 37 | 38 | 46† | 43† |
| More likely to purchase (8 to 10) | | | | | 34 | 35 | 29† | 31 |
| Don't Know | | | | | 7 | 2† | 2† | 2† |
| **The price for clean energy is slightly higher but remains locked for five years** | | | | | | | | |
| Less likely to purchase (0 to 4) | | | | | 16 | 17 | 16 | 17 |
| About as likely to purchase (5 to 7) | | | | | 30 | 44† | 46† | 45† |
| More likely to purchase (8 to 10) | | | | | 44 | 37† | 35† | 36† |
| Don't Know | | | | | 11 | 2† | 3† | 2† |
| **Total Respondents** | **600** | **410** | **528** | **946** | **600** | **374** | **518** | **901** |

# 7 Clean Energy Organizations

**Summary**
Recognition of CCEF increased from 2005 to 2007, from 27% to 36% 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 rebates or incentives that are available for rooftop solar photovoltaic systems increased from 10% in 2005 to 23% in 2007. Awareness of clean energy communications from various sources rose as well from 2005 to 2006, as 23% of respondents recently heard about programs or organizations that sponsor clean energy (compared to 13% in 2005).

**Discussion**
In 2007 23% 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) | Yes (2007) | Total Respondents (2005) | Total Respondents (2006) | Total Respondents (2007) |
|---|---|---|---|---|---|---|
| **Percent** | 13% | 21%* | 23%* | **600** | **600** | **600** |

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

In 2007, 5% of respondents are able to recall the names of the clean energy programs or organizations; this represents 23% 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 environmental organizations, the Connecticut Clean Energy Fund and the two major Connecticut Utilities. (Table 7-3).

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

| | Yes (2005) | Yes (2006) | Yes (2007) | Total Respondents (2005) | Total Respondents (2006) | Total Respondents (2007) |
|---|---|---|---|---|---|---|
| **Percent of All Respondents** | 3% | 5%* | 5%* | **600** | **600** | **600** |
| **Percent of Those Asked** | 25% | 25% | 23% | **77** | **125** | **144** |

* Significantly different from Connecticut 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) | Number of Responses (2007) |
|---|---|---|---|
| Utility; Connecticut Light & Power; United Illuminating | 3 | 12* | 3# |
| Connecticut Clean Energy Fund | 2 | 1 | 4 |
| Federal government general | 2 | 2 | 0 |
| President Bush's Clear Skies Initiative | 2 | 0 | 0 |
| City/town government | 1 | 0 | |
| State government general | 1 | 0 | |
| Connecticut Clean Energy Trail | 1 | 0 | |
| U.S. Environmental Protection Agency | 1 | 1 | 1 |
| 20% by 2010 Clean Energy Campaign | 0 | 1 | |
| Environmental groups | 0 | 1 | 6*,# |
| Sterling Planet | 0 | 0 | 1 |
| The Regional Greenhouse Gas Initiative (Reggie) | 0 | 0 | 1 |
| Other | 6 | 12 | 2*,# |
| Don't Know | 5 | 2 | 15 |
| **Total Respondents** | **19** | **32** | **32** |

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

# Significantly different from Connecticut 2006 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 2007, with 36% of Connecticut residents aware of CCEF and 30% aware of the Connecticut Center for Science and Exploration, Awareness of CCEF, though higher in 2007 compared to 2005, appears to have declined from 2006 to 2007. 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) | Yes (2007) |
|---|---|---|---|
| EPA | 83% | 89%* | 81%# |
| Connecticut Clean Energy Fund | 27% | 44%* | 36%*,# |
| President Bush's Clear Skies Initiative | 25% | 23% | 22%# |
| The Connecticut Center for Science and Exploration | 22% | 31%* | 30%* |
| Smart Power | 13% | 17%* | 15% |
| Connecticut Clean Energy Communities | 10% | 16%* | 13%* |
| Connecticut Clean Energy Trail | 9% | 14%* | 12%* |
| 20% by 2010 Clean Energy Campaign | 6% | 10%* | 9%* |
| Community Energy | 6% | 8% | 7% |
| Sterling Planet | 3% | 3% | 5% |
| The Regional Greenhouse Gas Initiative ("RGGI")[1] | NA | 18% | 17% |

[1] Awareness of The Regional Greenhouse Gas Initiative ("RGGI") was not asked in 2005
*Significantly different from the 2005 sample at the 90% confidence level.
# Significantly different from Connecticut 2006 sample at the 90% confidence level.

Awareness of the CCEF is higher among respondents 35 to 64 years old (40 to 41%) compared to respondents 65 and over (28%) and under the age of 35 (32%). Homeowners (38%) are more likely to be aware of CCEF than renters (23%) and respondents with incomes over $25,000 per year are more likely to be aware of CCEF than those earning under $25,000 per year. Respondents with at least some college education are more likely to be aware of CCEF than those with a high school degree.

In 2007 a higher percentage of respondents who are aware of specific clean energy organizations or programs are able to describe what each organization or program is and what it does, except for the Connecticut Clean Energy Community program (Table 7-5). However, as in 2005 and 2006, 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 | | | | | 2007 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 | CT Clean Energy Fund | Smart Power | Community Energy | Sterling Planet | CT Cl Energ Commu |
| Promote clean energy | 12% | 3% | 3% | 0% | 5% | 27%* | 10%* | 6% | 6% | 8% | 25%* | 10%* | 14% | 38%*,# | 11% |
| Promote clean air/reduce pollution | 4 | 1 | 0 | 0 | 3 | 7 | 0 | 6 | 6 | 4 | 3# | 1 | 0 | 3 | 4 |
| Help environment | 3 | 3 | 3 | 0 | 2 | 3 | 0* | 2 | 0 | 7 | 3 | 0* | 0 | 0 | 6 |
| Solicits donations | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 |
| Saves energy | 1 | 1 | 3 | 0 | 0 | <1 | 7* | 2 | 0 | 1 | 1 | 7* | 2 | 0 | 1 |
| Use taxes or funds | 3 | 0 | 0 | 0 | 0 | 10* | 1 | 0 | 0 | 0 | 16*,# | 0 | 0 | 0 | 1 |
| Use resources wisely | 0 | 3 | 0 | 0 | 0 | 0 | 0* | 0 | 0 | 0 | 0 | 0* | 0 | 0 | 0 |
| Wind, solar, water energy; fuel cells | 0 | 2 | 0 | 0 | 2 | 3* | 4 | 0 | 0 | 0 | 2* | 4 | 5 | 10 | 3# |
| Associated with CCEF | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| Energy Monitoring System | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 4 | 7 | 0 | 11 | 5 | 5 | 10 | 16* | 19 | 1 | 4 | 23*,# | 19* | 3 | 1 |
| Don't Know | 75 | 80 | 91 | 89 | 87 | 57* | 68* | 67* | 69 | 76* | 62* | 59* | 67* | 48*,# | 77 |
| **Total Respondents** | **161** | **75** | **35** | **18** | **60** | **261** | **126** | **49** | **16** | **97** | **213** | **92** | **29** | **29** | **79** |

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

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

In 2007 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 (13% of all respondents), 22% 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) | Yes (2007) | Total Respondents (2005) | Total Respondents (2006) | Total Respondents (2007) |
|---|---|---|---|---|---|---|
| **Percent of All Respondents** | 2% | 3% | 3% | 600 | 600 | 600 |
| **Percent of Those Aware of CCEC** | 20% | 15% | 22% | 60 | 97 | 79 |

We asked respondents what organizations or companies they would turn to for information regarding clean electricity. In 2007, 27% mention the two major investor-owned utilities in Connecticut (Connecticut Light & Power or United Illuminating), 6% would look on the internet 4% would turn to the U.S. EPA. Fifty four percent say they do not know where they would look (Table 7-7).

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

| Organization | Percent (2005) | Percent (2006) | Percent (2007) |
|---|---|---|---|
| Utility: Connecticut Light & Power; United Illuminating | 30% | 32% | 27% # |
| Would look on Internet | 7 | 9 | 6 # |
| Connecticut Clean Energy Fund | 4 | 2* | 3 |
| City/town government | 3 | 2 | 1 * |
| State government general | 2 | 4* | 3 |
| Federal government general | 2 | 2 | 1 |
| EPA, U.S. Environmental Protection Agency | 2 | 4* | 4 * |
| Scientists | 0 | 3* | <1 |
| Media sources | 0 | 2* | 2 * |
| Friends, family, co-workers | 0 | 1* | <1 |
| Smart Power | 1 | 0* | 1 # |
| Contractor | 1 | 0* | <1 |
| Would look in Yellow Pages | 1 | 0* | <1 |
| Connecticut Energy Cooperative | 1 | 1 | <1 # |
| Connecticut Department of Public Utilities | 1 | 1 | 1 |
| Environmental Organizations | 1 | 9* | 1 # |
| Green Mountain Energy | 0 | 0 | <1 |
| Clear Skies Initiative, President Bush | 0 | 0 | <1 |
| Community Energy | 0 | 1* | <1 |
| CT Clean Energy Trail | 0 | 1* | <1 |
| CT Clean Energy Communities | 0 | 1* | 0# |
| Other | 6 | 3* | 1 *,# |
| Don't Know | 50 | 42* | 54# |
| **Total Respondents** | **600** | **600** | **600** |

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

Awareness of rebates or incentives that are available for rooftop solar photovoltaic systems increased from 10% in 2005 to 23% in 2007. (Table 7-8)

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

| | Yes (2005) | Yes (2006) | Yes (2007) | Total Respondents (2005) | Total Respondents (2006) | Total Respondents (2007 |
|---|---|---|---|---|---|---|
| **Percent** | 10% | 23%* | 23%* | **600** | **600** | **600** |

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

Homeowners, respondents with some college or more education, people making more than $75,000 per year, and men are likelier than others to be aware of rebates for PV systems.

In 2007, twenty-seven 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 5% believe that the Connecticut utilities would be the sponsor, a statistically significant lower percentage of respondents than 2005 and 2006. No respondents name the CCEF, indicating they may not know where to apply for rebates if they want to.

**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) | Percent (2007) |
|---|---|---|---|
| Federal government | 29% | 29% | 27% |
| Utility; Connecticut Light & Power; United Illuminating | 14 | 11 | 5*,# |
| State government general | 9 | 16 | 16 |
| Connecticut Clean Energy Fund | 7 | 3 | 0*,# |
| Smart Power | 2 | 0 | 0 |
| Connecticut Department of Public Utilities | 2 | 1 | 0 |
| Manufacturers | 2 | 2 | 1 |
| Contractors | 2 | 0 | 1 |
| Other | 0 | 1 | 0 |
| Don't Know | 40 | 45 | 59*,# |
| **Total Respondents** | **58** | **139** | **137** |

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

# 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 from 26% in 2005 to 38% in 2007. The percentage of respondents who have seen or heard about clean energy on news programs or stories or on television advertisements increased from 2005 to 2007. Recognition of the phrase "It's real, it's here, it's working" declined from 2005 to 2007, and awareness of the Connecticut Clean Energy Option program is low at 12%, although higher than a set of hypothetical programs for comparison. The relatively high percentage of respondents who say they have seen something about clean energy in newspapers indicates appropriate program targeting of activities that focus on generating earned media at the local level.

**Discussion**
In 2007 thirty eight percent 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) | Yes (2007) | Total Respondents (2005) | Total Respondents (2006) | Total Respondents (2007 |
|---|---|---|---|---|---|---|
| **Percent of All Respondents** | 26% | 41%* | 38%* | **600** | **600** | **600** |

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

Homeowners are more likely to have heard something about clean energy than renters (50% of homeowners compared to 38% of renters). Higher levels of education are associated with hearing something about clean energy: 36% of respondents with a high school degree have heard something about clean energy recently, compared to 47% of respondents with some college, 49% with a college degree and 56% of respondents who have attended graduate school. Respondents with annual household incomes over $100,000 were the most likely to have heard about clean energy (62%) and 52% of men compared to 44% of women have heard about clean energy recently.

As in 2005 and 2006, among those who have recently heard something about clean energy, a variety of topics are mentioned, including clean energy in general, hybrid cars, wind, solar and ethanol (Table 8-2). Unlike previous years, respondents in 2007 mentioned Al Gore or his film *An Inconvenient Truth* while others said that clean energy was something that society needed to address, indicating the impact of the movie on global warming awareness applies to at least 4% of the Connecticut population.

**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) | Percent (2007 |
|---|---|---|---|
| Hybrid/hydrogen cars | 14% | 15% | 8%*,# |
| General clean/renewable energy | 12 | 15 | 27*,# |
| Hydrogen/fuel cells | 8 | 7 | 3*,# |
| Wind mills | 7 | 15* | 15* |
| Politics/legislation/standards | 7 | 7 | 1*,# |
| Solar power | 3 | 11* | 8* |
| Cost | 3 | 4 | 3 |
| Buying clean energy | 3 | 0* | 3# |
| Natural gas | 1 | 1 | 0 |
| Landfill gas | 1 | 0 | 0 |
| Hydro | 1 | 1 | 3 |
| Cleaner/better | 1 | 7* | 1# |
| Ethanol/corn | 0 | 9* | 10* |
| Less fossil fuels/alternative fuels | 0 | 5* | 4* |
| CCEF, slogans, utility mailers, sign-up | 0 | 6* | 3* |
| Global warming | 0 | 3* | 5* |
| Al Gore's movie; Al Gore | 0 | 0 | 4*,# |
| Something society needs to do | 0 | 0 | 4*,# |
| Conservation | 0 | 0 | 2* |
| Biodiesel | 0 | 2* | 1 |
| Nuclear | 0 | 2* | 2* |
| Other | 9 | 16* | 11 |
| Don't Know | 33 | 9* | 13* |
| **Total Respondents** | **154** | **246** | **226** |

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

As in 2005 and 2006, among those who have recently heard something about clean energy, most 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, or through a bill insert increased significantly from 2005 to 2007.

**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) | Percent (2007 |
|---|---|---|---|
| News stories-newspapers | 31% | 35% | 41%* |
| News stories-television | 30 | 45* | 41* |
| News stories-magazines | 16 | 18 | 14 |
| News stories-radio | 11 | 11 | 11 |
| Internet | 10 | 10 | 10 |
| Advertising-newspapers | 7 | 6 | 4 |
| Articles-scientific journals | 6 | 1* | 2* |
| Advertising-television | 4 | 13* | 10* |
| Conversations with friends, family, or co-workers | 4 | 3 | 4 |
| Advertising-magazines | 3 | 4 | 3 |
| Advertising-radio | 2 | 6* | 3 |
| Newsletter from organization | 1 | 2 | 0* |
| Builder/contractor | 1 | 0 | 0 |
| Materials/information that children brought home from school | 1 | 0 | 0 |
| Information from my town or city government | 1 | 1 | 1 |
| Bill inserts from my utility/electric | 1 | 6* | 4* |
| Advertising-billboards | 0 | 2* | 1 |
| Library | 0 | 1 | 0 |
| Science center or museum | 0 | 1 | 0 |
| Other | 2 | 2 | 4 |
| Don't Know | 8 | 3* | 4* |
| **Total Respondents** | **154** | **251** | **226** |

* Significantly different from Connecticut 2005 sample at the 90% confidence level.
# Significantly different from Connecticut 2006 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.[20] Recognition of the phrase "It's real, it's here, it's working" declined from 2005 to 2007, with fewer respondents completely certain they have seen or heard the phrase and more respondents are completely certain they have not seen or heard the phrase. (Table 8-4) As in 2005 and 2006, claimed recognition is

[20] 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.

highest for the following fictitious slogan: **"**Clean energy: for Connecticut, for the Earth" slogan —with 16% being somewhat or completely certain they have seen or heard it. Eleven percent are somewhat or completely certain they have heard the actual CCEF slogan "It's real, it's here, it's working**"** while 13% have seen or heard "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)

| | 2005 | | | | | 2006 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Slogan** | **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.

## Table 8-4: Recall of Slogans (Cont'd)

(All Respondents)

| | 2007 | | | | | |
|---|---|---|---|---|---|---|
| **Slogan** | **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** | **Total Respondents** |
| **"It's real, it's here, it's working."** | 5%*,# | 6 | 7*,# | 7* | 76*,# | **600** |
| **"Green up."** | 8% | 5# | 7*,# | 7 | 73*,# | **600** |
| **"Clean energy: for Connecticut, for the earth."** | 9% | 7# | 7*,# | 7# | 70*,# | **600** |

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

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

In 2007 we tested awareness of the Connecticut Clean Energy Option program (CCEOP) against two other programs that do not exist. Recognition of the CCEOP is relatively low, with 12% of respondents completely or somewhat certain they had seen or heard it. (Table 8-5) However, recognition of CCEOP was higher than recognition of the "RENEW Connecticut Program" (9% awareness) and the "Connecticut Climate Challenge Program" (3% awareness).

**Table 8-5: Recall of Clean Energy Programs**
(All Respondents)

| Clean Energy Program | 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 | Total Respondents |
|---|---|---|---|---|---|---|
| **"The Connecticut Clean Energy Option Program"** | 6% | 6 | 6 | 6 | 78 | **600** |
| **"The RENEW Connecticut Program"** | 4% | 5 | 6 | 5 | 80 | **600** |
| **"The Connecticut Climate Challenge Program"** | 2% | 1 | 5 | 5 | 87 | **600** |

# 9 Personal Actions Related to Clean Energy

**Summary**
Personal actions related to clean energy increased significantly from 2005 to 2007, 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 2007 the percentage of respondents who reported speaking with friends, relatives, neighbors, or co-workers about clean electricity over the past year increased to 42% from 25% in 2005 and 37% in 2006. (Table 9-1).

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

| | Yes (2005) | Yes (2006) | Yes (2007) | Total Respondents (2005) | Total Respondents (2006) | Total Respondents (2007) |
|---|---|---|---|---|---|---|
| **Percent** | 25% | 37%* | 42%*,# | **600** | **600** | **600** |

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

In 2007 14% brought up the topic of clean electricity themselves, 12% said someone else brought it up, and 13% said it was some combination (Table 9-2).

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

| | Percent (2005) | Percent (2006) | Percent (2007) |
|---|---|---|---|
| I brought it up | 8% | 11%* | 14%*,# |
| They brought it up | 7 | 12* | 12* |
| Both I/they brought it up | 8 | 10 | 13* |
| **Total Respondents** | **600** | **600** | **600** |

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

In 2006 age is correlated with degree of proactivity: 34% of those 35 to 44 years old, 30% of those 43 to 54 and 29% of those 55 to 64 say they brought it up themselves, compared to 18% of those 34 years old or younger and 23% of those 65 years of age or older. Education is also correlated, with 17% of those with a high school degree being proactive compared to 26% of those with some college education, 27% of those with a college degree and 40% of those with graduate education being proactive. Homeowners are more likely to be proactive than renters with 29% of homeowners proactive compared to 13% of renters, and 30% of men are proactive compared to 23% of women.

In 2007, a higher percentage of Connecticut respondents have taken one of the actions listed in Table 9-3 over the past year than respondents in 2005. 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 (9%).

**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) | Yes (2007) | Total Respondents (2005) | Total Respondents (2006) | Total Respondents (2007) |
|---|---|---|---|---|---|---|
| **…written letters to elected officials about clean energy?** | 3% | 4% | 4% | **600** | **600** | **600** |
| **…written letters to newspapers or magazines about clean energy?** | 2% | 2% | 3% | **600** | **600** | **600** |
| **…made a donation to a charitable organization because of its commitment to clean energy as a way of generating electricity?** | 8% | 12%* | 9%# | **600** | **600** | **600** |
| **…joined or participated in an organization because of its commitment to clean energy as a way of generating electricity?** | 5% | 5% | 5% | **600** | **600** | **600** |
| **…called an 800 number to find out about purchasing clean energy to supply your electricity?** | 2% | 4%* | 3% | **600** | **600** | **600** |
| **…visited a website dealing with clean energy as a way of generating electricity?** | 9% | 15%* | 15%* | **600** | **600** | **600** |

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

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

Overall, 15% of respondents have taken some action regarding clean energy (including the first four actions listed above in Table 9-3); while 16% 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 you… | Yes (2005) | Yes (2006) | Yes (2007) | Total Respondents (2005) | Total Respondents (2006) | Total Respondents (2007) |
|---|---|---|---|---|---|---|
| **..taken some type of action regarding clean energy** | 12% | 16%* | 15% | **600** | **600** | **600** |
| **..sought some type of information regarding clean energy** | 9% | 17%* | 16%* | **600** | **600** | **600** |

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

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

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 seek information than renters.

# 10 Attitudinal Segments

**Summary**
In 2007, belief in clean energy increased, while skepticism and lack of empowerment declined among Connecticut respondents. As a result, the Ideals segment has increased from 30% of respondents in 2005 to 37% of respondents in 2007 while Doubters have declined from 21% to 13% of respondents and Cynics have declined from 18% to 14% of 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 and Undecideds) shifted to the Ideals segments, while some Cynics and Doubters shifted to the Eeyores segment. Given these attitudinal shifts, the target market segments appear to be the Ideals (as in 2005 and 2006) with the Doubters and Eeyores as secondary targets.

## 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 and 2006, the highest level of agreement for any of the statements is that clean energy will reduce our dependency on foreign oil, with 87% of respondents somewhat or strongly agreeing. Seventy-three 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, 69% somewhat or strongly disagree that clean energy does not help address global warming and 70% somewhat or strongly disagree that using clean energy makes little difference to the environment.

### Table 10-1: Attitudes toward Clean Energy, 2007

(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 | 67% | 20 | 4 | 0 | 1 | 4 | 4 |
| The use of clean energy can provide a reliable source of electricity for my home | 48% | 25 | 8 | 1 | 1 | 4 | 12 |
| 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 | 47% | 26 | 7 | 3 | 3 | 7 | 8 |
| 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 | 37% | 14 | 6 | 2 | 8 | 21 | 12 |
| If I weren't satisfied with using clean energy in my home, I could easily go back to what I was using before | 34% | 22 | 8 | 3 | 5 | 10 | 18 |
| There is enough clean energy to provide electricity for thousands of homes and businesses in Connecticut | 29% | 17 | 8 | 3 | 5 | 15 | 23 |
| It would be easy to use clean energy to supply the electricity in my home | 28% | 19 | 8 | 5 | 9 | 12 | 18 |
| There's nothing much I can do to increase the use of clean energy sources in this area of the country | 18% | 11 | 7 | 6 | 16 | 33 | 9 |
| Whether or not I use clean energy to supply my electricity makes little difference to the environment | 13% | 6 | 3 | 3 | 14 | 56 | 5 |
| Clean energy could NOT meet all of my household's electricity needs | 14% | 10 | 6 | 4 | 13 | 32 | 22 |
| I don't believe using clean energy sources to generate electricity does very much to reduce global warming. | 10% | 7 | 4 | 3 | 12 | 57 | 9 |

There are a few differences in the attitudes of respondents in 2007 compared to 2005 that are worth noting (Table 10-1, Table 10-2). Nearly half (47%) 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 11% from 2005). Further, nearly half (48%) of all respondents strongly agree that clean energy can provide a reliable source of electricity for their homes (an increase of 11% from 2005) and over half (54%) agree that clean energy can provide enough energy for thousands of homes and businesses in Connecticut (an increase of 7% from 2005); 55% 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 7% from 2005). However, compared to 2006 fewer respondents disagree with the statement that they have no way of knowing the source of their electricity. In summary, compared to 2005, respondents in 2007 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) | Agree, 2007 (percent) | Disagree, 2007 (percent) |
|---|---|---|---|---|---|---|
| Using clean energy to provide my electricity will help reduce our need for foreign oil | 86% | 8% | 88% | 8% | 90%* | 6%*,# |
| The use of clean energy can provide a reliable source of electricity for my home | 77 | 12 | 82* | 10 | 82* | 6*,# |
| 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* | 80* | 12* |
| 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 | 57 | 31# |
| 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* | 64 | 18# |
| There is enough clean energy to provide electricity for thousands of homes and businesses in Connecticut | 47 | 26 | 54* | 29 | 54* | 23# |
| It would be easy to use clean energy to supply the electricity in my home | 54 | 23 | 59* | 25 | 56 | 26 |
| 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* | 36 | 55* |
| Whether or not I use clean energy to supply my electricity makes little difference to the environment | 22 | 69 | 27* | 71 | 23 | 72 |
| Clean energy could NOT meet all of my household's electricity needs | 28 | 45 | 34* | 51* | 30 | 49 |
| I don't believe using clean energy sources to generate electricity does very much to reduce global warming. | 21 | 65 | 21 | 71* | 20 | 71* |

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

# Significantly different from Connecticut 2006 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 and 2007 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 and have increased significantly from 2005. Compared to 2005 there are fewer Doubters (13%) and Cynics (15%) and compared to 2006 there are fewer Undecideds (14%%) but more Eeyores (22%). With the increased belief in clean energy benefits, decreased skepticism and decreased feeling of lack of empowerment observed in the attitudinal questions, we suggest that Doubters, and perhaps some Undecideds and Cynics, shifted to the Ideals segment, while some Cynics and Doubters shifted to the Eeyores segment.

## Table 10-4: Clusters Descriptions

(All Respondents)

| Clusters | Percent | | | Description | Belief in Clean Energy Benefits | Skepticism about Clean Energy | Lack of Empowerment |
|---|---|---|---|---|---|---|---|
| | 2005 | 2006 | 2007 | | | | |
| Ideals | 30% | 33% | 37%* | Positive about the benefits of clean energy and their ability to take action | Very High | Very Low | Very Low |
| Doubters | 21 | 16* | 13* | Limited belief in benefits of clean energy | Medium-Low | Medium | Medium |
| Eeyores | 20 | 18 | 22# | Positive about potential benefits but do not feel empowered to take action | High | Low | Very high |
| Undecideds | 12 | 18* | 14# | Skeptical about the efficacy of clean energy, but feel empowered to take action if they choose | Medium-High | High | Low |
| Cynics | 18 | 15 | 14* | Skeptical about efficacy of clean energy and do not feel empowered to take action | High | Very high | Very high |
| **Total categorized** | **559** | **584** | **579** | | | | |
| Could not be categorized | 41 | 16 | 21 | | | | |
| **Total** | **600** | **600** | **600** | | | | |

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

# Significantly different from Connecticut 2006 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 largely comparable between 2005, 2006 and 2007. As in 2005 and 2006, 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 a lower proportion of respondents with college degrees, and they have a lower proportion with annual household incomes of $75,000 or more and a higher proportion of respondents 55 years old or older. Notable changes in demographic profiles between 2006 and 2007 include a larger proportion of Doubters with incomes of $75,000 or more and higher proportions of Doubters and Eeyores with a college degree.

**Table 10-5: Cluster Demographics**
(All Respondents)

| Category | Ideals | Undecideds | Doubters | Eeyores | Cynics | Overall |
|---|---|---|---|---|---|---|
| Household income: $75,000 or more | 60% | 51% | 52% | 49% | 38% | 52% |
| Household income: $100,000 or more | 38 | 38 | 38 | 25 | 30 | 34 |
| **Total Respondents** | **144** | **47** | **48** | **93** | **50** | **382** |
| Home ownership | 89% | 89% | 85% | 87% | 82% | 87% |
| Education: four-year college degree or higher | 60 | 44 | 63 | 53 | 33 | 53 |
| Age: 34 or under | 18 | 6 | 19 | 12 | 14 | 15 |
| Age: 35 to 54 | 51 | 53 | 52 | 45 | 37 | 48 |
| Age: 55 or over | 30 | 41 | 29 | 43 | 49 | 37 |
| Gender: Male | 41 | 56 | 55 | 55 | 59 | 51 |
| **Total Respondents** | **206-215** | **70-75** | **75-80** | **120-130** | **65-79** | **539-579** |

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 and Doubters are more likely to be both aware of the availability of clean energy and say they will pay extra for clean energy (after screening for awareness of clean energy) than other segments, and Ideals are more likely to be aware of CCEF. In addition, over half of Ideals and Eeyores name global warming as the most important environmental problem and feel that global warming is more important than other issues facing the world. Over 60% of Ideals and Eeyores are more likely to purchase clean energy if it supports the development of more clean energy in Connecticut while over 50% of Ideals, Doubters and Eeyores are less likely to purchase clean energy if it is not certified by an independent consumer organization. Over half of Ideals are more likely to purchase clean energy if the price is locked for five years. In relation to global warming, 89% of Ideals and over 70% of Doubters and Eeyores think there are actions individuals can take to help reduce global warming and over half of Ideals think that Connecticut's leaders could do a great deal to help reduce global warming. Finally, seven of the nine respondents who are current subscribers to the Connecticut Clean Energy Option are Ideals.

Compared to 2005, higher proportions of all cluster groups have recently seen or heard about clean energy and talked with others about clean energy, higher proportions of all cluster groups except Cynics identify global warming as the most important environmental problem, a higher proportion of Ideals is aware of CCEF, and higher proportions of Doubters and Eeyores are aware of availability of clean energy.

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

| Category | Ideals | Undecideds | Doubters | Eeyores | Cynics | Overall |
|---|---|---|---|---|---|---|
| Aware of Clean Energy | 84%* | 68% | 78%* | 85%* | 67% | 79%* |
| Mention Clean Energy Example | 66 | 52 | 59 | 62* | 41 | 59* |
| Recently Seen/Heard about Clean Energy | 57* | 49* | 50* | 39*,## | 42* | 49* |
| Talked with Others about Clean Energy | 50* | 45*,# | 43* | 42*,# | 24* | 43*,# |
| Aware of the Availability of Clean Energy Supply for Home | 47 | 47 | 53* | 36* | 41 | 44* |
| Willing to Pay extra 10% on bill for 100% Clean Energy Supply | 60 | 40 | 41# | 49 | 34 | 49## |
| Aware of CCEF | 42* | 33 | 33 | 36 | 23## | 35*,## |
| Aware of clean energy *and* aware of ability to purchase grid-delivered clean energy at home *and* willing to pay 10% more for clean energy | 26 | 12 | 24# | 17 | 13 | 20 |
| Identify global warming as the single most important environmental problem | 55*,# | 33*,# | 36* | 50*,# | 28 | 45*,# |
| Rate global warming as more important than other major issues facing the world | 55 | 45 | 38 | 56* | 34** | 49 |
| More likely to purchase clean energy if it supports more clean energy in CT | 61## | 48 | 58 | 62 | 30## | 55## |
| Less likely to purchase clean energy if it is not certified by a consumer organization | 54 | 39 | 51 | 54 | 37 | 49## |
| More likely to purchase clean energy if the price locked for 5 years | 53 | 44 | 38 | 42 | 28 | 44 |
| Think there are actions individuals can take to help reduce global warming | 89 | 60 | 71 | 79 | 55 | 76 |
| Leaders could do a great deal about global warming | 59# | 27 | 35 | 48 | 27 | 45 |
| Current subscriber to CTCEO | n=7 | n=1 | n=1 | n=0 | n=0 | n=9 |
| Previous subscriber to CTCEO or other clean energy program | n=3 | n=2 | n=3 | n=3 | n=1 | n=12 |
| **Total respondents** | **180-215** | **51-75** | **62-80** | **110-130** | **53-79** | **456-579** |

*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 and 2006, 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 2007, suggesting that messaging emphasizing the benefits of clean energy may be resonating with respondents, perhaps contributing to the decline in the number of Doubters and Cynics from 2005 to 2007. 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. At 37% of the customer base, they are the largest segment. They are more educated than nearly all 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 have high levels of awareness 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 name global warming as the single most important environmental problem, rate global warming as more important than other issues facing the world, and believe that there are actions individuals can take to help reduce global warming. Ideals are more likely to purchase clean energy if it supports the development of more clean energy in Connecticut and more likely to purchase clean energy if the price is locked for five years despite being higher than conventionally produced electricity. Finally, it is worth noting that seven of the nine respondents who are current subscribers to the Connecticut Clean Energy Option are Ideals.

Doubters, making up an additional 13% of the population, are the secondary target group. 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, and their willingness to pay 10% more for clean energy after taking awareness of clean energy and awareness of grid-delivered clean energy into account increased significantly from 2006 to 2007, surpassed only by Ideals. They are also relatively affluent and are the most well-educated segment.

Eeyores, making up an additional 22% of the population, are a potential target group, but lower priority than Doubters. Eeyores believe in the benefits and efficacy of clean energy but do not feel empowered to take action. They have high levels of awareness of clean energy and the second highest level of willingness to pay 10% more for clean energy, but, perhaps critically, they have the lowest level of awareness of the availability of clean energy for their homes and are least likely to have seen or heard about clean energy recently. Further, half of Eeyores name global warming as the single most important environmental problem, over half rate global

warming as more important than other issues facing the world, and nearly eight in ten believe that there are actions individuals can take to help reduce global warming. Finally, Eeyores are more likely to purchase clean energy if it supports the development of more clean energy in Connecticut

Undecideds, an additional 14% of the population, no longer appear to be a good choice as the secondary target group. They are skeptical about the efficacy of clean energy, but feel empowered to take action if they choose. After taking awareness of clean energy and grid-delivered clean energy into account, 12% would pay 10% more for clean energy, the lowest percentage of any segment.

Further examination of the demographic characteristics, attitudes and knowledge of current and previous customers to the CTCEO program is difficult because there are so few respondents (n=9 for current customers and n=12 for previous customers), but several factors seem to distinguish both current and previous customers from the general population. Both types of customers (current and previous) appear more likely to be women, as two-thirds of current and previous customers are women. Both types of customers are more aware of grid-delivered clean energy as 89% of current customers and 75% of previous customers are aware compared to 42% of the rest of the population. Both types of customers appear more likely to have sought out information on clean energy in the past year with 44% of current customer and 50% of previous customers compared to 15% of the rest of the population. Finally, some of the factors affecting likelihood to purchase clean energy appear to resonate more with current customers than previous customers and the rest of the population. For example, 78% of current customers would be more likely to purchase clean energy if it supports the development of more clean energy in Connecticut compared to 55% of the rest of the population; 67% would be less likely to purchase clean energy if it were not certified by a consumer organization compared to 48% of the rest of the population; and 78% would be more likely to purchase clean energy if the price were locked for five years compared to 43% of the rest of the population.

The attitudinal segments and demographic analysis suggest a general targeting strategy. The following basic targeting strategy should safely cover the Ideals, and probably a large portion of the Doubters and Eeyores. 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

The target segments do not offer strong evidence that gender is a reliable targeting strategy, although the highest priority target segment (Ideals) are 59% female. More interestingly, 67% of respondents who are current subscribers to the CTCEO are female.

# 11 Demographics

Connecticut respondents have a higher homeownership rate than respondents from the comparison groups: 824 of Connecticut respondents own their own home, compared to 78% in Other CESA states, 79% in Non-CESA states, and 78% nationally (Table 11-1). According to Census 2000 data, home ownership rates in Connecticut are 67%; given that the survey excluded those households that 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 | 84% | 78% | 79% | 78% |
| Rent | 13 | 22 | 22 | 22 |
| Don't Know/Refused | 4 | 0 | 0 | 0 |
| **Total Respondents** | **600** | **374** | **518** | **901** |

Connecticut survey respondents are more educated than respondents from the comparison groups, with one-half holding a four-year college degree or higher compared to 37%-41% 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 | 21% | 44% | 32% | 38% | 35% |
| Some college or associates degree | 22 | 25 | 25 | 25 | 25 |
| Four-year college graduate | 26 | 18 | 27 | 25 | 26 |
| Graduate experience | 24 | 13 | 14 | 12 | 13 |
| Refused | 7 | 0 | 1 | 0 | 0 |
| **Total Respondents** | **600** | **n/a** | **374** | **518** | **901** |

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 | 16 |
| Technical or trade school graduate | 4 |
| Some college | 10 |
| Two-year college graduate | 11 |
| Four-year college graduate | 26 |
| Some graduate or professional school | 4 |
| Graduate or professional degree | 20 |
| Refused | 7 |
| **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 | 14% | 32% | 27% | 29% | 28% |
| 35 to 44 | 19 | 21 | 22 | 18 | 20 |
| 45 to 54 | 25 | 18 | 20 | 20 | 20 |
| 55 to 64 | 17 | 11 | 14 | 15 | 14 |
| 65 or over | 17 | 18 | 16 | 17 | 17 |
| Refused | 8 | 0 | 1 | 1 | 1 |
| **Total Respondents** | **600** | **n/a** | **374** | **518** | **901** |

Table 11-5 displays the total 2007 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 52% earning at least $75,000 compared to 29%-33% 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 | 10% | 27% | 19% | 19% | 19% |
| $25,000 to $49,999 | 19 | 23 | 28 | 37 | 33 |
| $50,000 - $74,999 | 19 | 19 | 21 | 16 | 18 |
| $75,000 - $99,999 | 18 | 13 | 15 | 10 | 12 |
| $100,000 or more | 34 | 18 | 18 | 19 | 19 |
| **Total Respondents** | **392** | **n/a** | **374** | **417** | **730** |

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 | 3% |
| $15,000 - $24,999 | 3 |
| $25,000 to $34,999 | 4 |
| $35,000 - $49,999 | 8 |
| $50,000 - $74,999 | 13 |
| $75,000 - $99,999 | 12 |
| $100,000 - $149,999 | 13 |
| $150,000 or more | 9 |
| Refused | 35 |
| **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% | 50 | **600** |
| **Other CESA States** | 52% | 48 | **374** |
| **Non-CESA States** | 53% | 47 | **518** |
| **U.S.** | 53% | 47 | **901** |

The average monthly electric bill for respondents continues to increase, from $105 in 2005 to $121 in 2006 and $165 in 2007. Forty three percent of respondents have monthly electric bills of $150 or more. (Table 11-8).

**Table 11-8: Monthly Electric Bills of Respondents**

| Monthly Electric Bill | Percent, 2005 | Percent, 2006 | Percent, 2007 |
|---|---|---|---|
| Less than $50 | 12% | 8% | 3% |
| $50 to $99 | 32 | 29 | 21 |
| $100 to $149 | 24 | 27 | 22 |
| $150 or more | 18 | 25 | 43 |
| **Don't Know** | 15 | 11 | 11 |
| Mean | $105 | $121 | $165 |
| **Total Respondents** | **600** | **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]

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)

As you may know, electricity rates nationally have changed, sometimes dramatically, over the past few years. In response, some electricity providers across the nation have begun to offer their customers the option of signing a long term contract for clean energy, with a capped electricity rate that is guaranteed not to increase for several years. [NOTE: IF RESPONDENT ASKS TO FURTHER EXPLAIN 'CAPPED ELECTRICITY RATES' SAY "BY CAPPED ELECTRICITY RATES WE MEAN THAT YOUR ELECTRICITY RATE CANNOT INCREASE BEYOND A SPECIFIC RATE, WHICH WILL NOT CHANGE FOR THE LENGTH OF THE CONTRACT]

30a) How likely would you be to commit to a 3 year contract to purchase clean energy for your home which locks your electricity rates at 10% higher than today's regular electricity rates for the length of the contract? Use a scale from 0 to 10, where "0" is "not at all likely" and "10" is "extremely likely" [11=DON'T KNOW; IF 6-10, GO TO 30b; IF 0 TO 5 OR 11, SKIP TO 30c]

30b) How likely would you be to make that same commitment if it required a refundable $100 security deposit to join? 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]
]

30c) How likely would you be to commit to a 5 year contract to purchase clean energy for your home which locks your electricity rates at 10% higher than today's regular electricity rates for the length of the contract? 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]

[4 SKIP SCENARIOS:

- IF RESPONDENT ANSWERS 6 TO 10 FOR 30a and 6 TO 10 FOR 30c, SKIP TO 30g
- IF RESPONDENT ANSWERS 0 TO 5 OR 11 FOR 30a and 6 TO 10 FOR 30c, SKIP TO 30g
- IF RESPONDENT ANSWERS 6 TO 10 FOR 30a and 0 TO 5 OR 11 FOR 30c, SKIP TO 30d
- IF RESPONDENT ANSWERS 0 TO 5 OR 11 FOR 30a and 0 TO 5 OR 11 FOR 30c, SKIP TO NEXT SECTION OF QUESTIONS]

30d) How likely would you be to enroll if the 3-year contract required no security deposit but included a fee for early termination – similar to a cell phone contract – of $300? Use the same 0 to 10 scale. [11=DON'T KNOW; IF 6-10, GO TO 30e; IF 0 TO 5 OR 11, GO TO 30f]

30e) How likely would you be to enroll if the early termination fee was $500? [ALL RESPONDENTS GO TO NEXT SECTION OF QUESTIONS]

30f) How likely would you be to enroll if the early termination fee was $100? [ALL RESPONDENTS GO TO NEXT SECTION OF QUESTIONS]

30g) How likely would you be to enroll if the 5-year contract required no security deposit but included a fee for early termination – similar to a cell phone contract – of $300? Use the same 0 to 10 scale. [11=DON'T KNOW; IF 6-10, GO TO 30h; IF 0 TO 5 OR 11, GO TO 30i]

30h) How likely would you be to enroll if the early termination fee was $500? [ALL RESPONDENTS GO TO NEXT SECTION OF QUESTIONS]

30i) How likely would you be to enroll if the early termination fee was $100? [ALL RESPONDENTS GO TO NEXT SECTION OF QUESTIONS]

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

G. A community leader, such as a civic official, clergy or business leader, recommends purchasing the clean energy.

H. The clean energy is recommended by your family, friends, or neighbors

I. The price for the clean energy is slightly more than regular electricity, but the price is locked for five years and will not increase or decrease during that time.

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

Next, I'm going to read three names of programs that may exist to serve Connecticut residents who wish to purchase clean energy in place of their regular electricity. As I read the name of each program, please tell me how certain you are whether you have seen or heard it.

[RANDOMIZE Q.#65A-65C]

65A. The program, "The Connecticut Clean Energy Option Program." 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

65B. The program, "The RENEW Connecticut Program." 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

65C. The program, "The Connecticut Climate Challenge Program" 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)

73A. The Connecticut Clean Energy Option is a state-regulated program that allows Connecticut's businesses and residents to purchase Renewable Energy Credits, or electricity generated from clean sources. Are you currently a subscriber to this program?
    1. Yes
    2. No
    3. (Don't know)

73B. [IF 73A=NO; ELSE SKIP] Were you ever a subscriber to any clean energy program in the past?
    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)

77. What is the highest level of education you have completed? **[READ CATEORIES]**
    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]** Gender
    1. Female
    2. Male

**Thank you very much!**

81. [IF "YES" TO Q.#73A OR 73B] You said that either you currently purchase clean energy, or at one time in the past purchased clean energy, to supply the electricity in your home. We are interested in people's experiences with their clean energy program participation. Would you be willing to describe this experience in more detail with our researchers at a future date?

    1. Yes [RECORD NAME: _____]
    2. NO [THANK AND TERMINATE]

**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. [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
G. A community leader, such as a civic official, clergy or business leader, recommends purchasing the clean energy
H. The clean energy is recommended by your family, friends, or neighbors
I. The price for the clean energy is slightly more than regular electricity, but the price is locked for five years and will not increase or decrease during that time