

MEMORANDUM

To: Interested Parties
FROM: Gotham Research Group
SUBJECT: Public Perceptions of Solar Water Heating Systems: Survey Findings
DATE: October 17, 2011

Below is an overview of the key findings from a national telephone survey of U.S. adults conducted on behalf of the Solar Energy Industries Association (SEIA), the national trade association of the solar energy industry.

Executive Summary

The survey was designed to assess public awareness and perceptions of solar water heating systems.

The findings (1) confirm that Americans have strong positive associations with solar energy, (2) demonstrate the widespread perception that *solar water heating systems* present an appealing offering with a significant economic upside for the country, and (3) establish that more consumer education is needed about the affordability and reliability of solar water heating systems.

- Three out four (74%) Americans agree that "the growth of the solar water heating industry will produce jobs and help the American economy."
- Most Americans (63%) believe that solar energy can be used to heat water and buildings as well as provide electricity.
- Positive perceptions of "solar water heating systems" exceed negative perceptions by more than 10 to 1 (48% to 4%).
- More broadly, solar energy is now considered to be the energy source *most* deserving of U.S. government support – outdistancing natural gas, oil, nuclear, coal and even wind energy. Support for solar extends to Americans of all partisan affiliations (Independents, Republicans, and Democrats).

When it comes to installing solar water heating systems in their own homes, Americans express the most concern about the potential cost of the system – its purchase price (72%) as well as maintenance expenses (56%). Americans also have concerns about the reliability of the systems (50%), and feel they do not know enough about how the systems work (45%) or where to buy them (42%).

Key Findings

Solar Water Heating Systems: Awareness and Perceptions

- Americans are inclined to believe that solar energy can be used for a variety of purposes other than electricity production – including heating and cooling buildings (Q2 – see Appendix).
 - Most Americans (63%) believe that solar energy can be used to heat water, heat buildings, cool buildings, heat swimming pools, and produce electricity.
 - The perception that solar can be used for these purposes extends to all regions of the country – West (71%), South (62%), Midwest (62%), and Northeast (59%).
- Although a significant segment of Americans admit to being relatively unfamiliar with “solar water heating systems” specifically, those who have heard of the systems have overwhelmingly positive impressions (Q3 – see Appendix).
 - About half (47%) say they do not know enough about “solar water heating systems” to rate them one way or the other.
 - Of those who are able to rate the systems, the vast majority rate them favorably (48% favorable vs. 4% unfavorable) – a finding that is consistent across all regions and key demographic groups (age, gender, household incomes, race/ethnicity).

The Solar Water Heating Industry: Is it good for the economy?

- Despite the lack of familiarity many Americans have with solar water heating systems, there is strong agreement that **the growth of the solar water heating industry is likely to make a significant positive contribution to the U.S. economy** (Q6 – see Appendix).
 - The overwhelming majority (74%) either “strongly agree” (35%) or “somewhat agree” (39%) with the statement, “the growth of the solar water heating industry will produce jobs and help the American economy.”
- The belief that the industry will positively impact job and economic growth extends to Americans of all regions of residence and partisan/demographic backgrounds (Q6 – see Appendix).
 - 80% of Northeastern residents, 78% of Midwestern residents, 69% of Southern residents, and 73% of Western residents agree that the growth of the solar water heating industry will produce jobs and help the economy.
 - 65% of self-identified Republicans, 76% of Independents, and 83% of Democrats agree that the growth of the solar water heating industry will produce jobs and help the economy.
 - 76% of women and 73% of men agree that the growth of the solar water heating industry will produce jobs and help the economy.

Installing Solar Water Heating Systems

- Homeowners express some willingness to consider installing a solar water heating system in their own home (Q4 – see Appendix).
 - Almost half (46%) say they would either be “extremely likely” (6%), “very likely” (9%), or “somewhat likely” (31%) to consider installing a solar water heating system in their own home.
 - However, just over half (54%) say they would either be “not very likely” (29%) or “not at all likely” (25%) to consider installing solar water heating in their home.
 - Residents of the Southern and Western regions express the most initial interest in installation.
- When asked to identify their biggest hesitations about installing a solar water heating system in their homes, cost considerations top the list (Q5 – see Appendix).
 - “The cost of purchasing the decision” (72%) and “the cost of maintaining the system” (56%) are the top two concerns for residents in all regions and across key demographic/partisan groups.
 - Operational concerns about solar water heating systems are important, but decidedly second-tier considerations – “reliability/dependability” (50%) and “how the system works” (45%).

Concerns about Installing a Solar Water Heating System (Q5)

<i>Regardless of how likely you would be to consider installing a solar water heating system in your home, which of the following would be your biggest concerns about installing a solar water heating system in your home?</i>	%
The cost of purchasing the system	72%
The cost of maintaining the system	56%
The reliability/dependability of the system	50%
You don't know enough about how the system works	45%
You don't know where to buy the system	42%
The system wouldn't save you enough money on your utility bill	41%
These systems are not technologically advanced enough	30%
There's not enough sun in your area to power the system	21%
All of the above	4%
None of the above	4%
Other	1%
Don't know/Refused	1%

Solar Energy: Energy Sources: Top Priorities

- When asked to choose which energy source should be the top priority for the U.S. government to support, **solar is the clear winner** – followed by Wind, Natural gas, Oil, Nuclear, and Coal (Q1 – see Appendix).

Top Energy Source for the U.S. Government to Support (Q1)

<i>Now I'm going to read you a list of energy sources. Which one do you think should be the top priority for the U.S. government to support?</i>	%
Solar	29%
Wind	20%
Natural gas	18%
Oil	16%
Nuclear	8%
Coal	5%
All of the above	2%
None of the above	1%
Other	1%

- Support for solar energy extends to Americans of all regions of residence and partisan/demographic backgrounds – particularly those living in the Western region and self-identified Democrats.

Top Energy Source by Key Subgroups

<i>Now I'm going to read you a list of energy sources. Which one do you think should be the top priority for the U.S. government to support?</i>	<u>Top 2 Responses</u>
Northeast	Solar (27%), Natural gas (22%)
Midwest	Wind (27%), Solar (26%)
South	Solar (28%), Natural gas (20%)
West	Solar (36%), Oil (16%)
Republican	Oil (22%), Solar (20%)
Independent	Solar (30%), Wind (21%)
Democrat	Solar (37%), Wind (19%)
Female	Solar (34%), Wind (22%)
Male	Solar (24%), Natural gas (22%)

Note: When asked a similar question in a February 2010 survey conducted by SEIA, "solar energy farms" and "wind energy farms" were tied as the top priority at 22% – suggesting that the appeal of solar energy may have increased over the last year (Source: A national telephone survey of 500 adults, 18+, conducted between February 24th and 26th, 2010).

Methodological Overview

The findings described in this memo are based on a survey conducted on behalf of the Solar Energy Industries Association (SEIA), the national trade association of the solar energy industry. The survey was conducted from June 23rd through 26th, 2011 among a representative sample of 1,013 adults, 18+ living in private households in the continental United States. The margin of error on the total sample of 1,013 is +/- 3.1%.

The study was conducted by telephone and respondents were drawn from a random digit dialing (RDD) sample, which gives every household an equal chance of being called. All respondents were screened to ensure that they are currently 18 years or older and live in the continental United States. The overall sample results were weighted demographically and geographically based on the most recent data provided by the U.S. Bureau of the Census. All the numbers are presented as percentages and, due to rounding, may not add up to 100%.

Note: The "Northeast" region includes ME, NH, VT, MA, RI, CT, NY, NJ, PA; the "Midwest" region includes OH, IN, IL, MI, WI, MN, IA, MO, ND, SD, NE, KS; the "South" region includes DE, MD, DC, VA, WV, NC, SC, GA, FL, KY, TN, AL, MS, AK, LA, OK, TX; the "West" region includes MT, ID, WY, CO, NM, AZ, UT, NV, WA, OR, CA.

Appendix: Question Wording and Topline Results

1. Now I'm going to read you a list of energy sources. Which one do you think should be the top priority for the U.S. government to support? (READ AND ROTATE; ACCEPT ONE ANSWER) [IF "ALL", ASK:] If you absolutely had to choose, which one would you say should be the top priority?

	<u>Total Sample</u>
Solar	29%
Wind	20%
Natural gas	18%
Oil	16%
Nuclear	8%
Coal	5%
All of the above	2%
None of the above	1%
Other	1%
Don't know/Refused	2%

2. Which of the following, if any, do you believe solar energy can be used for? (READ & ROTATE LIST; ACCEPT MULTIPLE RESPONSES)

	<u>Total Sample</u>
To heat water	28%
To product electricity	27%
To heat buildings	25%
To cool buildings	16%
To heat swimming pools	20%
All of the above	63%
None of the above	2%
Don't know/Refused	*

As you may know, solar energy can be used to heat water for residential and commercial buildings. The remainder of the questions will be focused on these solar water heating systems.

3. Based on everything you know, please tell me if you have a favorable or unfavorable opinion of "solar water heating systems." If you haven't heard of them, just tell me and we'll move on. [IF FAVORABLE OR UNFAVORABLE, ASK:] Would you say you have a strongly favorable/unfavorable opinion or a somewhat favorable/unfavorable opinion?

	<u>Total Sample</u>
Strongly favorable	27%
Somewhat favorable	21%
Somewhat unfavorable	2%
Strongly unfavorable	2%
Heard of but can't rate	6%
Haven't heard of	41%
Don't know/Refused	1%
Net: Favorable	48%
Net: Unfavorable	4%

4. [Among self-identified homeowners only, n=698] Looking ahead to the next few years, how likely do you think you are to consider installing a solar water heating system in your own home?

	<u>Total Sample</u>
Extremely likely	6%
Very likely	9%
Somewhat likely	31%
Not very likely	29%
Not at all likely	25%

5. Regardless of how likely you would be to consider installing a solar water heating system in your home, which of the following would be your biggest concerns about installing a solar water heating system in your home? (READ & ROTATE LIST; ACCEPT MULTIPLE RESPONSES)

	<u>Total Sample</u>
The cost of purchasing the system	72%
The cost of maintaining the system	56%
The reliability/dependability of the system	50%
You don't know enough about how the system works	45%
You don't know where to buy the system	42%
The system wouldn't save you enough money on your utility bill	41%
These systems are not technologically advanced enough	30%
There's not enough sun in your area to power the system	21%
All of the above	4%
None of the above	4%
Other	1%
Don't know/Refused	1%

6. Please tell me whether you agree or disagree with the following statement: "the growth of the solar water heating industry will produce jobs and help the American economy." [IF AGREE/DISAGREE, ASK:] Would you say you strongly agree/disagree or somewhat agree/disagree?

	<u>Total Sample</u>
Strongly agree	35%
Somewhat agree	39%
Somewhat disagree	9%
Strongly disagree	7%
Neither agree nor disagree	5%
Don't know/Refused	5%
Net: Agree	74%
Net: Disagree	16%