

MEMO

PREPARED FOR: CALIFORNIA PUBLIC UTILITIES COMMISSION
PREPARED BY: ILLUME ADVISING, LLC
DATE: JUNE 15, 2020

SOLAR CONSUMER PROTECTION GUIDE RESEARCH FINDINGS

Table of Contents

EXECUTIVE SUMMARY.....	2
RESEARCH OBJECTIVES.....	4
FOCUS GROUPS SAMPLING AND RECRUITMENT	4
CONSUMER PROTECTION GUIDE OVERALL FINDINGS	6
AWARENESS AND ACCESS	6
USEFULNESS AND CLARITY	6
PURPOSE AND CREDIBILITY.....	7
ORGANIZATION, STRUCTURE, AND WAYFINDING	7
VISUALS AND DESIGN	8
DETAILED FINDINGS	9
FIRST SECTION	9
EXPERIENCE OF FALSE CLAIMS AMONG PARTICIPANTS	10
PAGE 5 ROADMAP GRAPHIC:.....	12
STEP 1: IS SOLAR A GOOD FIT FOR ME?.....	12
STEP 2: UNDERSTAND ROLES AND SOLAR PROCESS.....	13
STEP 3: FIND A QUALIFIED SOLAR PROVIDER	13
STEP 4: COMPARE YOUR FINANCING OPTIONS	14
STEP 5: LEARN ABOUT ELECTRICITY BILL SAVINGS	15
STEP 6: CAREFULLY READ ALL PAPERWORK	15
STEP 7: “BEFORE YOU SIGN” CHECKLIST.....	16
STEP 8: SIGNATURE PAGE	16
SPANISH-LANGUAGE FINDINGS.....	16
SOLAR JOURNEY	18
MOTIVATIONS.....	18
INFORMATION GATHERING AND SOURCES.....	18
DECISION-MAKING.....	20
APPENDICES	21
APPENDIX A: FOCUS GROUP GUIDE.....	21
APPENDIX B: FOCUS GROUP SCREENER	27

EXECUTIVE SUMMARY

This memo is divided into overall and detailed findings. The following summary summarizes overall findings and recommended changes, as detailed findings and suggested changes are too specific to merit inclusion here.

Awareness and Access

Awareness of the guide was moderate among recent adopters and very low among shoppers. Six of the ten solar adopters who had signed a contract since September 2019, and should have been provided the guide, were given it by a contractor. Of these, 5 were given it just before signing, and the sixth was provided it after they signed. Two adopters had obtained the guide on their own while researching solar, while none of the shoppers had found the guide on their own.

Purpose and Credibility

After reviewing the guide, participants identified and found credible two main goals of protecting and educating consumers interested in purchasing solar panels, but found their separation in the guide itself somewhat jarring.

- Participants found the first four required pages covering consumer rights and protections to be quite different from the rest of the guide, focused on educating the reader, in content, tone, and visuals.
- Participants were confused as to why signatures and initials were required, and were wary of the requirement.
- The fact that the guide had been created by the CPUC engendered trust and interest in the guide.

Usefulness and Clarity

The guide was perceived as particularly valuable for those at an early stage in the solar adoption process, with content that is comprehensive and highly useful. Shoppers often reported that it was the most useful and detailed source of information they had come across even though none had discovered the guide on their own. This suggests the guide would be useful to customers early in their journey, before they are preparing to sign a contract.

Participants felt that all the sections in the guide were important to understanding solar and deciding whether to install it. Asked whether any sections were unnecessary or could be removed, most participants felt they should all remain.

Participants found the information generally clear and easy to understand. Participants indicated that the language and style were accessible and appropriate for the subject.

Organization, Structure, and Wayfinding

Participants felt that the order of the “steps” in the guide made sense overall, but that the guide’s contents needs to be communicated and explained more clearly. Furthermore, they felt this should be done early in the guide to assist wayfinding.

Participants were confused by the instructions to skip to the end of the guide after the first four pages and perceived them as counterproductive to the goal of ensuring consumers were making an informed decision about solar panels. Participants noted that a person ready to sign a contract still may not have gone through all the steps suggested in the guide.

Participants observed that the guide needed clearer structuring to assist navigation through the various sections. They suggested headings to guide and inform readers of what will be covered in that section or on that page.

Visuals and Design

Overall, participants liked that the guide did not have overly dense text and that it used images, icons and graphs to create visual interest. Participants particularly appreciated visuals that contributed to their understanding of the information next to the visuals.

Participants felt that information should be laid out more clearly and consistently across sections. They wanted the main important elements to be highlighted in a consistent fashion throughout the guide.

Experience of False Claims among Participants

Several Spanish-language participants had encountered false claims like those listed on page 2 of the guide. Two out of five Spanish-speaking solar adopters have experienced them in person during their solar journey, particularly the first two about promises of free solar panels and no energy bills.

Several English-language participants reported being told that time was running out. They tended to view it as an undesirable sales tactic rather than a false claim per se.

Spanish-Language Findings

Spanish-speaking participants found the Spanish-language translation clear and comprehensible for the most part. When prompted for more specific feedback, participants noted that were aspects of the content that stood out as inconsistent, unclear or translated incorrectly from English, though these did not generally hinder comprehension. These are provided with examples in the section on Spanish-Language Findings.

Table 1. Summary of Key Recommendations

RELATED TO	RECOMMENDATION
Accessibility	<ul style="list-style-type: none">Given the guide’s usefulness to people new to the process of researching solar, expand the means of disseminating it so that shoppers are more likely to find it on their own, potentially through internet research which many engage in, rather than relying on contractors who supply the guide end of the process.Additionally, consider requiring contractors to provide the guide with up-front sales material rather than at the time of signing a contract.
First section (first 4 pages)	<ul style="list-style-type: none">Contextualize and harmonize the content and purpose of the first four “required” pages with the rest of the guide.State the purpose for requiring initials and a signature along with what should be done with the guide after signing (e.g. who retains it and for what purpose).Omit or more clearly explain instructions to skip sections of the guide.Provide a table of contents in the first section that indicates what information is in each section, where it is located, and links to navigate directly to each section.Consider featuring the CPUC logo and authorship statement more prominently.
Structure	<ul style="list-style-type: none">Use headings throughout the guide based on the table of contents to make finding information easierIncorporate page breaks to indicate changes between sections and avoid mid-page breaks.
Design	<ul style="list-style-type: none">Create a consistent visual hierarchy to indicate the relative importance of information and to direct readers’ attention without calling attention to the visuals themselves.Employ visuals that aid comprehension without being distracting. For instance, the size and multitude of graphic elements, fonts, and text sizes on page 4 of the guide was perceived by many to be a distraction from the information.
Spanish-language	<ul style="list-style-type: none">Employ the services of a Spanish-English translator to resolve issues noted by participants.

RESEARCH OBJECTIVES

ILLUME Advising, LLC, (ILLUME) as a subcontractor to Itron, Inc., was contracted by San Diego Gas and Electric (SDG&E) on behalf of the California Public Utilities Commission (CPUC) to conduct an assessment of the Solar Consumer Protection Guide (“the guide”), a resource for California ratepayers considering solar panels.

The objectives of this research were to explore perceptions of the guide among residential customers who have installed solar or are interested in getting solar, and in particular:

- To explore awareness of and access to the guide,
- To assess its value, usefulness, and usability, and
- To provide recommendations for improving the content and layout of the guide.

ILLUME conducted five online focus groups from May 18-22, 2020. This memo presents overall and detailed findings from the focus groups based on feedback from participants, including recommendations to change both the design and content.

A preliminary version of this memo was sent to members of the service list for the CPUC's rulemaking (R.) 14-07-002, with a request for comment.

The following comments were received from CALSSA and SEIA.

- 1) On the suggestion to require contractors to give the guide earlier in the process, CALSSA and SEIA were both supportive of consumers receiving the guide early in the solar purchasing process as well and would be very interested in continuing to work with the Commission on the details of implementation.
- 2) On the suggestion to expand methods of disseminating, they agree that more tactics should be considered. In particular, for IOU customers with an email address, it could be useful to have the IOUs could do a yearly email to those customers regarding the guide.
- 3) Regarding the suggestion to require initials at the end of each step instead of just the first four pages, they believe accessing the guide early and reading is vital, but they recommend against any additional initialing requirements on the guide.

This final memo was not edited in response to the comments but CPUC staff will review the comments.

FOCUS GROUPS SAMPLING AND RECRUITMENT

The ILLUME team conducted five online focus groups with a total of 27 English- and Spanish-speaking residential single-family homeowners. Participants were either solar adopters (customers who had solar installed) or people who reported being interested in installing solar within the next two years. In total, there were 16 solar adopters of which 10 had installed solar since September 2019 and 6 had installed solar prior to September 2019, and 11 solar shoppers.

The following demographics were sampled and recruited for the focus groups:

1. English and Spanish-speaking single-family homeowners in California’s IOU territories
2. Near-coast (defined as counties adjacent to the ocean) and inland (east of these counties in the middle of the state)
 - a. Spanish speakers were primarily recruited from around the Fresno area owing to reports of false claims about solar benefits being made to Spanish speaking customers in that area

3. Solar adopters (customers with solar installed on their homes) and solar shoppers (customers who reported an interest in installing solar within two years)
4. A mix of ages, with representation of older solar adopters/shoppers (65 years or older)
5. A mix of income, with representation of income-qualified and moderate-income customers
6. A mix of gender, ethnicities, and education levels

Recruitment was conducted through our partners EnergySage (for English-speaking solar adopters) and Athena Research (for Spanish-speaking customers and English-speaking solar shoppers). Participants received a \$125 incentive for their participation in the focus groups. All participants were mailed a paper copy of the protection guide, as well as a link to the online version, in advance of the focus groups for their use during the online sessions.

Below is a summary of the composition of the five focus groups.

Table 1. Focus Group Composition

DATE & TIME	LANGUAGE & SOLAR STATUS	LOCATION & PARTICIPANT ZIP CODES
May 18, 2020 from 6pm-8pm	English speaking, mix of adopters and shoppers <ul style="list-style-type: none"> • 2 solar shoppers • 3 solar adopters since September 2019 	Inland (92506, 94521, 95219, 92518, 92318)
May 19, 2020 from 3pm-5pm	English-speaking, solar adopters <ul style="list-style-type: none"> • 6 solar adopters since September 2019 	Near-coast (90066, 90712, 92117, 94027, 94707, 94563)
May 20, 2020 from 6pm-8pm	English-speaking, mix of solar adopters and shoppers <ul style="list-style-type: none"> • 2 solar shoppers • 2 solar adopters since September 2019 	Inland (93402, 90601, 92701)
May 21, 2020 from 6pm-8pm	Spanish-speaking, mix of solar adopters and shoppers <ul style="list-style-type: none"> • 4 solar shoppers • 3 solar adopters before September 2019 	Inland (Fresno) (93210, 93706, 93633, 93608, 93706, 93210, 93633)
May 22, 2020 from 6pm-8pm	Spanish-speaking, mix of solar adopters and shoppers <ul style="list-style-type: none"> • 3 solar shoppers • 2 solar adopters before September 2019 	Near-coast (91001, 91604, 92661, 90603, 91361)

SOLAR CONSUMER PROTECTION GUIDE OVERALL FINDINGS

The following section provides findings relating to participants' awareness, perceptions, and assessments of the usability and clarity of the California Solar Consumer Protection guide in both English and Spanish. Detailed findings relating to specific sections and pages of the guide are located in the subsequent section of the memo.

AWARENESS AND ACCESS

Awareness of the guide was moderate among recent adopters and very low among shoppers. When asked whether participants had encountered the guide prior to the focus groups, of the ten solar adopters who had signed a contract since September 2019, when the guide was publicly released, six had been given the guide by their contractor and four had not been provided it.

- Of the six adopters who received the guide:
 - Five were presented with the guide at the time of signing the contract, one of whom also received the guide early in the sales process from a contractor he requested a bid from, and one received the guide after signing the contract.
 - Two of the six adopters found the guide on their own during their research process.
- None of the adopters who had solar installed before September 2019 had obtained the guide. This was not surprising since they were no longer actively seeking information on installing solar.
- Notably, none of the shoppers reported finding the guide on their own.

Suggested changes: see next section, "USEFULNESS AND CLARITY."

USEFULNESS AND CLARITY

We asked participants how useful they found the guide both as a standalone document and compared to other research they had completed previously.

All participants thought that the guide was comprehensive in the topics it covered and highly useful, particularly for those early in the process of considering solar.

- Participants who were given the guide just before signing a contract agreed that it was very useful, but felt it was too late in the process since they had progressed beyond the point of needing the information in the guide.
- Shoppers, none of whom had encountered the guide on their own, often reported that it was the most useful and detailed source of information they had come across. This suggests the guide would be useful to customers early in their solar shopping journey, before they are preparing to sign a contract.

Participants felt that the sections contained in the guide were all important to understanding solar and making a decision about whether to install it. Asked whether any sections were unnecessary or could be removed, most participants felt they should all remain.

Participants found the information presented in the guide generally clear and easy to understand. Participants indicated that the language and style were accessible and appropriate for the subject (note that findings specific to the Spanish-language version are covered in the Spanish-language Findings section).

- The only exception to this was "STEP 5: Learn About Electricity Bill Savings," which several participants found confusing. We note that this is discussed further in the Detailed Findings.

“I think it was very useful. It has a lot of information about signing contracts, and not signing contracts.” English-language shopper, inland

Suggested changes:

1. Given the guide’s usefulness to people new to the process of researching solar, expand the means of disseminating it so that shoppers are more likely to find it on their own, rather than relying on contractors who supply the guide at the end of the process. Commonly visited websites by solar shoppers could be a potential avenue.
2. Additionally, consider requiring contractors to provide the guide with up-front sales material rather than at the time of signing a contract.

PURPOSE AND CREDIBILITY

After reviewing the guide, participants identified and found credible the guide’s two main goals of protecting and educating consumers interested in purchasing solar panels, but found their separation in the guide itself jarring.

- They noted that the first four “required” pages, which explained consumer protections and warning consumers about fraud and steps to avoid it, were distinct from the rest of the guide, for instance in tone, content, and visuals. This gave some the impression that the guide was more like two resources put into one rather than a single, continuous document.
- Participants were unclear on who the intended audience of the guide was. They noted that although it was framed as being a resource for those about to sign a contract, it included a great deal of important information that was needed before reaching the point of signing a contract.
- The fact that the guide had been created by the CPUC (noted on the first page) engendered trust and interest in the guide.

Participants were confused as to why signatures and initials were required on the guide, leaving them wary of the requirement.

- Participants noted that a signature is typically required when entering into a legally binding contract, and those who had not seen the guide before wondered if the guide itself was a contract, or part of one.
- Many expressed uncertainty about who was intended to retain the signed document—the contractor, the customer, or if needed to be submitted somewhere.

Suggested changes:

1. Clearly state the intended audience(s) and purpose(s) on the first page. Several noted that this could be in the form of “what you’ll learn from this guide” or “what’s inside” to help readers quickly understand the value and relevance to them.
2. State the purpose for requiring initials and a signature, and what should be done with the signed guide, to avoid confusion relating to the document’s purpose.
3. Consider making the CPUC logo and statement of authorship more prominent—either moved higher on the page or made larger.

ORGANIZATION, STRUCTURE, AND WAYFINDING

Participants felt that while the order of the “steps” made sense overall, these needed to be provided earlier on as a table of contents, as they felt they needed more information about what to find and where early in the guide to simplify navigation.

Participants were confused by the instructions to skip to the checklist and signature page at the end of the guide after the first four pages and found them counterproductive to the goal of ensuring consumers were making an informed decision about solar panels.

- Participants noted that a person ready to sign a contract still may not have gone through all the steps suggested in the guide, and that while the checklist in Step 7 would alert them to this, it seemed counterintuitive to have the guide’s contents outlined at the end of the document.
- Participants felt that the guide directed them to jump through sections more often than they felt comfortable with. For example, the checklist at the end refers readers back through the guide, but not in the order of the guide’s sections). They mentioned having a feeling of “being bounced around.”
- Many recognized that the option to skip to the end was likely owing to the fact that many people would not want to read the entire guide, but felt the guide should still ensure consumers are aware of the steps in the guide. One suggested requiring initials at the end of each step rather than the first four pages only.

Participants observed that clearer structure is needed to assist navigation through each of the sections.

- They suggested section or page headings to alert readers of what will be covered in the subsequent section or on a given page. As an example, some participants commented that the page 2 heading warns them to read at least the following 3 pages but does not indicate why or what will be covered.
- Many found mid-page section breaks awkward and that it made it difficult to find information (Steps 1 and 5). They noted that information for each section should end at the bottom of the page to avoid this.

“These are all [...] details that you need to be aware of that might just slip through the cracks, particularly if you're talking to a salesperson in person. I think you should initial each section instead of each page at the beginning to make sure people at least see the steps they might be missing.” – English-language adopter, inland

Suggested changes:

1. Provide a table of contents at the beginning of the guide that indicates what information is included in each section and precisely where it is located.
2. Omit or more clearly explain instructions to skip sections of the guide.
3. Organize the checklist at the end in the same order as the sections in the guide.
4. Use headings based on the table of contents throughout the guide, to make finding information easier.
5. Incorporate page breaks to indicate changes between sections and avoid mid-page section breaks.

VISUALS AND DESIGN

This section includes the overall observations and recommendations participants made regarding the design and visuals used in the guide. As these were often focused on particular graphics or pages, specifics are provided in the Detailed Findings section.

Overall, participants liked that the guide did not have overly dense text and that it used images, icons and graphs to create visual interest.

- Participants particularly appreciated visuals that contributed to their understanding of the information next to the visuals. Participants noted that not all visuals met this requirement.
- Some participants felt certain pages or sections were overly busy or cramped by visuals.

Participants felt that information should be laid out more clearly and consistently across sections.

- They wanted the main important elements to be highlighted in a consistent fashion throughout the guide, observing that what “jumped out to them” at first glance—whether a visual, icon, or text—did not always seem to be the most critical information once they took in the information.

Suggested changes:

1. Create a consistent visual hierarchy to indicate the relative importance of information and to direct readers’ attention without calling attention to the visuals themselves.
2. Employ visuals that aid comprehension without being distracting. For instance, participants noted that page 4 has fonts in different sizes and styles along with a multitude of graphic elements that many perceived to be a distraction from the information.

DETAILED FINDINGS

A significant portion of the session was devoted to going through the guide section by section. The following sections expand on the overall findings presented above to provide findings relating to specific pages and sections and relevant changes to consider at the end of each.

FIRST FOUR PAGES REQUIRED FOR SIGNING

All groups were directed to read the first four pages of the guide and were prompted to discuss the usefulness and clarity of each page in detail.

Most participants felt the content of the first four pages was useful and important to retain in order to help people avoid fraudulent claims and pressure tactics. They also felt the information was clear and easy to understand.

- For solar shoppers in particular, it was mostly new information that was regarded as important to know before deciding whether to adopt solar.

In relation to the rest of the guide, most participants felt the first four pages read differently and were visually distinct from the rest of the guide.

- Some participants commented that the rest of the guide seemed more “important” in terms of understanding the choice and process of installing solar than the first section, which, while important, did little to inform customers about solar.
- Several commented that it was not a “Step” like the rest of the guide and was visually distinct as well, and one noted it seemed like a brochure more than a guide due to the graphics and amount of information in each page.

Many participants were critical of the header suggesting that readers only read the first section on page 2, as they felt it downplayed the importance of the rest of the guide.

- Adopters stressed that purchasing solar panels is a complex and costly investment that merits reading the entirety of the guide, and several suggested removing the header.
- As noted earlier, many observed the first section of the guide does not indicate what information is included in the rest of the guide, which they viewed as problematic.

Suggested changes:

1. Contextualize the content and purpose of the first section in relationship to the rest of the guide.
2. Harmonize and integrate this section visually with the rest of the guide.
3. Include a table of contents early in the guide.
4. Consider removing or revising the header on page 2 instructing readers to read “at least the next 3 pages.”

Experience of False Claims among Participants

Several Spanish-language participants encountered false claims relating to solar adoption. Two out of five Spanish-speaking solar adopters reported receiving an in-person false claim regarding free solar panels and no energy bills. Spanish-speaking solar shoppers have also heard similar claims in TV commercials and media ads. A few English-speaking participants noted seeing ads on the internet relating to free solar, but none experienced them in person.

Several English-language participants reported being told that time was running out. They tended to view it as an undesirable sales tactic rather than a false claim.

“One of my main questions was that I thought that the installation was free. You hear them say “There is no installation cost” but I always thought it was strange. As they say, nothing is free. In my mind, I was always thinking – Are they going to charge me for anything? How is that going to work? I was really confused.”

[Translated from Spanish] Spanish-language adopter, Fresno area

The following sections provide page-by-page findings, observations, and suggested changes for the first section of the guide that have not yet been discussed in this memo.

PAGE 1

- Participants liked the focus on the three main tips, both as content and being visually highlighted. The snail visual, however, had a negative connotation for several participants, who thought a clock may be a more neutral option.
- Participants thought the information on language availability and sound recordings was important, but took up more space than it merited.
- The first page includes an “initial here _____” section, which was concerning for most participants since there was no mention about why initials or a signature were required.
- The guide version date at the top of the first page can be interpreted as an expiration date. This could be fixed by adding “Issued in...”
- The Spanish-language guide lists Spanish as an available language, which participants felt should be changed to English in that version.
- A few participants noted that the question of qualifying for low-income programs seemed to be an outlier with the rest of the information.

Suggested changes:

1. Change snail icon to a clock or another icon that denotes time and has a neutral connotation.
2. Minimize the space allocated to the information given about language availability and sound recordings.
3. Clarify why initials are needed on this page.
4. Add text in front of the guide version date to clarify the significance of the date.
5. Change the available language list in the Spanish-language guide to feature English rather than Spanish.
6. Reconsider including the information provided about low-income programs on this page.

PAGE 2

- Participants felt the information on page 2 was important to include, regardless of whether or not they had experienced false claims themselves.
- Participants felt the true/false visuals (thumbs up/down) helped reinforce the information, but several felt they were too large and distracting.
- The detail in the last claim about signing an electronic tablet was perceived as too specific and potentially confusing.
- One participant pointed out that the asterisk at the bottom of the page by the statement about reporting fraud was confusing as this usually indicates a footnote, and fraud was not referred to anywhere on the page. Several then noted this was important and should be featured more prominently.

Suggested changes:

1. Consider resizing the true/false visuals to be smaller.
2. Move the statement about fraud to a more prominent position on the page.
3. Change the reference to an electronic tablet to something more generic.
4. Consider introducing the topic of fraud earlier in the page rather with an asterisk at the end.

PAGE 3

- The raised fist icon at the top of the page had a strong connotation for many participants. Some associated it with rebellion or violence and suggested it should be replaced.
- Most participants liked the way the information was presented on this page. The repetition of the phrase “You have the right” reinforced the content and made it easy to read. However, a few noted that “having the right” to read the whole guide did not seem to merit the phrase as much as the other three rights listed, and could be moved to the beginning of the guide (and not referred to as a right).
- Overall, the right to cancel was perceived as the most important for people to know.
- Some participants wondered whether the right to have the contract written in the language that the representative spoke to them was accurate, given that contracts may not be available in all languages.

Suggested changes:

1. Replace the raised fist icon with something less provocative, given the current political discourse.
2. Consider moving or removing the right to read the entire guide.
3. Consider stating the languages in which the contract should be available to customers.

PAGE 4

- Participants agreed that the three main questions featured on the page were useful and very important.
- Many participants felt the recommendation to get three bids was extremely important and should be integrated into the rest of the information on the page. One Spanish-speaking solar adopter mentioned he only requested one bid and regretted not having this information sooner.
- Many observed that the margin on the left was not useful and crowded the important information on the right side of page.

“I wish I had all this information. When they spoke to me, the company spoke very nicely suggesting – This is your best option, we can send someone tomorrow – I just went with that option without thinking about asking for 3 bids. I was stupid and went with the first option. This is very important information.” [Translated from Spanish] Spanish-language adopter, Fresno area

Suggested changes:

1. Consider integrating the advice to get three bids into the overall list of questions—as a separate point or incorporated into the second point on the page about the total cost of the system.
2. Reduce the amount of space taken by visuals to allow the information to be presented in a clearer, more spaced out fashion.

ROADMAP GRAPHIC:

Participants had mixed responses to the roadmap graphic, but overall felt the graphic did not clearly communicate the contents or how to use the guide.

- While some participants liked the literal roadmap nature of the graphic and found it clear enough, more often participants found it confusing. For example, having steps on top and steps on the bottom, and in different colors, signaled that there may be differences among the two groups and made them wonder what these differences were. Several participants mentioned they would prefer a more typical table of contents with more information about what they would find in each step.
- Most participants did not notice the vertical title on the side of the page, and several observed they did not understand the purpose of the graphic until it was pointed out to them.

“I think it was set up to be a roadmap, right? But it goes up and down. It's just odd. It's kind of disconcerting and not how you normally read. You go up and down from one to the next.” English-language solar shopper, inland

Suggested change:

1. Replace road graphic with a clear and informative table of contents.
2. Reposition headline to appear at the top of the page.

STEP 1: IS SOLAR A GOOD FIT FOR ME?

Participants felt the information was useful in theory, but did not ultimately provide clear, practical guidance as to whether they were a good candidate for solar.

- They found that the questions to ask before considering solar were very useful and were not always raised by contractors when talking about solar. A few wanted the considerations about the physical considerations for the home to be spelled out more clearly (for instance about the roof or shade)
- Most participants felt the last question: “Have I made my home energy efficient?” should go first since it would be a logical first step when considering solar.
- Some felt the content was inconsistent in addressing low-income programs (but not other forms of financing). Most felt the information related to low-income programs was very useful for those that have interest in solar but may not have the financial resources, but it could be combined with Step 4 on financing options.

“I think it seems to put a lot on you to decide if you're good candidate for solar. I haven't met one solar provider that told me I wasn't a great candidate for solar.” English-language adopter, inland

“I think [the first question] is important. I think maybe not, “Am I a good candidate.” But, “Is my roof a good candidate?” Is the question, and it's something that I didn't really think about. And then when we started to look into it, we were like, “Oh, wow. How old is that roof?”” English-language adopter, inland

Suggested changes:

1. Reorder the questions at the beginning of Step 1 so that the first and last questions are switched.
2. Revise the content to help readers determine the answers to the questions posed, and direct them to resources that help answer each question, whether in the guide or external to it.
3. Move information on low income programs to Step 4.

STEP 2: UNDERSTAND ROLES AND SOLAR PROCESS

Participants found the information on both pages useful, but felt some information made more sense in other sections and the design of the section should be streamlined.

- Although some participants initially liked the cyclical graphic on page 7, most ultimately found it confusing for the following reasons:
 - It does not have a beginning or end
 - It gives the wrong idea of a recurring cycle
 - It does not clearly relate to the order in the text to the left of the graph
 - The solar process can be simpler than represented, as some of the actors may or may not be involved in an individual's process
- The information about PACE financing on the second page was distracting and belonged in the financing section. Several felt it was fine to mention it as a step, but that financing information should mainly be kept together.
- Participants also viewed the information on the expected timeline for installation as important, but felt its placement at the end of the section in its own section confusing.

Participants appreciated the timeline presented on the second page of the section, in particular its chronological order and clear distinction of the responsible party.

- More, however, felt the format could be cleaner, and found the long ellipses between actor and the action too busy.

"I don't think that graphic is helpful to be honest, because where does it start? And where does it end?" English-language shopper, inland

"It goes from solar provider to lender, but then lender comes way down here, and then PACE administrators, that's next to manufacturers and it is way down. It's not synchronized for some reason. And is it a cycle, is it going around and around or is it a straight line?" English-language shopper, inland

Suggested changes:

1. Remove or revise the cyclical graphic on page 7, and present information on market actors in clearer, linear fashion.
2. Consider moving the details about PACE financing to Step 4 where financing is covered.
3. Consider moving information on the length of the process earlier in Step 2.

STEP 3: FIND A QUALIFIED SOLAR PROVIDER

Overall, participants liked the content and layout of this page and thought it was highly useful and clear.

- Participants felt that the three steps to find a solar provider were clear and straightforward.
- Similarly, participants appreciated the clear breakdown of questions to ask a contractor.

Some participants found the design of the section too busy.

- Several felt the content was crowded.
- Some noted that using numbered lists for the questions would improve clarity.
- A few felt the icons, though appropriate, took up too much space.

“I think it's useful. It's well laid out and it helps you just break down an overall big picture. I think page 10, like you said, when you're getting the sales presentation or talking to the solar salesperson, they cover those three big pieces pretty well.” English-language solar adopter, inland

“I think this is a great, great section. I think it's clear, and they're all questions that I wanted to ask, and I did ask of our provider, of our installer, and the solar company.” English-language solar adopter, inland

“These questions are very interesting. It is extremely important to have this information.” Spanish-language solar shopper, Fresno area

Suggested changes:

1. Streamline the design of the section to provide more room for text and to highlight the importance of the information.
2. Consider a numbered list for the questions for contractors.

STEP 4: COMPARE YOUR FINANCING OPTIONS

Participants felt the layout and organization of the section could be improved to help readers compare their options more readily.

- Several proposed moving this step earlier on in the guide, potentially between Step 1 and Step 2, as the question of affordability is a critical consideration.
- While they found the information in the Pros and Cons table useful, many noted this was given before an explanation of the financing options, and therefore lacked context. Several felt short descriptions could be provided in the graphic at the beginning of the Step or in the first column in the Pros and Cons table. Many wanted this entire table on one page instead of broken up to make it easier to compare.

Participant felt the information in the Closer Look sections was important but perhaps too dense to easily absorb. They particularly liked the formatting and clarity of the questions to ask after each financing option.

“The one thing that jumps out, that I find very disconcerting, is how it's organized. If you look at it, the first half of the page is this graphic, and then the pros and cons of the three are spread over two pages. When in reality, the side-by-side quick comparison could be put on one page so you have it all together... And the same goes all the way through where you're looking at more detail. Each one of those is approximately a page long. And if we eliminated the graphic at the top and everything moved up, we'd end up with four pages.” English-language solar adopter, near-coast

“So the pros and cons, and maybe even just a one or two sentence type summary on what the differences are, or what purchase is, what PACE is, what a PPA is.” English-language solar adopter, near-coast

Suggested changes:

1. Consolidate all financing information in one step, including the parts found in Steps 1 and 2.

2. Minimize the graph at the beginning or include descriptions within it to improve its usefulness and to remove the page break in the middle of the table. Alternatively, add a brief description of each financing option before or alongside the pros and cons.
3. Consider formatting changes to make denser text blocks easier to read.

STEP 5: LEARN ABOUT ELECTRICITY BILL SAVINGS

Topics covered in this section of the guide were some of the most difficult for participants to grasp. Participants felt the content did not significantly improve their understanding of the topics covered, particularly for solar shoppers who were still in the early stages of their solar shopping journey.

- Although participants recognized the guide was not intended to be a complete source of information, most agreed that the information provided was not adequate to cover complex topics like bill savings, net energy metering, and settlement bills. Several felt that this could be resolved by the section acknowledging the limitations, and outlining additional steps and resources for more details on these topics (in particular to highlight that each utility has its own resources).
- Pricing, in general, was one of the most difficult areas to find information about and understand.
- The warning in the section heading that “electricity bill savings estimates do not guarantee savings” was interpreted by some participants as meaning solar may not provide any bill savings at all. Participants thought this information should be placed at the end of the section once they had an opportunity to go through the information.
- The True Up graph was confusing and concerning for a few who noted they first looked at the True Up amount that was 50 times higher than the monthly bill before reading the text explaining it.

“My power provider isn't clear on how much you get paid for the electricity put back, and I don't even know. I got a bill each month for \$10. I don't know what's going to happen when I have a true-up, I mean, it's sort of a mystery to me.” English-language solar adopter, near-coast

“...because we're dealing with different utility companies... This is just general stuff. But all they can really say is that for details, please refer to your utility companies for more specifics on the NEM.” English-language solar adopter, near-coast

“I agree that [the bill savings warning upfront] should go at the end so as not to discourage people to read about the different steps.” Spanish-language solar shopper, near-coast

Suggested changes:

1. Acknowledge that the section serves as an introduction to complex topics, and provide links to external resources.
2. Consider simplifying information and using strategies to guide understanding, such as an ordered process or using key questions to organize information.
3. Consider moving or removing the heading relating to bill savings estimates.

STEP 6: CAREFULLY READ ALL PAPERWORK

Participants found this section useful, particularly in its placement before the checklist in Step 7. They felt the content and layout were clear overall.

- Several noted that an introduction explaining the purpose of the section would help the reader understand its content better.

- While acknowledging that having it on one page was ideal, a few felt the text was overly crowded.

Participants appreciated the section listing Additional Resources, but felt it was crowded in terms of formatting and could be arranged more clearly.

- A few felt that organizing the resources by topic might be clearer, but acknowledged that might be more confusing for some.
- A few were unsure whether it was a separate section or part of Step 6, and that either way it would need its own line in the table of contents.

“I think a header at the top would be helpful, just an introduction. Like ‘this is the paperwork you’re going to encounter’.” English-language solar shopper, near-coast

“This page is very useful to me. The page is reminding you of anything that you may not remember before signing a contract. It’s very useful.” Spanish-language solar adopter near-coast

Suggested changes:

1. Add a brief description of the purpose of the section to the top of the page.
2. Streamline the text, if possible, to reduce visual crowding.
3. Consider revising and relocating the Additional Resources to a separate section, and ensure it is highlighted in the table of contents.

STEP 7: BEFORE YOU SIGN CHECKLIST

The checklist in this section was considered very important and essential to have completed before signing a contract.

- This page was a favorite among many participants who felt it clarified the rest of the guide.
- Many participants were, in general, accustomed to and comfortable using checklists, and felt this checklist was extremely useful.

“I like this page a lot. It makes you review all the important points. In my opinion, it is the most important page in this guide.” Spanish-language solar shopper, Fresno area

“I think this is a very important page, it is like a summary. Before deciding to sign a contract, it reminds us all the information that we already read to make sure we didn’t miss any details, any clauses, and we are sure about signing a contract. I think it is really good. This summary is very good here.” Spanish-language solar shopper, Fresno area

STEP 8: SIGNATURE PAGE

While participants did not have any issues with this page per se, as noted previously, they felt that clarifying the purpose for requiring a signature early in the guide was important.

SPANISH - LANGUAGE SPECIFIC FINDINGS

Spanish-speaking participants found the Spanish-language translation clear and comprehensible for the most part. When prompted for more specific feedback, participants noted that while they did not generally rise to the level of reducing comprehension, there were aspects that stood out as inconsistent, unclear or translated incorrectly from

English. Below we discuss the issues participants discussed along with examples in descending order of frequency mentioned and importance.

We note that the issues listed below could be addressed relatively quickly by a bilingual translator or fluent speaker.

Register Switch

Participants pointed out that the level of formality used to address consumers/readers was inconsistent within sentences and throughout the guide. The following sentence first addresses the consumer with the verb form for the informal “tú” and the second part of the sentence uses the more formal form “usted”.

“Tienes el derecho a una copia del contrato de energía solar y del acuerdo de financiamiento en el idioma en que el vendedor se comunicó con usted.”

Terminology

Inaccurate translations of specific terms were found through the guide by some participants. Some terms were translated from English by using Spanish terms that would be appropriate in another context but not in the context of the guide.

“Activo” translated from the English word Asset when it should have been translated as “bienes.”

“Coherente” translated from the English word Consistent when it should have been translated as “consistente.”

Words Untranslated

Participants also observed that some words and phrases were left in the English language. Throughout the guide, several headings or graphs titles were left in English, causing confusion among Spanish speakers.

“Example of a settlement” was found in the Spanish version.

Misspelled Words

Words in the Spanish language were misspelled or had missing accents. This would not cause difficulty in comprehension, but it can undermine the quality of the translation.

“Desición” – “través” – “esta”. It should have read “Decisión” – “a través” – “está”.

Use of Imperative Tense

Participants perceived some of the advice given, particularly where the imperative tense was used, to be too harsh and intimidating. Several Spanish-language shoppers perceived the tone used to give advice throughout the guide as intimidating and commented that reading the information would make them reconsider their initial interest in going solar. This was particularly the case in sentences written in the imperative tense, which is considered more aggressive in the Spanish language. A more polite tone would make the guide less intimidating for solar shoppers.

“Asegúrese” for make sure – “No firme” for do not sign. This could be translated as “Deben asegurarse” – “Se recomienda no firmar...”

SOLAR JOURNEY

The session opened with a discussion of participants' progress and process in considering and (for adopters) installing solar on their homes.

The following section provides findings relating to participants' solar decision-making process to provide context and insight into how the guide might support their journeys.

MOTIVATIONS

Participants consider solar for a range of reasons, often in combination, from bill savings to the environment. Adopters almost always noted these motivations alongside federal tax credits. Tax credits are a catalyst for shoppers to become adopters—and in particular, awareness that the credits decrease over time. In descending order of frequency mentioned, reasons for considering as well as adopting solar included:

- **Bill savings:** Most, though not all, solar adopters were motivated wholly or in part by the goal of saving money on electricity, with several noting recent rate increases due to wildfires. In general, shoppers tended to be concerned with whether the bill savings would justify the expense.
- **Environmental considerations and preservation:** Most listed the environment as a primary or secondary motivator, often to the end of preserving it for the next generation. Many of these spoke of having long been interested in solar for this reason.
- **Friends or family adopting solar:** Several participants noted becoming more seriously interested in solar when someone they knew installed and were satisfied with it.
- **In tandem with other improvement projects:** Several mentioned they decided to get solar as part of a series of home projects. Two of these were the construction of a separate accessory dwelling unit (granny flat or cottage) on the property.
- **Desire to adopt green technology:** A small number of participants mentioned owning or being interested in buying an EV and being generally interested in green technology. While this did not seem to be a strong driver, they noted that it seemed to 'make sense' to get solar in context with other technologies.

"What prompted us really to make the jump was the fact that the federal tax [credit] support was going to drop from 30% to 26% and then 4% every year. So economically, probably, it's not going to pay off for us for a long time, in spite of the subsidy, but I felt that it's the right thing to do, for the environment and for next generation." – English-language solar adopter, near-coast

"I've been interested in solar all my life. As a young kid, I read a book talking about solar cells and geothermal homes, and I've just been interested. It seems so sensible to me, especially here where we have so much sun most of the time. I've had a couple of homes and I put solar on them. One of them, I put it on myself. I've been very enthusiastic about solar most of my life." English-language solar adopter, inland

"In the area where I live, it can get pretty hot and my energy bills can get pretty high in the summer. That's why I made the decision to install solar." [Translated from Spanish]. Spanish-language solar adopter, Fresno area

INFORMATION GATHERING AND SOURCES

Both adopters and shoppers discussed challenges associated with researching solar and determining whether solar is or was right for them. Many shoppers felt they were unable to find information that answered their questions satisfactorily. We note that we partnered with EnergySage for the recruitment of solar adopters, and that as a

group, the adopters we spoke to felt the site had been extremely helpful and provided answers, or means to answering, all of their questions relating to solar and selecting a contractor. For the solar adopters who participated in this research, EnergySage was a primary source of information. Other sources included in descending order of frequency:

- **Contractors:** Adopters said they often received information from contractors, though there was a range in perceptions of how trustworthy this information was. Some noted having salespeople knock on their door offering solar panels.
- **Friends and neighbors who had installed solar:** Many participants cited this as an important and trusted source.
- **The Consumer Protection Guide:** Several participants noted finding the guide on their own in the process of their research and found it to be a detailed and helpful source of information.
- **Sources found through internet research:** While most participants noted looking for information on the internet, no source other than EnergySage was mentioned by name.
- **Home Power magazine:** A few participants noted using this source in the last year and finding it quite helpful, even though it ceased production in 2018.
- **TV and social media:** Spanish-speaking adopters and shoppers mentioned TV ads as their initial exposure to solar panels. They also noted they often heard claims of free installation and no energy bills.

We asked participants to discuss their main questions at the outset of their solar journey. In descending order of frequency, their responses included:

- **Total cost of solar panels and installation:** This is the main consideration participants mentioned. Their judgment on whether it was financially accessible and/or sensible tended to determine whether they continued their research.
 - There were two views on cost: Some noted that they needed the technology to be financially beneficial, meaning that they would save money in the long run, while others accepted it may not “pay for itself” but was the right thing to do as long as the cost was not prohibitive.
- **Amount of bill savings:** We note that only one participant used the language of “payback period”, but that this was alluded to by several participants. Some Spanish-speaking solar adopters and shoppers also had the belief that energy bills would be zero after installation.
- **How long solar panels last:** Participants wondered about the longevity and durability of solar panels, including what recourse there is if they break or cease functioning.
- **Whether their homes are right for solar:** Although many did not consider this without prompting, a few wondered if their exposure and shade would work for solar.
- **Payback period:** Some participants found it difficult to find information on payback periods based on energy savings. Information on upfront costs was more readily available to participants than long-term savings.

“I used EnergySage as one website to do some of the heavy lifting. But also we are very connected on our street, many of the houses where I live have it so I got some feedback from other people. I did about 10 bids out there from different providers, too.” – English-language adopter, near-coast

“I think that the biggest kind of surprise for me during the whole process was just the variability in the price from one company to the next and the differences in financing overall I feel like it's not as transparent. I was really happy to find the EnergySage website ...” – English-language adopter, inland

“How much I am going to save long-term. Usually you just hear – if you install the panels now, you will save x amount of money – but I am going to have my house for 20 years or more and I’d like to know how much I am going to save in those 20 years. You also have to consider long-term savings.” [Translated from Spanish] Spanish-language solar adopter, near coast

DECISION-MAKING

Coming to a decision about installing solar is often iterative and spread over a period of time from several months to several years.

- Most **adopters** noted deciding to get solar more than once, meaning they decided to get solar and later reconsidered due to cost, or deciding to get solar and then spending a substantial period of time researching and shopping. As noted in the section on Motivations, the actual decision itself is often catalyzed either by tax credits and/or a particular moment of clarity.
- **Shoppers** tended to report feeling unsure about whether it made financial sense. Often after going through the guide, they felt they did not yet have enough information to feel confident about the decision to get solar.
- **Some Spanish-speaking solar adopters** felt they rushed into solar to later find that the cost was higher than expected, or that there were contingencies that had not been clearly stated at the beginning by installers.

“Well, I’ve heard that sometimes they pay you back if you don’t use enough energy, or something like that, or if you could rent it, or own it, you know? So, it’s just different things about money that I’ve heard that spark my interest. Because I mean, who doesn’t want to save a dollar?” – English-language solar shopper, inland

“I’ve wanted to have solar on my roof, but we don’t use a lot of electricity. But the thing that sparked it was when we drove through past a number of power plants that were spewing a lot of smoke into the sky. I was like, “Okay, it’s time. It’s time to do it.” And then with the prices coming down and the federal rebate, it looked like it would work.” English-language solar adopter, inland

“My thinking is: If you are installing solar panels to cover your energy consumption, why do you still have to pay your utility company? The only answer I got is – that’s the way it is-. As I don’t know how it works, I really wonder if you are investing thousands of dollars, why do you still have to pay for electricity?” [Translated from Spanish] Spanish-language solar shopper, near-coast

APPENDICES

APPENDIX A: FOCUS GROUP GUIDE

WELCOME (3 MIN)

Thank you so much for joining us today. My name is _____ I work for ILLUME Advising, an independent, national research company. Today we'll be discussing issues related to solar energy and, more specifically, looking at the information designed to support Californians considering having solar panels installed on their homes.

Start Powerpoint for ground rules/introductions.

The most important thing about this group is to be open about what you think – we're only able to speak to a small group of people, and we really value your perceptions and feedback. There are no right or wrong answers.

There are really only two ways this can go wrong, if you speak the whole time and don't allow others the opportunity to share their thoughts, or don't speak at all. I'll want to hear from all about the topics we cover over the course of the session.

Before we get started, I also have a few colleagues on the line who are working on this project as well and wanted to hear your feedback. We would like to record this session for note-taking purposes. These recordings are not posted publicly, nor will it be used for any marketing purposes. Your personal information will not be included in our reporting. We use these recordings for analysis and to ensure we have what you say as you said it. ***Begin recording.***

INTRODUCTIONS (ALL) (5 MINUTES)

In this activity, facilitator and participants will introduce themselves, and participants will review and sign consent forms before recording commences. The introduction activity will focus on their initial experiences with going solar.

1. I'd like to begin by getting to know each of you a bit more. As we go around the room, I'd like you to introduce yourself and tell us a few things about yourself. Please tell us:
 - a. Your name,
 - b. Your occupation, or if you've retired or are not currently working, what was it before,
 - c. How long you've lived in California,
 - d. Pre-COVID-19, what your favorite way to spend free time was?

[Close Powerpoint]

INFORMATION GATHERING (ALL) (10 MINUTES)

2. Tonight, we'll be discussing and getting your feedback on a resource available to people who are interested in solar panels, as well as the process of getting solar panels installed at your home for those of you have done so.
 - a. First, I'd like you to think back to the moment **you first started considering** solar panels for your home. Please jot this down on the paper in front of you.
 - b. I'd like to spend the next bit of our discussion talking about the **process of gathering information**
 - c. about getting solar panels.
 - i. To start, **what are/were the main questions that you had about getting solar panels for your home?** Please write these on the paper in front of you.

- ii. What information and resources were most useful to you?
 - iii. What, if any, are/were your main **concerns** about installing solar panels? Do you or did you have any **unanswered questions**?
 - iv. **Solar Adopters:** Is there anything you **wish you knew** when you were making your decision to install solar? What is that?
3. Next I'd like to discuss your decision about solar panels.
- a. **Solar Adopters:** Describe the decision-making process you went through that led you to decide to install solar panels at your home. What made you decide to go ahead?
 - b. **Solar Shoppers:** Describe where you are in your decision-making process at this time.
 - i. Decided against: Why is that?
 - ii. Still considering: Do you still have questions?
 - iii. Decided to go ahead: What are the next steps?

AWARENESS AND ACCESS TO SOLAR PROTECTION GUIDE (ALL) (15 MINUTES)

Now I'd like to understand your familiarity with a particular resource for people considering installing solar panels.

1. **Were any of you aware that the State of California has created resources for solar consumers?**
 - a. If so, what resources were you aware of?
 - b. What resources have you used? What was your experience with those resources?
2. Were you given, or did you find on your own, any information related to your rights as a solar panel purchaser?
 - a. How did you get it?
 - b. Did you find it useful? Did you have lingering questions?
3. *If Guide not mentioned:* **Have you heard of/seen the California Solar Consumer Protection Guide before it was sent to you for this discussion session?**

[For those that said YES to: 4. Have you heard of/seen the California Solar Consumer Protection Guide?]

1. For those of you who have shopped or purchased solar panels since September of 2019, were you presented with the California Solar Consumer Protection Guide in either a printed or electronic format?
 - a. **[IF YES:** When did you first receive the guide? *[Moderator to probe on specific time during the sales process and signing of the contract.]*
 - b. Who showed/ gave you the guide?
 - c. In what form was it given to you (print or electronic)?
 - d. Were you given the full 23-page guide, or just the first pages and the signature page?

[Spanish language focus groups only]

- e. Was the guide in Spanish?
- f. **[IF NO]** Was the salesperson speaking Spanish or English?
- g. Were you directed to the guide in your primary language? Printed or electronic copy?
- h. *If not presented with a guide:* Were you able to find a translated guide within the timeline you needed it?
- i. Was the guide understandable/well-translated?

[If YES to 1. Were you presented with the California Solar Consumer Protection Guide?]

2. How was the guide described to you? *[Moderator to go around the room and let participants share their experiences]*
 - a. Was it framed as important? As something they were required to share?

[If NO to 1. Were you presented with the California Solar Consumer Protection Guide?]

3. You mentioned that you were NOT presented with the guide.
 - a. Were you made aware of the guide?
 - b. Were you encouraged to read or directed to the guide?
4. For those of you who were presented or directed to the guide, how was the guide described to you? *[For example, was it described as something worth reading/important, something that you need to read about because it is required, etc.]*
 - a. Did you review the guide later? What parts of the guide did you read?
 - b. Did you have questions about it?
 - i. Did you need any additional information that was not in the guide? What was it?
 - c. When/how did you sign it?
5. Now we'd like to know your thoughts/impressions after reading the guide. Please write any thoughts or reactions that you remember having about the guide.
 - a. What, if any, actions did you take after reading the guide?
 - i. Gathered more information about solar panels?
 - ii. Comparison shopped or got additional quotes?
 - iii. Reconsidered entering into a contract with a specific company?

SOLAR CONSUMER PROTECTION GUIDE HANDS-ON REVIEW (ALL) (30 MINUTES)

Now I'd like to spend some time getting your thoughts on the California Solar Consumer Protection Guide. Specifically, we would like to get your feedback on the information, layout and visuals inside the guide.

We are interested in getting your opinion about what is useful in the guide and should be kept versus what is not that useful and could be removed. Your feedback is extremely important in improving the guide for other solar panel shoppers. There are no right or wrong answers or opinions. If you find it useful/not useful, clear or confusing, it's probably the case that other users will have the same impressions so that's why we are talking to you about it.

Open Powerpoint to Feedback Instructions page. Explain we will go through the guide section by section starting with the first.

Now we'd like you to grab the guide that you have in front of you and take some time to read through the **first 4 pages**. Pretend you are just starting the process of considering solar panels for your home and whether this guide answers the questions you have or had. (Moderator to give enough time for this task).

[SECTION 1]

1. We are going to talk in detail about each page a little bit later but for now I'd like to ask you for some general feedback on what you read so far.

- a. What are your general impressions about what you read so far? What are the first words that come to mind?
- b. What is the overall **purpose** of this section?
- c. How **useful** is it from 1-5? Why?
- d. How **clear** is it from 1-5? Why?
- e. How are the **visuals**? Which are helpful, which are distracting?
- f. Does it **encourage you to continue** reading?

[PAGE 1]

1. Let's start with the first page. What is useful and necessary on this page?
2. How do you find the layout—is it clear or could it be improved?

[PAGE 2]

3. *Let's go now to Page 2. What is this page telling you?*
 - a. Is this information useful?
 - b. Have you experienced any of these false claims?
 - c. Are there any other misleading sales tactics that you think the guide should include?
 - d. Is the information presented in a format that is easy to read? Clearly laid out?
 - e. What, if any changes would you make to this page?

[PAGE 3]

1. *Let's go now to Page 3. What is this page telling you?*
 - a. Is this useful information?
 - b. What do you think about the use of the phrase 'you have the right...' to start each paragraph?
 - c. Which of these rights were you unaware of?
 - d. Is the information presented in a format that is easy to read? Clearly laid out?
 - e. What, if any changes would you make to this page?

[PAGE 4]

2. *Let's go now to Page 4. What is this page telling you?*
 - a. Is this useful information?
 - b. Is the information presented in a clear way? What would you change?
 - c. Do you find this page clearly laid out? Would you change anything?

[PAGE 23: SIGNATURE PAGE]

3. At this point turn to page 23, which is the signature page.
 - a. Would you feel comfortable signing this based only on the pages we just covered?
 - b. What questions do you still have about installing solar at your home and/or signing a solar panel contract?
 - c. Do you feel you can easily find answers to these questions?

[PAGE 22: BEFORE YOU SIGN CHECKLIST]

4. *Now let's look at page 22. Take a moment to read the information on this page.*
 - a. How useful is the 'Before You Sign Checklist' on page 22?
 - b. Do you think anything is missing on this checklist?
 - c. **[Solar adopters since September 2019]** Did you use this checklist before signing the contract?

WAYFINDING WITHIN THE GUIDE **(ALL)** (5-10 MINUTES)

Thanks for your feedback on the 'mandatory' sections of the Guide. Now I'd like to get your thoughts on using the rest of the guide.

[PAGE 5]

5. Let's turn to page 5.
 - a. What is this page telling you? What is its **purpose**?
 - b. How do you **interpret the graph at the top**? [Moderator to check whether participants understand that this is a summary of contents to the guide, and that there are 8 steps],
 - c. Are all 8 steps clear in terms of what you expect to find?
 - d. Was the title useful? Would you change it?
 - e. Is the information presented in a format that is easy to read? Clearly laid out?

STEPS TO SOLAR **(ALL)** (15-20 MINUTES)

The next pages contain specific information about the steps described on page 5. **[Moderator to alternate which steps each focus group will workshop, groups will either review steps 1-3 or 4-6 for clarity and usability].**

1. For each step (section) covered in the group, please write down the following:
 - a. What is the **purpose** of this step?
 - b. How **useful** is it from 1-5? Why?
 - c. How **clear** is it from 1-5? Why?
 - d. Would it help you make a decision?
 - e. How are the **visuals**? Which are helpful, which are distracting?

[Moderator to explore the following steps in detail based on which steps the group is assigned]

In addition, for the following steps, discuss the following:

Step 2 feedback:

- f. Did you, or would you, call or look at the websites to learn more about these programs?
- g. Why or why not?

Step 5 feedback

- h. Does any of you read the information about net energy metering (NEM) and billing before you signed a contract, or after signing a contract to help you understand your bill?

- i. Is the “True Up” graphic at the bottom helpful—if so, should we elevate it to one of the first four pages, or earlier in the guide?

Step 6 feedback

- j. Does the warning language help you decide you wanted more time before you signed?
- k. How is the level of information provided on this page?
- l. How could this page work better for you?

OVERALL USABILITY ASSESSMENT [ALL] (15 MINUTES)

Now we’d like to talk a little bit more about the guide overall rather than specific parts of it.

1. How was the guide in terms of:
 - a. The length?
 - b. The organization? Were you able to find things easily?
 - c. Visually? Was it crowded or enough space?
 - d. The font sizes? Was it legible?
2. Did you feel you were able to:
 - a. Understand the information in the guide?
 - b. Use the guide to make informed decisions?
3. Did you find value in the guide? Why? Why not?
 - a. Which sections of the guide are most valuable to you? Why?
 - b. Which sections of the guide are least valuable to you? Why?
4. What sections of the guide would you cut, if any? Why?
5. If you were to reorganize the guide, which sections would you include first? Why?
6. Have you come across any kind of informative communication about solar panels or energy (website, sign, guide, brochure, etc.) that you thought was particularly easy to use? What about it made it easy to use?

[If more than 5 minutes, see appendix for step-specific probes]

CONCLUSION AND WRAP UP (5 MINUTES)

Thank you for all of your insights on the guide so far. We have one last question.

1. If you could give the CPUC one piece of advice about how to inform people about installing solar panels on their homes, what would it be? Please write this down and then we’ll share it.

Thank you all so much for your participation today. We appreciate the feedback that you have provided, and it will help the CPUC make changes to the California Solar Consumer Protection Guide that will serve all solar panel adopters and potential solar panel adopters. **[Distribute incentives]**

APPENDIX [IF TIME ALLOWS]

The following are lower-priority questions that we will rotate through and incorporate in groups as time allows.

Step 2:

Page 7: Is the circle graphic and description of the roles helpful at all? Why or why not? Is it worth keeping or should we cut it?

Page 8: Is seeing the typical steps of a rooftop solar installation process interesting and useful to you, or is it too much information and not worth keeping?

Step 3:

Page 9: Is this advice about finding a solar provider something you would consider? Do you already have ways that you have/would find a reliable solar provider and if so, what are those ways?

Page 10 and 11: (for solar adopters) Did you use this list to ask your solar provider these questions before signing a contract?

(for solar shoppers) Would you use this list to ask a solar provider questions? Would it be helpful to have checkboxes next to these questions so you could tick them off? Any questions we should add that you had/have?

Step 4:

Pages 12-15: Did you know these types of financing options were available? Does the pros/cons chart help you choose between options? Is there a better way to graphically represent the options? Are the questions in each financing section useful or not?

Step 5:

Page 16: Is the information about electricity bill savings estimates not guaranteeing savings useful or new information to you? Is it clear what is being communicated to you?

Page 18: Is this information worth keeping, or should it be cut?

Step 6:

Page 19: Is this information worth keeping, or should it be cut? Is it helpful to be told what the documents you'll be signing are, or is it too much information? If you think it's helpful, is there a better way to graphically represent the information?

Pages 20-21: Did you, or would you, go to any of these websites or call any of these numbers? Are there any other types of resources you think should be on the page?

APPENDIX B: FOCUS GROUP SCREENER

OVERVIEW

The following document is intended to provide guidance and a script to our partner recruiting agency. The screener has been developed based on the following table from the approved research objectives document.

All participants will be **single-family homeowners** who have either entered into a contract for rooftop solar PV since the release of the protection guide (**solar adopters**) or are interested in the idea of getting rooftop solar PV in the next two years (**solar shoppers**).

All focus groups will be held online, and we will recruit 7 participants for each of the 5 groups listed below in order to include a minimum of 6 participants in each focus group. Below is a summary of each of the 5 focus groups based

on the location where the participants reside, the date and time of day the focus group will be conducted, and the characteristics included in the group compositions. Characteristics in italics can overlap with others.

GROUP	LANGUAGE	LOCATION	CHARACTERISTICS	DATE/TIME
1	English-speaking/proficient	Inland	Solar adopters (3-4) Solar shoppers (3-4) <i>Over 65 (2)</i> <i>Living with disability (2)</i>	May 18, 6pm
2	English-speaking/proficient	Near-coast	Solar adopters (7) <i>Over 65 (2)</i> <i>Living with disability (2)</i>	May 19, 4pm
3	English-speaking/proficient	Near-coast	Solar adopters (3-4) Solar shoppers (3-4) <i>Income-qualified (3-4)</i> <i>Moderate-income (3-4)</i>	May 20, 6pm
4	Spanish-speaking	Inland (Fresno zip codes)	Solar adopters (3-4) Solar shoppers (3-4) <i>Over 65 (2)</i>	May 21, 6pm
5	Spanish-speaking	Near-coast	Solar adopters (3-4) Solar shoppers (3-4) <i>Over 65 (2)</i>	May 22, 6pm

INTRODUCTION

Hello, my name is *[Interviewer Name]* with ILLUME Advising, calling on behalf of the California Public Utilities Commission, also known as the CPUC. We’re calling with an opportunity to participate in an online research study to understand how customers think and feel about solar energy-related topics.

We are very sensitive to people’s changing needs in light of COVID-19; please know that responding to this survey, while appreciated, is completely voluntary.

We’re offering \$125 in exchange for approximately two hours of your time to participate in an online video feedback session with us. You would participate in this online feedback session with 5 or 6 other participants if you qualify and agree to participate. In this session, you will be asked to discuss your thoughts about solar energy, as well as your thoughts on some materials intended to help consumers understand their options and rights as solar customers.

The session will be conducted by professional moderators from the CPUC’s research partners at ILLUME Advising.

Participating may be a good way to:

- Remotely connect with others. Participants have shared that participating helps them feel connected, and that communicating with other people feels good in these times.
- Occupy your time in an engaging way. Participating in a focus group can be a way to learn new things.
- Have your voice heard by sharing your unique perspective in a study.
- Earn money in the process of sharing your opinions.

ELIGIBILITY SCREENER

First, we would like to ask a few questions to make sure you qualify to be a participant in this study and answer any questions you may have about the research.

A1. Do you have time to answer a few short questions for us?

1. Yes
2. No [Ask if there is a better time to call back. If so record preferred time. Otherwise thank and terminate.]
98. [Not Sure] [Ask if there is a better time to call back. If so record preferred time. Otherwise thank and terminate.]
99. [Refused] [THANK AND TERMINATE. SCRIPT IN SECTION G]

OK great. To begin:

SCREENER

A1. Are you, or is anyone in your household, a current or past employee in any of the following industries [please randomize when reading out]:

1. Service or Hospitality [CONTINUE]
2. Finance or banking [CONTINUE]
3. Public education [CONTINUE]
4. Market research [THANK AND TERMINATE]
5. Energy utility [THANK AND TERMINATE]
6. Real estate [CONTINUE]
7. NONE OF THE ABOVE

A2. Do you own or rent your home?

1. Own [CONTINUE]
2. Rent [THANK AND TERMINATE]
3. Other [THANK AND TERMINATE]

A3. What type of home do you live in? [READ CATEGORIES]

1. Single-family detached house [CONTINUE]
2. Single-family attached home (such as townhouse) [CONTINUE]
3. Duplex, triplex or four-plex [THANK AND TERMINATE]
4. Apartment or condominium with 5 units or more [THANK AND TERMINATE]
5. Manufactured or mobile home [THANK AND TERMINATE]

A4. What is your zip code?

1. *Open end*

[RECRUIT BASED ON ZIP CODE IN ATTACHED EXCEL FILE]

DEMOGRAPHICS/HOUSEHOLD QUESTIONS

Now, we have a few demographic and household questions for you. You can choose not to answer any that you are uncomfortable with, **we ask these only so that we can recruit and hear from a representative mix of customers.**

A5. Which of the following statements most accurately describes your household?

1. We have purchased rooftop solar panels for our home since September, 2019. **[SOLAR ADOPTER CONTINUE]**
2. We have purchased rooftop solar panels for our home before September, 2019. **[SOLAR ADOPTER CONTINUE]**
3. We have signed a contract to install rooftop solar panels for our home in the last six months, but they are not installed yet. **[SOLAR ADOPTER CONTINUE]**
4. We are considering getting solar panels in the next 2 years. **[SOLAR SHOPPER CONTINUE]**
5. We are not interested in purchasing rooftop solar panels for our home at this time. **[THANK AND TERMINATE].**

[IF C1=1]

C1.B. Have you heard of or read the California Solar Customer Protection guide?

1. Yes, I have heard of it but I haven't read it.
2. Yes, I have read it.
3. No.
4. Not sure.
5. Other, specify

A6. Were you involved in the decision to install solar panels on your home?

1. Yes, I was the primary decision maker **[SOLAR ADOPTER CONTINUE]**
2. Yes, I was involved in the decision **[SOLAR ADOPTER CONTINUE]**
3. No **[ASK TO SPEAK TO HOUSEHOLD MEMBER RESPONSIBLE FOR DECISION]**
4. Don't know **[ASK TO SPEAK TO HOUSEHOLD MEMBER RESPONSIBLE FOR DECISION]**

A7. What language do you speak most often at home?

1. English [CONTINUE] [RECRUIT FOR ENGLISH-SPEAKING GROUPS]
2. Spanish [CONTINUE] [RECRUIT FOR SPANISH-SPEAKING GROUPS]
3. Other [CONTINUE] [RECRUITER TO CHECK FOR ENGLISH PROFICIENCY]

A8. Do you identify as being of Hispanic, Latino, or Spanish origin?

1. Yes
2. No
3. Don't know

A9. How would you describe your race or ethnicity? [READ OPTIONS, IF NECESSARY, MAY CHOOSE MULTIPLE – RECRUIT MIX]

1. White
2. Black or African American
3. American Indian or Alaska Native
4. Chinese
5. Filipino
6. Asian Indian
7. Vietnamese
8. Korean
9. Japanese
10. Other Asian
11. Native Hawaiian
12. Samoan
13. Chamorro
14. Other Pacific Islander
15. Other, please specify _____

A10. Which of the following ranges describes your age? [RECRUIT MIX]

1. 18-24
2. 25-35
3. 36-44
4. 45-55
5. 56-64
6. 65 or older [TWO PER GROUP]

A11. What is your highest level of education? [RECRUIT MIX]

1. High school degree
2. Some college or Associate degree
3. College degree
4. Some graduate college
5. Graduate degree or higher
97. [Other, specify]

A12. Which of the following best describes your employment status?

1. Full-time employed
2. Part-time employed
3. Self-employed

4. Retired
5. Stay-at-home parent or caregiver
6. Not employed
7. Other, specify

A13. Please check the range that best describes your household's total annual income— before taxes and deductions.

[GROUP 3 RECRUIT 3-4 FROM UP TO 7 AND 3-4 FROM 8-10]

[ALL OTHER GROUPS RECRUIT A MIX]

1. Less than \$10,000
2. \$10,000 - \$19,999
3. \$20,000 - \$24,999
4. \$25,000 - \$29,999
5. \$30,000 - \$34,999
6. \$35,000 - \$39,999
7. \$40,000 - \$49,999
8. \$50,000 - \$59,999
9. \$60,000 - \$74,999
10. 75,000 - \$99,999
11. \$100,000 - \$149,999
12. \$150,000 or more
97. [Other, specify]
98. [Not Sure]
99. [Refused]

A14. What is your gender? [RECRUIT MIX]

1. Female
2. Male
3. Non-binary
4. Prefer to self-describe [OPEN END]
5. Prefer not to answer

A15. Again, answers to these questions are completely voluntary. Does anyone living in your home have any medical conditions or disabilities that require special equipment, or consistently warmer or colder temperatures in your home which then requires more energy needs?

1. Yes [GROUPS 1 AND 2, AIM FOR TWO PER GROUP FROM C11 OR C12]
2. No
3. [Not Sure]
4. [Refused]

A16. Does any member of your household receive funding from the Supplemental Security Income (SSI) program due to a disability in 2019?

1. Yes [GROUPS 1 AND 2, AIM FOR TWO PER GROUP FROM C11 OR C12]
2. No
3. [Not Sure]
4. [Refused]

ACCESS TO VIRTUAL MEETING ROOM

These next questions will help us understand whether you are able to participate in the focus group.

A17. Do you have access to a computer, tablet, or smart phone with a camera that can be used for video chats or calls?

1. Yes, a computer
2. Yes, a phone
3. Yes, I have a tablet
4. No [CONTINUE TO SECTION E, UP TO 4 ELIGIBLE PARTICIPANTS WILL BE SCHEDULED FOR PHONE INTERVIEWS]

[ASK IF D1=1, 2, or 3]

A18. When was the last time you used a device for a video call or chat?

1. Within the last week
2. Within the last month
3. Within the last year [CONTINUE TO A19]
4. It has been longer than a year [CONTINUE TO A19]
5. Never [THANK AND TERMINATE]

A19. What app or service did you use?

1. Open ended, but terminate if they can't answer.

A20. Do you need assistance setting up a video call or chat from your phone or computer?

1. Yes
2. No
3. Don't know

A21. What type of device will you use for the video interview, such as a phone, computer or tablet?

Open End

A22. What is the brand or make of the device?

Open End

A23. How long have you had this device (roughly)?

Open End, require a four-digit year

EXPLAIN ONLINE FOCUS GROUP REQUIREMENTS

[INTERVIEWER] Great, it looks like you qualify to participate in our research. We'd like to invite you to participate in our online feedback session. We know your time is very valuable, so we will compensate you with an \$125 e-Visa gift card, to be delivered to your email in the week after the conclusion of our feedback session. These gift cards can be used to purchase any good or service as a regular Visa card.

We will record video and audio of this conversation, but they will be used for research purposes only. To participate in the online session, you will need to use a link to a Zoom webinar and password provided by ILLUME. For questions

or technical assistance, please contact Goldie Christenson, who will be standing by to assist participants before and during the session (goldie@illumeadvising.com or 480.343.9495).

[Interviewer Note: If customer expresses concern regarding the interview being recorded, please use the following response, “Interview recordings will be used solely for internal reporting purposes, and to develop recommendations around program design. Recordings will never be publicly distributed. We maintain safeguards to ensure all identifying information remains confidential” .]

FOCUS GROUP SCHEDULING

A24. Are you willing to participate in this research?

1. Yes [CONTINUE]
 2. No [TERMINATE]
98. [Not Sure] [TERMINATE]

A25. We will be conducting research during the week of April 20. **[SELECT DATE BASED ON LANGUAGE/LOCATION]**. Please state whether you can participate at this time or not:

[RECRUITER TO USE THE FOLLOWING TABLE TO SCHEDULE BASED ON LOCATION, LANGUAGE AND CHARACTERISTICS]

GROUP	LANGUAGE	LOCATION	CHARACTERISTICS	DATE/TIME
1	English-speaking/proficient	Inland	Solar adopters (3-4) Solar shoppers (3-4) <i>Over 65 (2)</i> <i>Living with disability (2)</i>	May 18, 6pm
2	English-speaking/proficient	Near-coast	Solar adopters (7) <i>Over 65 (2)</i> <i>Living with a person with disability or having a disability (2)</i>	May 19, 4pm
3	English-speaking/proficient	Near-coast	Solar adopters (3-4) Solar shoppers (3-4) <i>Income-qualified (3-4)</i> <i>Moderate-income (3-4)</i>	May 20, 6pm
4	Spanish-speaking	Inland (Fresno zip codes)	Solar adopters (3-4) Solar shoppers (3-4) <i>Over 65 (2)</i>	May 21, 6pm
5	Spanish-speaking	Near-coast	Solar adopters (3-4) Solar shoppers (3-4) <i>Over 65 (2)</i>	May 22 6pm

[If No times work]

A26. Are there any times that would allow you to participate?

1. **[Record verbatim]**

A27. What is your first and last name?

2. **[Record verbatim]**
3. **[If needed: more than one person may participate. Record verbatim]**

A28. What is the best number to reach you at? Is there an alternative number we could use as well? Please provide **two** phone numbers if you can.

1. **[Record primary phone number]**
2. **[Record secondary phone number, if available]**

A29. And what is your email address? We will send a confirmation to this address and we will use it to send you your VISA egift card.

1. **[Record email address]**

A30. We will be sending you a few pages for you to have during our online session. What is your mailing address?

1. **[Record mailing address]**

CLOSING AND THANKS

Thank you for taking the time to speak with us today. We will call and email you within 3 days of your appointment to remind you. Should you have any questions or concerns about the nature or validity of this research please feel free to reach out to Silvia Van Riper at silvia@illumeadvising.com. Thank you and have a wonderful day.

Termination script. Thank you very much for your time. Based on your responses, it appears we have reached our quota for participants with your characteristics. Again, we thank you for your time. Have a wonderful day/evening.