

APPENDIX A | STAKEHOLDER SURVEY

Methods

Research Objectives

Prior to identifying locations and developing survey questions, we developed research objectives to guide our work and to form the basis of the survey instrument. The objectives, designed as a set of questions, were in part derived from what we identified as underexplored or altogether missing information from academic literature and current discourse. The questions, designed to capture ordinal, or ranked, data, sought to understand the interests, opinions, and concerns of local community stakeholders toward utility-scale solar development within their regions. In particular, we hoped the collected data would enable us to answer the following questions:

- Do people in affected communities generally favor or oppose solar development in their communities, and how do those opinions break down by community or demographic?
- Which outcomes do respondents think are most likely to occur as a result of this development? How concerned are they about these expected outcomes?
- Why do people participate or fail to participate in the decision-making process? Is this participation or lack thereof linked to opinion?
- Isolating those who *oppose* solar, how informed are they, do they participate in the process, do they want information, and how do they want that information?
- Isolating those who *support* solar, how informed are they, do they participate in the process, do they want information, and how do they want that information?
- Comparing those who support with those who oppose solar in or near their communities, how do these groups differ? Do they have different opinions on potential outcomes, do they receive information in different ways, or do they participate more or less in the process?

The stakeholder survey addressed these questions and captured demographic information to allow us to perform statistical analyses that explored the relationship between each community's perceptions and the respondents' age, education, and length of residence in the California Desert region. We hoped that understanding what people think, what they claim to know, how they get their information, and the degree to which they participate would be useful to the BLM and other decision-making stakeholders in designing information campaigns, modifying public comment processes, and assessing risk, among other potential actions.

Target Respondents

Three communities in the California desert region were selected to receive the stakeholder survey: El Centro, Lucerne Valley, and Newberry Springs. Three criteria were used to select these communities:

- Current stage of the proposed project: To capture the most informed opinions possible, we selected communities that had already held at least one public meeting regarding the proposed solar project. In order for a public meeting to be held, a project must have been through a certain level of analysis by the developer, the BLM, and the CEC. Since many of the proposed solar energy applications are still in the early stages of the permitting process, we felt it was important that communities were only considered if they were near projects that had demonstrated a substantial time and financial commitment.
- Proximity to a proposed solar project: To ensure that those surveyed were representative of true community stakeholders, we only considered locations within 25 miles of a proposed solar energy project. This proximity requirement maximized the likelihood that the individuals surveyed had a vested interest in the construction of these projects. The communities of El Centro and Lucerne Valley were within 14 miles of the Tessera Imperial Valley project and eight miles of the Chevron Lucerne Valley project, respectively. The community of Newberry Springs was within 17 miles of the Tessera Calico project.
- Population size: For statistical reasons, we chose to only survey communities that were 1,500 residents or more, though the community of Newberry Springs did require a partial exception to this rule. Though Newberry Springs included land parcels that were owned by over 1,500 unique persons, many of these were “absentee owners”, meaning that they owned the land and title, but did not permanently reside in the community. The 2009 population estimate for El Centro was 44,259, while the 2000 U.S. Census population estimate for Lucerne Valley was 2,870.^{626,627} Since Newberry Springs is an unincorporated area of San Bernardino County, precise population data is not available; however, estimates based on the primary zip code (92365) place the population at approximately 2,895 as of 2000.⁶²⁸

We relied on multiple sources to obtain mailing addresses for these three communities. For El Centro and Lucerne Valley, lists of consumer mailing addresses were ordered from www.directmail.com, an online database for designing and obtaining mailing lists. However, for Newberry Springs we felt that [directmail.com](http://www.directmail.com) did not provide a sufficient number of addresses when compared to the census data for that community. Therefore, for Newberry Springs we contacted the Assessor’s Office at San Bernardino County and requested a list of the on-file addresses for landowners in Newberry Springs. We sent surveys to all of the addresses within Newberry Springs. For the remaining addresses of absentee owners, we assigned randomly selected 610 addresses for the survey mailing.

Survey Instrument Design and Dissemination

The survey instrument was distributed by mail and included both a paper copy of the survey with a stamped and addressed return envelope, and a website link that respondents could use if they

preferred to complete the survey online. Each community received its own version of the survey with the name, distance, and size of the nearest solar energy facility proposed. The questions within the survey were identical across the three versions, helping to maintain consistent data collection and allowing us to pool respondents for statistical analysis. Households received two copies of the survey, one in English and one in Spanish, as census figures indicated a high level of Hispanic populations in these communities. The survey requested that responses be submitted within two weeks. Ultimately, survey responses were received between early December 2009 and the end of January 2010. The six versions of the survey instrument, one in English and one in Spanish for each community, are included below.

Survey questions drew from the research objectives. Overall, there were 14 questions asked, three of which were demographic in nature. Of the 14, two were open response: “What do you think are the positive impacts of these facilities?” and “What do you think are the negative impacts of these facilities?” We included open-response questions to allow respondents to offer uninfluenced opinions of solar, and as such, these questions were placed at the beginning of the survey. The remaining 12 questions required respondents to either choose one of a set or to check all that applied, most of which offered the option to fill-in a response. We used this type of question because:

1. We believed it would greatly improve our response rate because the survey would be easier to fill out;
2. We wanted to control response choices;
3. It provided us with the ability to conduct quantitative analyses using ranked data.

The first question in our survey – “How supportive are you of using government land in the California Desert for the development of utility-scale solar facilities?” – presented respondents with a one to seven scale, from “very unsupportive” to “very supportive,” respectively. We believed that including seven options in this initial question, which served as our dependent variable in most aspects of the analysis, would give us an optimal spectrum with which to group and compare respondents. All other rank questions were on a scale of one to five, which we believed would offer the appropriate range of options: extreme, moderate in either direction, or neutral.

Data Capture

Through December and into January 2010, responses were received by mail and online. Each of these surveys was issued a unique identifying number, physically written at the top of each survey, and placed in order in a filing cabinet. One by one, answers to these surveys were manually keyed into a master spreadsheet in Excel, coupling the unique number with the matching line in Excel. Data

validation controls were placed into each answer column in the form of drop-down menus to avoid error. Open-response answers were typed into an assigned field for subsequent analysis. All additional comments were noted at the end of each row, which represented a complete data set for an individual survey. In the event where a respondent circled two adjacent options – for instance, three and four – data validation was turned off and the average was manually inserted. Additionally, each survey was initialed by the entrant and recorded that information in the spreadsheet to allow other entrants to verify data and ask questions as they arose. Unanswered questions were left blank in the spreadsheet. Those surveys that only included written comments but otherwise were incomplete were recorded but not included in the final data set.

Analysis Approach

We analyzed the data in three primary ways: 1. We calculated the mean response for each question as an aggregate number from the sample and by demographic category; 2. We placed those in favor of and those opposed to solar into two groups, and calculated the means and variances of each question to identify divergence of opinion; 3. We read each open-response question and assigned a numerical value to individual words or phrases as they appeared, such as “jobs” or “green.” In our evaluation we did not correct for missing data, which was primarily in the form of skipped questions. In such cases, we left the field blank so it did not factor into the mean value for a given question.

Because the data is ranked, as opposed to continuous, we used correlation analysis to get a rough idea of linear relationship. We also used regression in some cases to test relationships, such as public participation’s influence on opinion. In addition, we used contingency table analysis in those cases where proportional patterns were observed, and manually calculated P-values. The bulk of the analysis focused on comparative relationship between groups by observing means and differences in means, as well as percent-of-total responses in order to provide insight into what representative communities think, what they know, and how they are involved.

Contingency Table

A master contingency table, which is often used to record and analyze the relationship between two or more categorical variables, was constructed in Excel and formed the primary basis of analysis. Figure A.1, pictured below, analyzed each question against each demographic category. Pivot tables were used to identify patterns between some subgroups, a task which involved, for instance, breaking each community down by age then by education level. However, no significant patterns were identified using this technique. In all cases, the mean response for each question was calculated. In some cases, such as in Question 9, the percent of total was used to allow for comparable scales or to evaluate yes-no type questions, which simultaneously asked respondents to comment on the value of individual

SURVEY ANALYSIS JANUARY 2010											
	TOTAL	LOCATION			AGE			RESIDENCE TIME [YEARS]			
Q	OVERALL	EL CENTRO	LUCERNE	NEWBERRY	< 40	40 to 60	> 60	< 10	10 to 20	> 20	
	None Given	27	7	8	13	2	9	16	2	3	22
1	Opinion One	11.6%	7.7%	15.1%	11.4%	5.4%	12.3%	12.3%	9.3%	16.3%	11.2%
1	Opinion Two	4.0%	4.2%	4.7%	3.6%	0.0%	2.8%	5.6%	3.9%	6.1%	3.2%
1	Opinion Three	2.2%	0.7%	4.7%	1.4%	5.4%	2.0%	1.9%	0.8%	3.1%	2.7%
1	Opinion Four	10.2%	11.9%	9.3%	10.0%	10.7%	9.9%	11.2%	12.4%	10.2%	9.1%
1	Opinion Five	7.9%	9.8%	9.3%	6.0%	16.1%	7.5%	6.7%	3.9%	10.2%	8.3%
1	Opinion Six	15.4%	14.7%	16.9%	14.9%	21.4%	17.1%	13.0%	14.7%	14.3%	15.9%
1	Opinion Seven	48.7%	51.7%	40.1%	52.7%	41.1%	48.4%	49.8%	54.3%	40.8%	47.8%
4	LIKLIHOOD OF OUTCOME	GIVEN AS AVERAGES [5 SCALE]			GIVEN AS AVERAGES [5 SCALE]			GIVEN AS AVERAGES [5 SCALE]			
A	Less Housing	1.91	1.98	1.76	1.97	2.00	1.90	1.92	2.09	1.97	1.83
B	Less Habitat	2.82	2.83	3.01	2.69	3.06	2.91	2.70	2.70	2.93	2.86
C	Poorer Air Quality	1.89	2.13	2.01	1.70	2.26	1.92	1.79	1.91	1.95	1.87
D	More Construction Jobs	4.16	4.26	3.94	4.25	4.24	4.17	4.14	4.06	4.25	4.16
E	More General Jobs	4.04	4.25	3.71	4.12	4.23	4.06	3.98	3.97	4.04	4.06
F	Less Recreation	2.37	2.58	2.45	2.20	2.62	2.44	2.25	2.35	2.41	2.40
G	Less Water	2.38	2.27	2.51	2.37	2.37	2.33	2.43	2.31	2.51	2.37
H	Less Fossil Assets	3.45	3.52	3.32	3.50	3.82	3.42	3.40	3.59	3.31	3.45
I	More Traffic	3.48	3.47	3.55	3.44	3.35	3.52	3.46	3.54	3.40	3.45
J	Bigger Budget	3.51	3.77	3.48	3.39	3.85	3.58	3.40	3.55	3.70	3.43
K	Increased Business	3.83	3.90	3.65	3.91	4.00	3.85	3.77	3.81	3.71	3.85
L	Site Damage	2.29	2.47	2.42	2.13	2.46	2.39	2.18	2.27	2.46	2.28

Figure A.1 Contingency table used to compare group data and mean responses.

information sources and to answer whether they had used that information source or not. In cases where we noticed patterns in the data, we manually calculated P-values and probabilities.

In addition, we grouped together demographic categories in the contingency table based on the volume of responses from a given group. For example, our survey offered respondents five options for residence time, ranging from less than one year to more than 20 years. To ensure enough respondents were in a given group, we pared these down to three: less than 10 years (22.5%), between 10 and 20 years (17.3%), and more than 20 years (60.2%). We followed a similar grouping approach for age and education level. In each case, we conducted sample testing to ensure that we were not merging two groups that exhibited significant differences in mean response to the questions.

Group Comparison

Additionally, we used two-sample t-tests assuming unequal variances to compare the mean, variances and p-values of two groups: those who reported to oppose utility-scale solar development (one and two on a scale of seven) and those who reported to support it (six and seven on a scale of seven). We did this for each question as the basis to identify issues where mean responses were significantly different, and to identify each group’s orientation to that issue – positive or negative (Figure A.2). We believed that this approach would provide valuable insight into issues that are split down opposition and a support lines.

QUESTION 8: FAMILIARITY WITH TECHNOLOGIES			QUESTION 9: UTILITY OF INFO SOURCE			QUESTION 10	
<i>Parabolic Trough</i>	<i>Favor</i>	<i>Oppose</i>	<i>Newspapers</i>	<i>Favor</i>	<i>Oppose</i>	<i>Facility Appearance</i>	
Mean	1.94214876	2.405660377	Mean	2.90459364	2.724137931	Mean	
Variance	1.750787635	2.338634322	Variance	1.68235471	1.829991981	Variance	
Observations	363	106	Observations	283	87	Observations	
Hypothesized Mean Difference	0		Hypothesized Mean Difference	0		Hypothesized Mean Difference	
df	154		df	138		df	
t Stat	-2.826831972		t Stat	1.098643627		t Stat	
P(T<=t) one-tail	0.002662806		P(T<=t) one-tail	0.136918308		P(T<=t) one-tail	
t Critical one-tail	1.654808386		t Critical one-tail	1.655970383		t Critical one-tail	
P(T<=t) two-tail	0.005325612		P(T<=t) two-tail	0.273836617		P(T<=t) two-tail	
t Critical two-tail	1.975488024		t Critical two-tail	1.977303512		t Critical two-tail	
<i>Flat Plate Photovoltaic</i>	<i>Favor</i>	<i>Oppose</i>	<i>Television and Radio</i>	<i>Favor</i>	<i>Oppose</i>	<i>Technology Detrimental</i>	
Mean	2.301912568	2.716981132	Mean	2.95	2.681318681	Mean	
Variance	2.054489483	2.414375562	Variance	1.806856187	2.01953602	Variance	

Figure A.2 Two-sample t-test assume unequal variances, testing every question between supporters and opponents of solar.

Keyword Analysis

Finally, we assigned values to each key word or phrase that appeared in the open-response questions, identifying a total of 44 words that had value to the study. For example, “jobs” received a code of 03, “increased property values” received a code of 20, and “renewable,” “clean,” and “green” all received a code of 01. Neither words that would be ambiguous on their own, such as “property,” nor articles and verbs received codes. The intent was to both reconcile the ranked data and to identify sentiment not explicitly captured in the close-ended questions. Figure A.3 is shown below with an example of this analysis.

KEYWORDS								
ID	WORD OR PHRASE	AGGREGATE SAMPLE			FAVOR			
		Q2	Q3	TOTAL	Q2	%	Q3	%
01	Renewable or clean energy	149	137	286	106	27.7%	117	30.6%
02	Cheaper electricity	118	4	122	83	21.7%	0	0.0%
03	Jobs	220	16	236	167	43.7%	6	1.6%
04	Supports solar tech development	20	54	74	16	4.2%	30	7.9%
05	Reliability	7	23	30	6	1.6%	11	2.9%
06	Energy independence	32	2	34	24	6.3%	2	0.5%
07	Reduced Conventional Fuel Use	57	8	65	40	10.5%	5	1.3%
08	Reduced or no pollution	40	85	125	30	7.9%	44	11.5%

Figure A.3 View of the keyword analysis table



You are invited to be a part of a research study being conducted by the University of Michigan's School of Natural Resources and Environment. We are researching the potential impacts of solar energy development in the California Desert.

A number of solar facilities have been proposed and we would like to learn what local residents believe will be the most significant impacts from these facilities. **Your input will inform government agencies and other interested organizations so that they can better address your concerns about solar energy development.**

Our focus is on "utility-scale" solar facilities, which are commercial structures that provide electricity for a large number of people. They are not the same as residential or rooftop solar panels. For the purposes of this survey, a "solar facility" includes all the buildings, mirrors, transmission lines, and access roads that are built to serve the facility.

You have been selected to participate because you live near El Centro and a solar facility has been proposed near your town. This facility is 14 miles west of El Centro. It will use 6,140 acres of federal land and supply at least 230,000 homes with electricity per year.

~~~~

Please complete either the attached paper survey or follow the link listed below to an Internet version of the survey. This survey will take 10 to 15 minutes to complete.

Participating in this study is completely voluntary. You may choose not to answer an individual question and can skip any section of the survey. Please complete only one version of the survey (English or Spanish).

Researchers will not be able to link your survey responses to you. If you chose to complete the survey online, the survey software keeps your identifying information separate from the answers you provide to the survey. We plan to publish the results of this study, but will not include any information that would identify you.

**Please respond to this survey by Friday, December 11, 2009.**

Link to Internet Survey: <http://www.surveymonkey.com/EC1>

If you have questions about this research study, please contact Sarah Tomsy, University of Michigan, School of Natural Resources and Environment, 440 Church Street, Ann Arbor, MI 48109-1041, (734) 615-6431, [desertsolar@umich.edu](mailto:desertsolar@umich.edu). If you have questions about your rights as a research participant, please contact the University of Michigan Institutional Review Board Health Sciences and Behavioral Sciences, 540 E. Liberty, Ste. 202, Ann Arbor, MI 48104-2210, (866) 936-0933 (toll-free), [irbhsbs@umich.edu](mailto:irbhsbs@umich.edu), IRB# HUM00035010. By following the link above or returning the paper survey via mail, you are consenting to participate in this research survey. We appreciate your willingness to contribute to our academic research.

Multiple “utility-scale” solar facilities have been proposed for development in the California Desert. A “utility-scale” solar facility is a commercial structure that provides electricity for a large number of people – it is not the same as residential or rooftop solar panels. For the purposes of this survey, a “solar facility” includes all the buildings, mirrors, transmission lines, and access roads that are built to serve the facility.

1) In general, how **supportive** are you of using government land in the California Desert for the development of utility-scale solar facilities?

|                              |   |   |                |   |   |                            |
|------------------------------|---|---|----------------|---|---|----------------------------|
| <b>Very<br/>Unsupportive</b> |   |   | <b>Neutral</b> |   |   | <b>Very<br/>Supportive</b> |
| 1                            | 2 | 3 | 4              | 5 | 6 | 7                          |

2) What do you think are the positive impacts of these facilities?

3) What do you think are the negative impacts of these facilities?



4) How **likely** do you think the following outcomes will be if a utility-scale solar facility is constructed near your town? Circle your answers.

|   |                                                                                     | Very<br>Unlikely |   |   | Very<br>Likely |   |            |
|---|-------------------------------------------------------------------------------------|------------------|---|---|----------------|---|------------|
|   |                                                                                     | 1                | 2 | 3 | 4              | 5 |            |
| A | Decreased availability of apartments or other rental housing                        | 1                | 2 | 3 | 4              | 5 | Don't Know |
| B | Decreased wildlife and plant habitat                                                | 1                | 2 | 3 | 4              | 5 | Don't Know |
| C | Decreased air quality in your town                                                  | 1                | 2 | 3 | 4              | 5 | Don't Know |
| D | Increased employment opportunities in your town during facility <i>construction</i> | 1                | 2 | 3 | 4              | 5 | Don't Know |
| E | Increased employment opportunities in your town during facility <i>operation</i>    | 1                | 2 | 3 | 4              | 5 | Don't Know |
| F | Decreased recreational opportunities                                                | 1                | 2 | 3 | 4              | 5 | Don't Know |
| G | Decreased quantity or quality of water in streams, springs, and wells               | 1                | 2 | 3 | 4              | 5 | Don't Know |
| H | Decreased need for new coal or natural gas power plants                             | 1                | 2 | 3 | 4              | 5 | Don't Know |
| I | Increased traffic during facility construction                                      | 1                | 2 | 3 | 4              | 5 | Don't Know |
| J | Increased town budget due to taxes or other payments from the solar facility        | 1                | 2 | 3 | 4              | 5 | Don't Know |
| K | Increased business in local restaurants and stores                                  | 1                | 2 | 3 | 4              | 5 | Don't Know |
| L | Increased damage to cultural and historic sites                                     | 1                | 2 | 3 | 4              | 5 | Don't Know |
| M | Decreased quality of vistas from your town                                          | 1                | 2 | 3 | 4              | 5 | Don't Know |
| N | Increased energy availability/reliability for California residents                  | 1                | 2 | 3 | 4              | 5 | Don't Know |

- 5) Assuming that they happen, how **concerned** would you be about the following outcomes if a utility-scale solar facility is constructed near your town?

|   |                                                                       | Not Concerned |   |   | Very Concerned |   |
|---|-----------------------------------------------------------------------|---------------|---|---|----------------|---|
| A | Decreased availability of apartments or other rental housing          | 1             | 2 | 3 | 4              | 5 |
| B | Decreased wildlife and plant habitat                                  | 1             | 2 | 3 | 4              | 5 |
| C | Decreased air quality in your town                                    | 1             | 2 | 3 | 4              | 5 |
| D | Decreased recreational opportunities                                  | 1             | 2 | 3 | 4              | 5 |
| E | Decreased quantity or quality of water in streams, springs, and wells | 1             | 2 | 3 | 4              | 5 |
| F | Increased traffic during facility construction                        | 1             | 2 | 3 | 4              | 5 |
| G | Increased damage to cultural and historic sites                       | 1             | 2 | 3 | 4              | 5 |
| H | Decreased quality of vistas from your town                            | 1             | 2 | 3 | 4              | 5 |

- 6) Assuming that they happen, how **valuable** to you are the following outcomes if a utility-scale solar facility is constructed near your town?

|   |                                                                                     | Not Valuable |   |   | Very Valuable |   |
|---|-------------------------------------------------------------------------------------|--------------|---|---|---------------|---|
| A | Increased employment opportunities in your town during facility <i>construction</i> | 1            | 2 | 3 | 4             | 5 |
| B | Increased employment opportunities in your town during facility <i>operation</i>    | 1            | 2 | 3 | 4             | 5 |
| C | Decreased need for new coal or natural gas power plants                             | 1            | 2 | 3 | 4             | 5 |
| D | Increased town budget due to taxes or other payments from the solar facility        | 1            | 2 | 3 | 4             | 5 |
| E | Increased business in local restaurants and stores                                  | 1            | 2 | 3 | 4             | 5 |
| F | Increased energy availability/reliability for California residents                  | 1            | 2 | 3 | 4             | 5 |

7) How familiar are you with solar energy technologies? Please circle your answers.

**Not familiar**

**Very familiar**

1                      2                      3                      4                      5

8) How familiar are you with the following solar technology types?

|   |                         | <b>Not Familiar</b> |   |   | <b>Very Familiar</b> |   |
|---|-------------------------|---------------------|---|---|----------------------|---|
|   |                         | 1                   | 2 | 3 | 4                    | 5 |
| A | Parabolic Trough        | 1                   | 2 | 3 | 4                    | 5 |
| B | Flat Plate Photovoltaic | 1                   | 2 | 3 | 4                    | 5 |
| C | Thin-Film Photovoltaic  | 1                   | 2 | 3 | 4                    | 5 |
| D | Dish Engines            | 1                   | 2 | 3 | 4                    | 5 |
| E | Fresnel Lens            | 1                   | 2 | 3 | 4                    | 5 |
| F | Power Tower             | 1                   | 2 | 3 | 4                    | 5 |

9) How helpful have you found the following sources of information when trying to learn about solar energy technology?

|   |                                                           | <b>Have Not Used</b> | <b>Not Helpful</b> |   |   |   | <b>Very Helpful</b> |
|---|-----------------------------------------------------------|----------------------|--------------------|---|---|---|---------------------|
|   |                                                           |                      | 1                  | 2 | 3 | 4 | 5                   |
| A | Newspaper articles                                        | N/U                  | 1                  | 2 | 3 | 4 | 5                   |
| B | Television/radio reports                                  | N/U                  | 1                  | 2 | 3 | 4 | 5                   |
| C | Internet                                                  | N/U                  | 1                  | 2 | 3 | 4 | 5                   |
| D | Books                                                     | N/U                  | 1                  | 2 | 3 | 4 | 5                   |
| E | Teachers                                                  | N/U                  | 1                  | 2 | 3 | 4 | 5                   |
| F | Friends/Family/Neighbors                                  | N/U                  | 1                  | 2 | 3 | 4 | 5                   |
| G | Trade Journals                                            | N/U                  | 1                  | 2 | 3 | 4 | 5                   |
| H | Local Government                                          | N/U                  | 1                  | 2 | 3 | 4 | 5                   |
| I | Chamber of Commerce                                       | N/U                  | 1                  | 2 | 3 | 4 | 5                   |
| J | Recreation Organizations (ORV clubs, hiking groups, etc.) | N/U                  | 1                  | 2 | 3 | 4 | 5                   |
| K | Environmental Groups                                      | N/U                  | 1                  | 2 | 3 | 4 | 5                   |
| L | Advertisements                                            | N/U                  | 1                  | 2 | 3 | 4 | 5                   |
| M | Other (please list)                                       | N/U                  | 1                  | 2 | 3 | 4 | 5                   |

10) In the future, how helpful would you find the following information about utility-scale solar facilities?

|   |                                            | <b>Not Helpful</b> |   |   | <b>Very Helpful</b> |   |
|---|--------------------------------------------|--------------------|---|---|---------------------|---|
|   |                                            | 1                  | 2 | 3 | 4                   | 5 |
| A | Appearance of the facility                 | 1                  | 2 | 3 | 4                   | 5 |
| B | Details about how the technology works     | 1                  | 2 | 3 | 4                   | 5 |
| C | Water use estimates                        | 1                  | 2 | 3 | 4                   | 5 |
| D | Potential ecological impacts               | 1                  | 2 | 3 | 4                   | 5 |
| E | Potential to reduce global warming impacts | 1                  | 2 | 3 | 4                   | 5 |
| F | Potential impacts to recreation areas      | 1                  | 2 | 3 | 4                   | 5 |
| G | Potential tax revenue                      | 1                  | 2 | 3 | 4                   | 5 |
| H | Job creation estimates                     | 1                  | 2 | 3 | 4                   | 5 |
| I | Planning and permit approval process       | 1                  | 2 | 3 | 4                   | 5 |

11) The Bureau of Land Management (BLM) is soliciting the public’s opinion on changes to their management plans to include solar development. Have you participated in any of the BLM’s public comment opportunities below? (Check all that apply.)

**Yes, I have participated in one or more of the following:**

- A. Attended a public meeting for the BLM’s Solar Programmatic Environmental Impact Statement
- B. Attended a public meeting for the solar project near your town
- C. E-mailed or mailed comments to the BLM
- D. Other (Please list):

**No, I have not participated for the following reason(s):**

- E. Do not wish to participate
- F. Unaware of participation opportunities
- G. Meeting time inconvenient
- H. Location of meeting inconvenient
- I. My opinion does not matter or will make no difference
- J. Other (Please list):

- 12) How old are you? Please check one.
- A. Less than 20 years
  - B. 20 to 29 years
  - C. 30 to 39 years
  - D. 40 to 49 years
  - E. 50 to 59 years
  - F. 60 years and above
- 13) How long have you lived in the California Desert region? This includes the desert areas of Imperial, Inyo, Kern, San Bernardino, San Diego, and Riverside counties.
- A. 1 year or less
  - B. 2 to 5 years
  - C. 6 to 10 years
  - D. 11 to 20 years
  - E. More than 20 years
- 14) What is the highest level of education you have completed?
- A. Less than high school
  - B. High school or GED
  - C. Some college, no degree
  - D. Two-year college degree (Associates)
  - E. Four-year college degree (BA, BS)
  - F. Graduate or Professional degree

End of Survey – Thank you for participating!!  
Please use the enclosed stamped envelope to return the survey