Building Strong Homeowner Relationships with Renewables Program

October 2018
Quantitative incentive-sensitivity research
- 200 Valley homeowners

Insights development & concept lab
- 5 groups over 3 days
- 18 homeowners, 10 installers
- Iterative groups to revise / improve the concepts based on consumer input

Used to identify key elements of successful Renewables Programs and build concepts for research

Identified the most appealing ideas to residential customers & installers
- 1000 Valley homeowners
- 20 Solar installers
Pricing Study
Pricing Study

• **Incentive research:** We executed quantitative incentive-sensitivity research among Valley residents to understand:
  – Who intends to use and why, and what the price (incentive) sensitivity curve is

• **Methodology:** Respondents were given a brief description then asked about purchase interest at different incentive (payoff) levels to determine what effect, if any, the incentives have on purchase
  – *This survey is about solar panels that can be put on the roof of your home to generate electricity. To generate most of the power at a home with average electric bill of $125, the solar panels cost about $16,000 to install. The monthly power savings in that home would pay off the installation cost in 22 years.*
  – *If that home participates in an incentive program, its monthly power savings is greater and the installation cost is paid off in fewer years.*
  – How likely would you be to consider buying solar panels for your home that would pay off in **xx** years?
  – Asked for **12, 15, 17 (current), 20, 22 (no participation in program)** years, based on TVA's solar calculator

• **Respondent Specifications:** 200 Males & Females aged 18+ with HH incomes >$50k who live in the TN Valley
  – Own single family detached house without solar panels; make or share in making energy decisions
Solar Pricing Test (Demand Elasticity Curve)

Incentive level does affect residential solar demand

- Demand would drop by about 1/3 at 22 year payout
- About half (54%) of HH $50M+ would not consider solar panels even at 12 year payout

<table>
<thead>
<tr>
<th>Payout Years</th>
<th>Demand</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>12</td>
<td>21%</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>13%</td>
<td>From TVA Solar Calculator, WITH GPP participation</td>
</tr>
<tr>
<td>20</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>8%</td>
<td>From TVA Solar Calculator, NO GPP participation</td>
</tr>
</tbody>
</table>

% Would Consider Solar Panels at Various Years Payout
Who Intends to Use

Positive Solar Panel Intenders tend to be younger; less likely to be married (likely attributable to age)

- Positive Intenders tend to be younger - 27% under 34 years of age vs. 8% neutral/negative intenders
  - Neutral/Negative Intenders tend to be older - 69% aged 50+ vs. 46% positive intenders
- Positive Intenders are less likely to be married - 27% under 34 years of age vs. 8% neutral/negative intenders

Indicates significantly higher
Who Intends to Use

Payment Options are important to positive solar purchase intenders

- Highest among positive – would increase interest (over 80% agreement) - no-interest financing, monthly payments

But would make less of a difference to Neutral/ Negative Intenders who believe the payout time to be too long and costs to install too high.
Cost, time and lack of savings are the biggest obstacles to consumers installing solar panels.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Agreement</th>
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</thead>
<tbody>
<tr>
<td>The cost to install solar panels is too high</td>
<td>76%</td>
</tr>
<tr>
<td>The amount of time it takes to payout is too long</td>
<td>74%</td>
</tr>
<tr>
<td>I would not participate unless I saved more on my electrical bill each month</td>
<td>73%</td>
</tr>
<tr>
<td>I would feel better about this service if my local power company helps provide it</td>
<td>68%</td>
</tr>
<tr>
<td>I might consider solar panels if I could get no-interest financing</td>
<td>62%</td>
</tr>
<tr>
<td>I might consider solar panels if I could pay in monthly payments (vs. all up front)</td>
<td>58%</td>
</tr>
<tr>
<td>This program would fit well with my local power company</td>
<td>48%</td>
</tr>
<tr>
<td>We have a lot of tall trees around our house</td>
<td>48%</td>
</tr>
<tr>
<td>I have considered solar power in the past, and decided against it</td>
<td>29%</td>
</tr>
<tr>
<td>Our neighborhood has an active HOA with rules about what is allowable on individual lots</td>
<td>19%</td>
</tr>
</tbody>
</table>

Q18. Please read each of the statements below that may be used to describe this program and indicate how much do you agree or disagree with each.
70% willing to invest in environmentally friendly homes
But ¾ feel they have taken practical steps they know

- 70% are willing to invest to make their home more environmentally-friendly
- But three-quarters feel they've already taken useful steps to increase home’s energy efficiency.

Q19. Please read each of the statements below about you and your home as it relates to the environment and indicate how much do you agree or disagree with each one.
• More than half (56%) are likely to recommend using solar panels.
• Education will play a big part in solar panel usage and advocacy as more than 80% have either not heard of the current program or don’t know much about it.

Q16. How likely would you be to recommend the use of solar panels to others?
Q17. Depending on where you live, you may have access to a solar panel program called Green Power Providers. Please select which of the following statements best describe your experience with Green Power Providers program. Select only one
Secondary Research
Benchmarking from External Programs
Toplines – Solar Stats / Consumer Insights

**National Solar Stats**

- In the last decade, solar has experienced an average annual growth rate of 59%.
- Installations surged in 2016 ahead of potential drop down of the Investment Tax Credit.
- While prices have dropped 52% over the last 5 years, price declines slowed in 2017.
- There are now more than 1.7 million solar installations in the U.S.
- After reaching 1 million in 2016, 2 million should be hit in late 2018 and 4 million by 2023.

**National Consumer Perceptions**

- 1/2 of all homeowners say solar power is most important energy source for America’s future – top across all demographics.
- For consumers, it continues to be about economics – “Saving money” (82%) is top motivator to purchase clean-energy products; “Reducing my environmental impact” comes in a distant second place at 34%.
Toplines – Benchmarking Benefits ($)

Benefits almost always start with the $
Reduce bill – increase home value

Benefits of home solar power:
1. Solar systems can lower your electric company bills by up to an estimated 50%
2. Current U.S. government tax credits could save you up to 30% off the purchase of a home solar system,
3. Purchasing and installing a solar panel system may increase the value of your home by up to $15,000 for an average-sized 3.6-kW PV system
4. Many solar providers are offering great financing programs so you can get solar for as little to $0 down if you qualify
5. You can protect yourself from rising costs of electricity

California Solar Power Can Save You Money

Many Californians don’t realize the amount of money spent on their home energy use each year. In the next 10 years, the average California homeowner may spend over $11,000 on electricity. Not to mention that California electricity rates increased from 10.6 cents per kWh to 15.15 cents per kWh in 2015. That’s a 43% increase in average electricity rates over just 17 years. Smart homeowners are increasingly looking to renewable energy and investing in a home solar system today to help offset the rise in electricity rates.

Benefits of home solar power:
1. Solar systems can lower your electric company bills by up to an estimated 50%
2. Current U.S. government tax credits could save you up to 30% off the purchase of a home solar system,
3. Purchasing and installing a solar panel system may increase the value of your home by up to $15,000 for an average-sized 3.6-kW PV system
4. Many solar providers are offering great financing programs so you can get solar for as little to $0 down if you qualify
5. You can protect yourself from rising costs of electricity

Thinking about going solar?
Installing solar at home benefits both you and the environment by reducing the amount of electricity purchased from the utility and your carbon footprint.
Toplines – Benchmarking Features

Videos and Examples illustrating the difference between net zero and off-grid living

https://youtu.be/Z17tEjXICtM

Estimated upfront system costs
- Net Zero: $20,000 to $30,000
- Off-Grid: $40,000 to $60,000

Electric reliability
- Net Zero: Solar panels can provide power during power outages
- Off-Grid: Battery systems can provide power during power outages

Equipment and power supply needs
- Net Zero: Panels can power all equipment
- Off-Grid: Solar panels provide power during power outages

Maintenance and upkeep
- Net Zero: No maintenance required
- Off-Grid: Batteries require maintenance

One-Stop Shop - Linking Solar Contractors & Incentives:
We work by matching you with top rated solar installers that services your local area. A specialist from each solar installer can then explain all of the cost saving initiatives that may be available to you – from government and California specific solar rebates & incentives to the different solar panel financing and leasing programs, all of which can help offset some of the initial solar system installation costs.

Solar Calculators are Points of Entry

Solar Calculator
Take the first step towards understanding your solar savings potential. With solar you can produce some of your own electricity, reduce your electric bill and shrink your carbon footprint.

How It Works

Review Personal Estimate
Find out your solar savings potential based on your rooftop characteristics, your electricity use, electricity rates and available tax credits and rebates.

Compare Options
View options side-by-side to understand how different scenarios impact your solar in the near-term and long-term.

Make an Informed Decision
If solar seems like the right choice for you, talk to your contractor about the results of this tool.

Useful Tools & Services

- FIND SOLAR INSTALLERS
- TALK TO SOLAR EXPERTS
- QUICK SOLAR CALCULATOR
- FREE SOLAR QUOTES
Dominion Energy owns a majority interest in the following projects located in Tennessee: Mulberry Farm, Selmer Farm
- All power and environmental attributes are purchased by the Tennessee Valley Authority.
- Interconnection to the electric grid is through facilities owned and operated by Pickwick Electric Cooperative of Selmer, TN.

Georgia Power aims to increase its solar energy generation from 970 megawatts of solar capacity by 1,600 megawatts by 2021.
- Georgia Power is aiming to increase its renewable energy portfolio in the state by adding 100 megawatts of solar power.
- The utility firm is seeking proposals from solar facilities that are interested in selling solar power to the company, The Atlanta Journal-Constitution reported. Georgia Power is seeking contracts with them to provide solar power to customers at a fixed price for a period of five to 35 years.
Educational Videos on every Solar topic

The Guide to Purchasing Green Power provides current and potential buyers of green power with information about green power purchasing.

Help Making Decisions
Choose the ideal renewable energy technology for your home

<table>
<thead>
<tr>
<th>BEST FOR:</th>
<th>WHAT TO CONSIDER:</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOLAR PANELS</td>
<td>- Homes with plenty of rooftop space exposed to the sun with minimal shading for at least six hours a day, ideally from 10 am to 3 pm.</td>
</tr>
<tr>
<td>SOLAR WATER HEATING</td>
<td>- Homes consuming large amounts of hot water, with plenty of roof space exposed to the sun.</td>
</tr>
<tr>
<td>BATTERIES / ENERGY STORAGE</td>
<td>- Combining with renewable systems to supplement intermittent energy needs.</td>
</tr>
</tbody>
</table>

- Solar panels can last more than 25 years. Make sure your roof is sturdy enough to support installing panels on a second storey.
- A solar panel will be more efficient if it is in a place where there is plenty of sunshine.
- Solar panels can be installed on a roof, on the side of a house, or on a pole. The best location for a solar panel is where it will get the most direct sunlight.
You use the renewable energy to offset your usage
Whatever is not used is purchased by Duke Energy
The generation credit (only for what is not used) is applied at the end of every month

Charges = Capacity charge – Energy credit + Fuel offset
Residential Net Metering: up to 25 kW or highest P12m usage
   – Excess monthly energy credited at end of next billing cycle or (at customer) towards other net meters customer has
   – Any excess remaining energy in net meter account queue per customer can be purchased by EA at avoidable cost rate when is older generation or if customer is relocating

Does not pay any incentives
Emphasis on 30% federal tax credit as a means to help pay for the initial investment
50 States of Solar
Connecticut Becomes the Latest State to Move Away From Net Metering
Connecticut’s Governor signed S.B. 9 into law in May 2018, which closes net metering to new customers at the end of the state’s residential solar investment program. Customers beginning to net meter before this time will be grandfathered until the end of 2039, while new customers will be able to select between two options – net billing and buy-all, sell-all – the details of which are yet to be determined.

New Jersey Legislature Adopts a Statewide Community Solar Policy
The Governor of New Jersey signed A.B. 3723 into law in May 2018, making the state the 19th to adopt a statewide community solar policy. The legislation creates a community solar pilot program, which is to become a permanent program within three years of final rules being adopted. The Board of Public Utilities is to establish many of the program’s criteria, including participant credit rates, an annual aggregate capacity limit, and ways to provide access to low and moderate income customers.
Florida Public Service Commission Opens the Door to Residential Solar Leasing

Responding to a petition for a declaratory ruling by Sunrun, the Florida Public Service Commission issued a declaratory statement in May 2018, ruling that Sunrun’s residential solar equipment lease does not constitute a sale of electricity and does not subject the company to regulation as a public utility. Following this order, Vivint Solar filed a similar petition for a declaratory ruling on its residential solar equipment lease.

Regulators Approve Idaho Power Request to Separate DG Customers into Unique Class

In May 2018, the Idaho Public Utilities Commission approved Idaho Power’s request to separate residential and small general service customers with on-site generation into unique customer classes. The Commission also approved the opening of a new proceeding to study issues related to on-site generation, including rate design, compensation, and the cost and benefits of net metering.

Figure 2. Q2 2018 Action on Solar Policy & Rate Design, By Number of Actions
Top Five Solar Policy Developments of Q2 2018

Colorado, Connecticut, and New York Regulators Approve Residential Fixed Charge Reductions

Commissions in three states approved reductions in residential fixed charges during Q2 2018. In New York, Central Hudson Gas & Electric’s fixed charge reduction was the result of a settlement agreement, while the Colorado Commission rejected Black Hills Energy’s cost allocation method, citing public policy concerns related to low-income customers and energy conservation. Connecticut regulators also approved a reduction in Eversource’s fixed charge, although the utility had not requested an increase.
Qualitative Research
Homeowners
Homeowners

• Tradewind Group & TVA gathered program inputs from Quantitative Incentive Research, TVA interviews, and secondary research benchmarking other programs to create initial concept to test with Homeowners in Concept Labs.

• Three different sets of homeowners who have income $75,000+ and “definitely would” or “probably would” consider solar panels were invited to participate in Concept Labs.

• Homeowner’s Concept Labs generated 4 potential concepts; all of which moved forward into quantitative research, along with one control concept.

• Following Concept Labs, ‘Confidence’ concept was the chosen winner.

Value to the consumer is helping find qualified, trained installers

The pain point isn’t about the cost

It’s about getting the job done right!

And, they believe you can do that!
Concepts Tested

Concept C – Confidence

2 million US houses have solar panels on the roof, and I’m ready to take that step. But everyone knows people who have had problems with contractors not doing work right, and I worry that I might end up in the same situation with my solar installer.

Now my local power company and TVA’s Solar Energy program helps me be confident that my solar installer will do the best possible job for me.

That’s because the program helps me get the information I need from a resource I trust so I can make a good decision. I can see qualifications for each contractor on the web site so I can decide exactly which contractor fits me the best. In this program, I can get:

- A list of qualified contractors who are specially trained and approved. These contractors:
  - Have a history of high customer satisfaction. My local power company and TVA ask every customer about their satisfaction after every job.
  - Are licensed, insured and bonded, and have good Better Business Bureau ratings.
  - Have completed special training on TVA quality guidelines.
  - Have completed a large number of jobs successfully.

- Support services from my local power company and TVA including:
  - A professional energy advisor who can come to my home to make sure the job was done right.
  - If they find the job does not meet quality guidelines, they will work with you until it’s right.

Concept G – GPP Control

I want solar for my own residence and I want to get paid for the energy I generate so that my monthly bills are lower.

My local power company and TVA offer a program (Green Power Providers) that helps me install solar panels on my home with a quicker return on investment.

Here’s how it works:

- TVA and your local power company purchase all the solar power you generate for a 20 year contract.
- You continue purchasing all your power from the local power company, but some of the cost is offset by the power you sell to them. If you generate enough power, they could even pay you more than you pay them.
- Because TVA purchases all of the energy and associated environmental attributes, I enable other Valley residents to support green energy by purchasing my solar panel generation.

Concept M – Understand Money

We’ve done everything we can to be more energy efficient at our house, and we’re ready to move on to install solar panels.

Now my local power company and TVA’s Solar Energy program helps me understand how my solar panels can benefit me with:

- An online calculator so we can see what our payments may look like.
- Information about financing plans to help with initial installation costs.
- A meter display inside my home which shows how much of my energy consumption is powered by the solar panels vs traditional energy supply.
- Billing that clearly shows the monthly savings from the power generated by my solar panels.

Concept R – Responsibility

I’m committed to protecting the environment from pollution and preserving our planet’s resources for years to come.

Now my local power company and TVA’s Solar Energy program helps me do my part to make tomorrow’s environment better.

That’s because my local power company and TVA’s Solar Energy program helps me understand how my installed solar panels are benefiting the environment with:

- A meter display inside my home which shows how much of my energy consumption is powered by the solar panels vs traditional energy supply.
- Billing that clearly shows the monthly savings from the power generated by my solar panels.
- A regular update on the amount of environmental impact that was avoided via solar power.

Concept S – Get Started with Solar

I’m interested in solar but I’m not sure if it’s right for me.

My local power company and TVA’s Solar Energy program helps me understand whether solar is right for me.

In this program, a professional energy advisor provides:

- An on-site evaluation of my home to determine if the lot and roof orientation works for solar panels.
- Education about the best type and size of power generation system for me based on the amount of sun at my house.
- A list of steps I would need to take to generate power at my home and information about how to get started.
- An online solar calculator to show me the cost/benefit of a solar system.

If solar is not right for me, the programs helps me understand other smart energy options by providing:

- A professional energy evaluation of my home to determine its unique energy opportunities.
- A personalized assessment of my home’s energy use and a tailored list of recommended energy upgrades to make my home the best it can be.
Homeowners

Confidence Concept

Participation in Program

54% definitely / probably expect to participate

Recommend Program

56% definitely / probably expect to recommend the program to other people

[I like that I] can easily choose a qualified installer with guidance and follow up by TVA ensuring that job is done right.

I like that they have picked out good contractors who will get the job done and sounds like it would be done right and on time.

If I could find a trustworthy contract to do the work that is certified and approved by my power company, then that would take a lot of the work and worry out of the process.
Installers
Installers

• Following Homeowner Research, Tradewind Group & TVA created initial concepts to test with Solar Installers in Concept Labs.
• Solar Installers’ Concept Labs generated 6 potential concepts; 2 of which moved forward into quantitative research. One was “Installer Network”, an installer-facing version of “Confidence”.
• Though “Confidence” concept came in second with the installers, a number of features in this concept were identified that will meet the homeowner and the installer needs.

“Having a streamlined platform would be tremendous.”
“A long term TVA program commitment sounds great.”
“It sounds great – the biggest issues with solar are the (1) financing, and (2) how long it takes from initial contact with utility company to installation.”
“I hope this streamlines paperwork and timing and doesn’t add to it.”
“Better Business Bureau is an organization you just “pay to get in”
“I already advertise on search engines so this could be more competition for me. How will they divvy up leads?”

Preferred Program

Installer Network 33%
Stable Growth 67%

29
Installers

Stable Solar Growth Concept

Navigating solar installation in the Tennessee Valley from year to year can be tricky. Lots of variables interact to make the market unpredictable.

Now, TVA and your local power company are working together to promote stable solar growth in the TN Valley. That’s because TVA and LPCs are working together to provide coordinated services to installers and homeowners:

Installer offerings:
• ONE program across the Valley, so no need to deal with differences among LPCs
• Long-term TVA program commitments that don’t change over time
• TVA Solar Installer Network with installers (like yourself) who meet strict standards to get into the program

Homeowner offerings:
• Information about financing plans that can help with initial installation costs
• Educational web site that clearly explains how solar power is produced and used, and how solar systems work. The site includes a quiz to help homeowners understand whether their lot and roof orientation will work for solar panels.
I'm always looking for ways to communicate the quality of my work to my customers.

Now, your customers will understand how established and effective your company is, because TVA and your local power company have made you part of their Solar Installer Network.

Your local power company and TVA offer homeowners a list of qualified solar installers (like yourself) who meet strict standards to get into the program, and maintain those standards to stay in the program. They help homeowners understand that qualifying installers:

**Homeowner offerings:**

- Have a history of high customer satisfaction
- Are licensed, insured and bonded, and have good Better Business Bureau ratings
- Have completed a large number of jobs in the Tennessee Valley over a number of years
- Have completed special training on standards that are developed jointly between Solar Installers and TVA

**Installer offerings:**

- TVA will show your business on their own site
- TVA will send you leads from their site and from other search engines like Google
Quantitative Testing
Homeowners
Method and Design
A 15-20 minute online consumer research study evaluating the concept. Questions included:
- Participation Intent
- Recommendation Intent
- Likes & Dislikes
- Feature Importance
- Equity associations for LPCs and TVA

Sample Specifications
The primary sample consisted of a general population sample of 200 US adults per concept who meet requirements listed below.
- Gender = Males & Females
- Age = 18+
- Own single family detached house
- Primary decision maker (or share responsibility) for home energy usage and energy improvements
- Do not work in home repair/improvement industry or for electric/power company
- Live in Tennessee or specific counties in Alabama, Georgia, Kentucky or Mississippi
- Household income = >$50,000K
- Do not already have solar panels on their homes
Topline Results Summary

- Concept C (Confidence, similar to eScore concept) **elicits more positive feelings regarding the local power company**
  - Most feel TVA is a trusted energy advisor, supports renewable/solar energy, and makes the Tennessee Valley a better place.

- We are likely to have **fewer participants** with “Concept C - Confidence” concept versus “Control – Concept G”.
  - This likely traces to the possibility of making money with the control concept - While Confidence Concept feature importance focuses on qualified contractors, Control concept focuses on possibility of making money.

- There is little differentiation of overall features that are Extremely/Very Important – **all are very high 81%-89% range**.
  - Qualified Solar Installers, TVA protection, and Savings generated top the list of ‘Extremely Important’ features, while tools and evaluations fall to the bottom of this list.

- Top Environmental Views surround **teaching children/protecting for future generations and concern about energy bills**.
  - Lower Agreement to teaching/telling others about environment, but much higher among Positive Participation Intenders.

- Consumers want to be **informed about Solar Programs through their LPC or TVA**
  - These are also top 2 choices among Positive Participation Intenders, but because **more likely researching environment online**, also more likely to want to hear about program on search engines when looking for contractors.

- **Target consumers** with the following characteristics (significantly higher among positive participation intenders):
  - First time home-owners a few years after they have settled into their homes (not brand new homes).
  - They tend to be **younger or middle aged**, with children in the home.
  - Consider reaching through the GPP. They are more likely aware/have participated and generally more environmental.
Concept C elicits more positive feelings regarding the local power company

LPC – T2B Agreement (Strongly/ Somewhat Agree) – Top 5

- Is a trusted energy advisor
- Helps make the community better
- Helps me make smart energy choices
- Cares about the community
- Would give me a realistic account of solar savings and costs

Would give me unbiased advice about solar being right for me

- Cares about me
- Advocates for me
- Has a relationship with me

Q20. If your local power company made a program like this available, how much would you agree or disagree with the following? My local power company ....
Most feel the TVA supports renewable/solar energy, makes the TV a better place and is a trusted energy advisor

The “Concept M - Understanding Money” is a little worse than others for reflecting well on TVA.

### TVA – T2B Agreement (Strongly/ Somewhat Agree)

<table>
<thead>
<tr>
<th>Supports renewable energy in the Tennessee Valley</th>
<th>Makes the Tennessee Valley a better place to live</th>
<th>Is a trusted energy advisor</th>
<th>Supports growth of solar energy in the Tennessee Valley</th>
</tr>
</thead>
<tbody>
<tr>
<td>88% C</td>
<td>85%</td>
<td>86% C</td>
<td>83%</td>
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<td>83%</td>
<td>85%</td>
<td>80%</td>
<td>79%</td>
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</table>

Q21. If the Tennessee Valley Authority (TVA) made a program like this available, how much would you agree or disagree with the following?

The TVA....

A/B/C/D/E/ = significantly higher at 95% confidence level
**Likely participants are even more favorable to LPCs & TVA**

Positive Intenders are significantly more favorable towards ALL LPC and TVA attitudes - all statements significantly higher than non-intenders

### Top 2 Box LPC Attitudes

<table>
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<tr>
<th>Attitude</th>
<th>Positive Participation Intent</th>
<th>Negative Participation Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is a trusted energy advisor</td>
<td>88%</td>
<td>71%</td>
</tr>
<tr>
<td>Helps make the community better</td>
<td>87%</td>
<td>69%</td>
</tr>
<tr>
<td>Helps me make smart energy choices</td>
<td>86%</td>
<td>66%</td>
</tr>
<tr>
<td>Cares about the community</td>
<td>85%</td>
<td>68%</td>
</tr>
<tr>
<td>Would give me a realistic account of solar savings and costs</td>
<td>84%</td>
<td>62%</td>
</tr>
<tr>
<td>Would give me unbiased advice about solar being right for me</td>
<td>81%</td>
<td>56%</td>
</tr>
<tr>
<td>Advocates for me</td>
<td>77%</td>
<td>54%</td>
</tr>
<tr>
<td>Cares about me</td>
<td>76%</td>
<td>56%</td>
</tr>
<tr>
<td>Has a relationship with me</td>
<td>72%</td>
<td>49%</td>
</tr>
</tbody>
</table>

### Top 2 Box TVA Attitudes

<table>
<thead>
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<tr>
<td>Is a trusted energy advisor</td>
<td>95%</td>
<td>71%</td>
</tr>
<tr>
<td>Supports renewable energy in the Tennessee Valley</td>
<td>94%</td>
<td>81%</td>
</tr>
<tr>
<td>Makes the Tennessee Valley a better place to live</td>
<td>94%</td>
<td>75%</td>
</tr>
<tr>
<td>Supports growth of solar energy in the Tennessee Valley</td>
<td>90%</td>
<td>76%</td>
</tr>
</tbody>
</table>

Q20. If your local power company made a program like this available, how much would you agree or disagree with the following?

Q21. If the Tennessee Valley Authority (TVA) made a program like this available, how much would you agree or disagree with the following?
While Confidence Concept feature importance focuses on qualified contractors, Control concept focuses on possibility of making money.

<table>
<thead>
<tr>
<th>Concept C (Confidence) – Importance of Attributes</th>
<th>Concept G (GPP Current) – Importance of Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualified contractors who have completed special training on TVA quality guidelines</td>
<td>You continue purchasing all your power from the local power company, but some of the cost is offset by the power you sell to them. If you generate enough power, they could even pay you more than you pay them</td>
</tr>
<tr>
<td>Qualified contractors who are licensed, insured and bonded, and have good Better Business Bureau ratings</td>
<td>TVA and your local power company purchase all the solar power you generate for a 20 year contract</td>
</tr>
<tr>
<td>Qualified contractors who have completed a large number of jobs successfully</td>
<td>Because TVA purchases all of the energy and associated environmental attributes, I enable other Valley residents to support green energy by purchasing my solar panel generation</td>
</tr>
<tr>
<td>If the professional energy advisor finds the job does not meet quality guidelines, they will work with you until it's right</td>
<td></td>
</tr>
<tr>
<td>Qualified contractors who have a history of high customer satisfaction. My local power company and TVA ask every customer about their satisfaction after every job</td>
<td></td>
</tr>
<tr>
<td>A professional energy advisor who can come to my home to make sure the job was done right</td>
<td></td>
</tr>
</tbody>
</table>

Q19A. The program would include all of the features listed in the description you read. We would like to know how important each feature is to you. Please read each one carefully, and indicate how important it is to you that the program includes this feature.
Likely Participants Place Higher Importance on ‘Confidence’ Features

They feel more strongly about features – for features in the Confidence concept they evaluated, 3 features are significantly higher.

Table: Top 2 Box Feature Importance

<table>
<thead>
<tr>
<th>Feature</th>
<th>Positive Participation Intent</th>
<th>Negative Participation Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualified contractors who are licensed, insured and bonded, and have good Better Business Bureau ratings</td>
<td>94%</td>
<td>86%</td>
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<tr>
<td>Qualified contractors who have completed special training on TVA quality guidelines</td>
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<td>86%</td>
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<td>A professional energy advisor who can come to my home to make sure the job was done right</td>
<td>94%</td>
<td>79%</td>
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<td>86%</td>
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<td>Qualified contractors who have a history of high customer satisfaction. My local power company and TVA ask every customer about their satisfaction after every job</td>
<td>90%</td>
<td>86%</td>
</tr>
</tbody>
</table>
Qualified Solar Installers, TVA protection, and Savings generated top the list of ‘Extremely Important’ features

Top Box Importance of Features

- Solar installers on the list are licensed, insured and bonded, and have good Better Business Bureau ratings: 60%
- If TVA finds the job does not meet quality guidelines, they will work with you until it’s right: 59%
- Billing that clearly shows the monthly savings from the power generated by my solar panels: 57%
- A site audit of my home to determine if the lot and roof orientation works for solar panels: 54%
- A list of steps I would need to take to generate power at my home and information about how to get started: 54%
- Solar installers on the list have completed special training on our quality guidelines: 52%
- A professional energy advisor can come to my home to make sure the job was done right: 52%
- A list of qualified solar installers who are specially trained and approved: 51%
- Education about the best type and size of power generation system for me based on the amount of sun at my house: 51%
- Solar installers on the list have a history of high customer satisfaction. My local power company and TVA ask every customer about their satisfaction after every job: 51%
- Information about financing plans to help with initial installation costs: 51%
- An online solar calculator to show me the cost/benefit of a solar system: 47%
- A meter display inside my home which shows how much of my energy consumption is powered by the solar panels vs traditional energy supply: 45%
- A professional energy evaluation of my home to determine its unique energy opportunities: 44%
- Solar installers on the list have completed a large number of jobs successfully: 44%
- Personalized assessment of my home’s energy use and a tailored list of recommended energy upgrades to make my home the best it can be: 43%
- I can see qualifications for each solar installers on TVA’s web site so I can decide exactly which contractor fits me the best: 43%

Q21A. This program would have additional features that were not included in the short description that you read before. The full list of features are shown below. We would like to know how important each feature is to you. Please read each one carefully and indicate how important it is to you that the program includes this feature.
Q21A. This program would have additional features that were not included in the short description that you read before. The full list of features are shown below. We would like to know how important each feature is to you. Please read each one carefully and indicate how important it is to you that the program includes this feature.

**Likely Participants Place Higher Importance on Features**

Also place higher importance on features overall - 12 below are significantly higher, with >90% Importance.

Top 2 Box Additional Feature Importance

- Education about the best type and size of power generation system for me based on the amount of sun at my house (97%)
- A site audit of my home to determine if the lot and roof orientation works for solar panels (96%)
- Solar installers on the list have a history of high customer satisfaction. My local power company and TVA ask every customer about their satisfaction after every job (96%)
- I can see qualifications for each solar installers on TVA’s web site so I can decide exactly which contractor fits me the best (96%)
- Solar installers on the list are licensed, insured and bonded, and have good Better Business Bureau ratings (95%)
- A professional energy advisor can come to my home to make sure the job was done right (94%)
- Solar installers on the list have completed a large number of jobs successfully (93%)
- A list of steps I would need to take to generate power at my home and information about how to get started (92%)
- A professional energy evaluation of my home to determine its unique energy opportunities (91%)
- An online solar calculator to show me the cost/benefit of a solar system (91%)
- Information about financing plans to help with initial installation costs (90%)
- A meter display inside my home which shows how much of my energy consumption is powered by the solar panels vs traditional energy supply (73%)

**Positive Participation Intent**

**Negative Participation Intent**

▲ Indicates significantly higher at 90% confidence level.
Q24. Please read each of the statements below about you and your home as it relates to the environment and indicate how much you agree or disagree with each one.

Top Environmental Views surround teaching children/protecting environment for future generations and concern about energy bills.

Top 2 Box Environmental Views

- It is important to teach our children about energy efficiency: 91%
- I want to protect the environment for future generations: 90%
- I am concerned about the amount of my energy bill: 87%
- I am environmentally conscious: 79%
- I've taken most of the practical steps I know about to increase my home’s energy efficiency: 74%
- I am willing to invest to make my home environmentally friendly: 72%
- I regularly recycle household items that I must take to a disposal site: 69%
- I use the internet to research environmental issues: 64%
- I regularly recycle household items that are picked up at my house: 64%
- I enjoy teaching others how to become more environmentally savvy: 52%
- I read earth-friendly or environmental magazines: 42%
- Others ask me for advice about making their homes more environmentally friendly: 36%

Lower Agreement to teaching/telling others about environment: 43%
Consumers want to be informed about Solar Programs through their LPC or TVA

Q23. What are all of the ways you would like to hear about this program?

<table>
<thead>
<tr>
<th>How Want to Hear About Program</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>My local power company</td>
<td>72%</td>
</tr>
<tr>
<td>Tennessee Valley Authority (TVA)</td>
<td>67%</td>
</tr>
<tr>
<td>News program (TV)</td>
<td>41%</td>
</tr>
<tr>
<td>A close friend / family member</td>
<td>37%</td>
</tr>
<tr>
<td>On a search engine like Google when I’m looking for a contractor</td>
<td>37%</td>
</tr>
<tr>
<td>A contractor I’ve asked to do work in my home</td>
<td>22%</td>
</tr>
<tr>
<td>A neighbor</td>
<td>22%</td>
</tr>
<tr>
<td>Facebook groups for my neighborhood or homeowners association</td>
<td>21%</td>
</tr>
<tr>
<td>Radio broadcast / DJ</td>
<td>15%</td>
</tr>
<tr>
<td>A billboard</td>
<td>14%</td>
</tr>
<tr>
<td>Nextdoor.com</td>
<td>10%</td>
</tr>
<tr>
<td>A realtor</td>
<td>9%</td>
</tr>
<tr>
<td>Online</td>
<td>2%</td>
</tr>
<tr>
<td>Other</td>
<td>2%</td>
</tr>
</tbody>
</table>
Understanding – How Solar works

Using & storing Solar energy
• The panels would generate power when the sun is shining and I would use the power when needed
• I could only use solar power when the sun is shining
• I could store my extra solar energy in batteries

Conditions for Solar
• I will be able to generate more solar power if I cut down the trees around my house
• I would use less electricity if I cut down the trees around my house

Top 2 Box Solar Panel Expectations

- The panels would generate power when the sun is shining and I would use the power when needed: 81%
- I could store my extra solar energy in batteries: 58%
- I will be able to generate more solar power if I cut down the trees around my house: 41%
- I could only use solar power when the sun is shining: 35%
- I would use less electricity if I cut down the trees around my house: 32%
Expectations – How program would work

Effect of Solar on bill
• Solar panels could eliminate my electric bill
• Solar panels could reduce my electric bill by more than half
• Solar panels could reduce my electric bill, but just by a little
• I would save more money on my electric bill with solar panels than I would by adding insulation to my house

Billing and paying for power
• My electric bill would only include the extra power that I had to buy from the local power company
• The local power company would buy any extra power that I generated and didn’t need at my house
• I would sell all of the solar power I generate to the local power company, and buy all the power I use from them

Financial aspects of Solar
• I can make a profit by selling some or all of the solar energy my panels generate
• Once I buy solar panels, I will not be charged any added fees from my local power company

Top 2 Box Solar Panel Expectations

- My electric bill would only include the extra power that I had to buy from the local power company: 70%
- The local power company would buy any extra power that I generated and didn’t need at my house: 68%
- I would save more money on my electric bill with solar panels than I would by adding insulation to my house: 64%
- Solar panels could reduce my electric bill by more than half: 59%
- I can make a profit by selling some or all of the solar energy my panels generate: 56%
- Solar panels could eliminate my electric bill: 50%
- Once I buy solar panels, I will not be charged any added fees from my local power company: 50%
- Solar panels could reduce my electric bill, but just by a little: 44%
- I would sell all of the solar power I generate to the local power company, and buy all the power I use from them: 43%
Profile of Positive Participation Intenders
### Positive Participation Intenders Profile

Those who expressed a positive interest in participating are more likely to be...

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Home</th>
<th>EE/Environment</th>
<th>LPCs/ TVA</th>
<th>Features</th>
<th>Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male (37% vs. 23%)</td>
<td>1st time home-owners (54% vs. 35%)</td>
<td>Main decision maker for energy usage &amp; improvements (62% vs. 33%)</td>
<td>Significantly more favorable towards ALL LPC and TVA attitudes – all statements significantly higher</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Younger 18-34 (26% vs. 13%) AND Middle-aged 35-49 (46% vs. 30%)</td>
<td>Have kids in HH (61% vs. 31%)</td>
<td>Have considered GPP or participated in past (18% vs. 3%)</td>
<td>Feel more strongly about concept features – all higher %, 3 features significantly higher</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work full or part time (79% vs. 58%)</td>
<td>Purchased 2-9 years ago (45% vs. 25%)</td>
<td>Multiple EE/ Environmentally friendly options (EE appliances, compost piles, organic garden)</td>
<td>Place higher Importance on all potential features – 12 significantly higher</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have a grad degree (35% vs. 21%)</td>
<td>Younger homes 5-9 years (18% vs. 5%)</td>
<td>More likely to agree on ALL environmental views – every statement significantly higher</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Homes are 10-19 years old (48% vs. 28%)</td>
<td></td>
<td>More likely to expect to hear about from search engine, neighborhood, contractor, billboard, radio, or nextdoor.com</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Demographics Profile

- Positive purchase intenders are significantly more likely to be male, younger or young middle ages (18-49), to be working and have a graduate degree.
- Non-Intenders more likely female, older, and not working/retired.

### Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Positive Participation Intent</th>
<th>Negative Participation Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>63%</td>
<td>37%</td>
</tr>
<tr>
<td>Male</td>
<td>23%</td>
<td>77%</td>
</tr>
</tbody>
</table>

### Age

<table>
<thead>
<tr>
<th>Age</th>
<th>Positive Participation Intent</th>
<th>Negative Participation Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-34</td>
<td>26%</td>
<td>13%</td>
</tr>
<tr>
<td>35-49</td>
<td>46%</td>
<td>30%</td>
</tr>
<tr>
<td>50-64</td>
<td>30%</td>
<td>20%</td>
</tr>
<tr>
<td>65+</td>
<td>8%</td>
<td>20%</td>
</tr>
</tbody>
</table>

### Education

<table>
<thead>
<tr>
<th>Education</th>
<th>Positive Participation Intent</th>
<th>Negative Participation Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate degree</td>
<td>35%</td>
<td>21%</td>
</tr>
</tbody>
</table>

### Employment

<table>
<thead>
<tr>
<th>Employment</th>
<th>Positive Participation Intent</th>
<th>Negative Participation Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work full or part time</td>
<td>79%</td>
<td>58%</td>
</tr>
<tr>
<td>Not working/retired</td>
<td>21%</td>
<td>42%</td>
</tr>
</tbody>
</table>

Note: We see no significant differences by state, area live in, income, ethnicity, or marital status.

Q1. What is your gender?
Q2. What is your age?
QD2. What is the highest level of education you have completed?
QD3. Which describes your current employment?
Newer Homeowners with Kids in the HH

- They are significantly more likely to be first time homeowners with kids in the home.
- Homes are more likely to be within 5-19 years of age, purchased within 2-9 years ago (vs. non-intender homes 20+ years old, purchased 10+ years ago).

QD5. What is the age of your single-family home?
QD6. How long ago did you purchase your single-family home?
QD7. Is this the first home you owned?
QD9. What are the ages of children in your household?

Indicates significantly higher at 90% confidence level
More Environmentally Aware & Involved

• They tend to be the main decision maker for energy usage and improvements (non-intenders are joint), and have considered GPP or participated in past (non-intenders never heard of GPP).
• They also are more likely to have Multiple EE/ Environmentally friendly options on property, like EE appliances, compost piles, or organic gardens.

Q8. Who in your home is the primary decision maker for your home’s energy usage and energy improvements?

Q9. Depending on where you live, you may have access to a solar panel program called Green Power Providers. Please select which of the following statements best describe your experience with Green Power Providers program.

Q10. Which of the following do you currently have in your home, or on your property?
Stronger Environmental Viewpoints

Positive Intenders are more likely to agree on ALL environmental views - every statement is significantly higher

- Especially large differences (>30%) for being willing to invest in home, using internet to research environment, teaching others/giving advice, and reading enviro magazines

**Top 2 Box Environmental Views**

- I want to protect the environment for future generations: 96% ▲
- It is important to teach our children about energy efficiency: 95% ▲
- I am concerned about the amount of my energy bill: 94% ▲
- I am willing to invest to make my home environmentally friendly: 91% ▲
- I am environmentally conscious: 88% ▲
- I use the internet to research environmental issues: 86% ▲
- I've taken most of the practical steps I know about to increase my home’s energy efficiency: 82% ▲
- I regularly recycle household items that I must take to a disposal site: 81% ▲
- I regularly recycle household items that are picked up at my house: 77% ▲
- I enjoy teaching others how to become more environmentally savvy: 73% ▲
- I read earth-friendly or environmental magazines: 59% ▲
- Others ask me for advice about making their homes more environmentally friendly: 57% ▲

Q24. Please read each of the statements below about you and your home as it relates to the environment and indicate how much do you agree or disagree with each one.

**Indicates significantly higher at 90% confidence level**
Positive Intenders are significantly more favorable towards ALL LPC and TVA attitudes - all statements significantly higher than non-intenders

**Top 2 Box LPC Attitudes**
- Is a trusted energy advisor: 88% ▲
- Helps make the community better: 87% ▲
- Helps me make smart energy choices: 86% ▲
- Cares about the community: 85% ▲
- Would give me a realistic account of solar savings and costs: 84% ▲
- Would give me unbiased advice about solar being right for me: 81% ▲
- Advocates for me: 77% ▲
- Cares about me: 76% ▲
- Has a relationship with me: 72% ▲

**Top 2 Box TVA Attitudes**
- Supports renewable energy in the Tennessee Valley: 94% ▲
- Makes the Tennessee Valley a better place to live: 94% ▲
- Supports growth of solar energy in the Tennessee Valley: 90% ▲
- Is a trusted energy advisor: 95% ▲

Q20. If your local power company made a program like this available, how much would you agree or disagree with the following?
Q21. If the Tennessee Valley Authority (TVA) made a program like this available, how much would you agree or disagree with the following?

▲ Indicates significantly higher at 90% confidence level
Place Higher Importance on ‘Confidence’ Features

They feel more strongly about features – for featured in the Confidence concept they evaluated, 3 features are significantly higher.

Top 2 Box Feature Importance

- Qualified contractors who are licensed, insured and bonded, and have good Better Business Bureau ratings: 94%▲
- Qualified contractors who have completed special training on TVA quality guidelines: 94%▲
- A professional energy advisor who can come to my home to make sure the job was done right: 94%▲
- Qualified contractors who have completed a large number of jobs successfully: 93%
- If the professional energy advisor finds the job does not meet quality guidelines, they will work with you until it's right: 91%
- Qualified contractors who have a history of high customer satisfaction. My local power company and TVA ask every customer about their satisfaction after every job: 90%

Q19B. The program would include all of the features listed in the description you read. We would like to know how important each feature is to you. Please read each one carefully, and indicate how important it is to you that the program includes this feature.

▲ Indicates significantly higher at 90% confidence level
Q21A. This program would have additional features that were not included in the short description that you read before. The full list of features are shown below. We would like to know how important each feature is to you. Please read each one carefully and indicate how important it is to you that the program includes this feature.

### Top 2 Box Additional Feature Importance

<table>
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<tr>
<th>Feature</th>
<th>Importance</th>
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<tbody>
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<td>Education about the best type and size of power generation system for me based on the amount of sun at my house</td>
<td>97%</td>
</tr>
<tr>
<td>A site audit of my home to determine if the lot and roof orientation works for solar panels</td>
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<td>Solar installers on the list have a history of high customer satisfaction. My local power company and TVA ask every customer about their satisfaction after every job</td>
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<tr>
<td>I can see qualifications for each solar installers on TVA’s web site so I can decide exactly which contractor fits me the best</td>
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<tr>
<td>Information about financing plans to help with initial installation costs</td>
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</tr>
<tr>
<td>A meter display inside my home which shows how much of my energy consumption is powered by the solar panels vs traditional energy supply</td>
<td>73%</td>
</tr>
</tbody>
</table>

**Positive Participation Intent**

**Negative Participation Intent**

Indicates significantly higher at 90% confidence level
Media Expectations differ somewhat

• While many media expectations for hearing about the program are similar (Top 2 choices the same), Positive intenders are more likely to expect to hear from search engine, neighborhood, contractor, billboard, radio, or nextdoor.com.

Q23. What are all of the ways you would like to hear about this program?

Indicates significantly higher at 90% confidence level
Installers
Solar Installer Quantitative Concept Test Findings

1. **Solar Installers preferred the Stable Solar Growth program.**
   - When comparing the two concepts directly, Solar Installers prefer this concept about 2:1 vs Installer Network.
   - Installers question why they need an Installer Network when they are already NABCEP certified, and like and trust that program.

2. **The most important benefit to solar installers is having a single set of rules across LPCs.**

3. **Stable Solar Growth also reflects most positively on LPCs and TVA.**
   - Installers’ opinions of the LPCs are generally positive, and installers view both programs as showing that LPCs support solar, which makes them think the same or slightly more positively about their LPCs.
   - Installers’ opinions of TVA are more mixed, and installers were also more mixed in how they viewed TVA in light of the two programs. They believe the programs both show TVA is interested in solar growth (viewed positively), but there was also skepticism driven by past solar program changes by TVA.
About 1/3 of installers “Definitely would” participate in either program

Likelihood to Participate

- **Installer Network**
  - Definitely would: 38%
  - Probably would: 8%
  - Might or might not: 8%
  - Probably would not: 8%
  - Definitely would not: 23%

- **Stable Growth**
  - Definitely would: 38%
  - Probably would: 15%
  - Might or might not: 23%
  - Probably would not: 8%
  - Definitely would not: 23%

How likely would you be to participate in this program?  Definitely would, Probably would, Might or Might Not, Probably would not, Definitely would not

If respond Definitely/Probably Would ask: What are all of the reasons why you would like to participate in this program?

If respond Might/Might Not or Definitely/Probably Would NOT ask: What are all of the reasons why you would not like to participate in this program?

“I’m not sure why TVA needs their own program”

“How is this different from NABCEP?”

“I like and trust NABCEP”

“I really like “one program across the valley”

“I need more details on what the “long-term TVA program” is”

“I like the idea of an educational website, but the site needs to be really good”
The most important benefit to solar installers is ONE Program across Valley

**Benefit Importance**

- **Very Important**
  - ONE program across the Valley, so no need to deal with differences among LPCs: 69%
  - Long-term TVA program commitments that don’t change over time: 54%
  - TVA Solar Installer Network has installers (like yourself) who meet strict standards to get into the program: 46%
  - TVA will show your business on their own site: 62%
  - TVA will send you leads from their site and from other search engines like Google: 23%

- **Somewhat Important**
  - ONE Program across Valley: 31%
  - Long-term TVA program commitments that don’t change over time: 31%
  - TVA Solar Installer Network has installers (like yourself) who meet strict standards to get into the program: 31%
  - TVA will show your business on their own site: 15%
  - TVA will send you leads from their site and from other search engines like Google: 31%

**How important are each of the following benefits of a solar program to you, as a solar installer?** Very Important, Somewhat Important, Neither Important nor Unimportant, Somewhat Unimportant, Very Unimportant.
Stable Solar Growth would most positively affect solar installers’ opinions of the LPCs

How Program Affects Opinion of LPC

**Installer Network**
- Improve it a lot: 85%
- Improve it a little: 15%
- Would not change: 8%
- Would worsen: 8%

**Stable Growth**
- Improve it a lot: 69%
- Improve it a little: 15%
- Would not change: 8%
- Would worsen: 8%

How would this program affect your opinion of the local power company in your area if it offered this solar program? Improve it a lot, Improve it a little, Would not change, Would worsen.

Please explain why you responded this way towards the local power company:

- "It sounds like LPCs and TVA “pushing off” answering their phones and educating customers on solar.”
- "I like that they are keeping a high standard for who they allow in – you need high standards as solar expands.”
- "It improves my opinion of the LPCs that discouraged solar previously.”
- "Allocating resources towards solar is a good thing and strict standards get rid of rip offs to protect customers.”
Stable Solar Growth would most improve solar installers’ opinions of TVA

How Program Affects Opinion of TVA

Installer Network

- Improve it a lot: 15%
- Improve it a little: 46%
- Would not change: 38%
- Would worsen: 15%

Stable Growth

- Improve it a lot: 15%
- Improve it a little: 31%
- Would not change: 38%
- Would worsen: 15%

"I do not want or need TVA or a power company as part of our business model"

"this shows that that they are more interested in solar growth, it will improve their public view"

"A streamlined program and process will save us time = money"
Participation & Recommendation Intent; Likes & Dislikes

(Concept C – Confidence)

Concept ‘Likes’ surround finding qualified installers that get the job done right

Q14. Based on the program description you just saw, how likely would you be to participate in the program?

Q18. Based on the program description you just saw, how likely would you be to tell other people about this program?

[I like that I] can easily choose a qualified installer with guidance and follow up by TVA ensuring that job is done right.

I like that they have picked out good contractors who will get the job done and sounds like it would be done right and on time.

If I could find a trustworthy contract to do the work that is certified and approved by my power company, then that would take a lot of the work and worry out of the process.

The risk of problems is too great for something that isn’t essential at this time.
# Importance of Concept Features (Concept C – Confidence)

All features are equally high in importance, with $\geq 87\%$ who feel each is extremely/very important.

## Concept C (Confidence) – T2B Feature Importance

<table>
<thead>
<tr>
<th>Feature</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualified contractors who have completed special training on TVA</td>
<td>90%</td>
</tr>
<tr>
<td>quality guidelines</td>
<td></td>
</tr>
<tr>
<td>Qualified contractors who are licensed, insured and bonded, and</td>
<td>90%</td>
</tr>
<tr>
<td>have good Better Business Bureau ratings</td>
<td></td>
</tr>
<tr>
<td>Qualified contractors who have completed a large number of jobs</td>
<td>89%</td>
</tr>
<tr>
<td>successfully</td>
<td></td>
</tr>
<tr>
<td>If the professional energy advisor finds the job does not meet quality</td>
<td>88%</td>
</tr>
<tr>
<td>guidelines, they will work with you until it's right</td>
<td></td>
</tr>
<tr>
<td>Qualified contractors who have a history of high customer satisfaction</td>
<td>88%</td>
</tr>
<tr>
<td>My local power company and TVA ask every customer about their</td>
<td></td>
</tr>
<tr>
<td>satisfaction after every job</td>
<td></td>
</tr>
<tr>
<td>A professional energy advisor who can come to my home to make sure the</td>
<td>87%</td>
</tr>
<tr>
<td>job was done right</td>
<td></td>
</tr>
</tbody>
</table>

Q19A: The program would include all of the features listed in the description you read. We would like to know how important each feature is to you. Please read each one carefully, and indicate how important it is to you that the program includes this feature.
Affinity towards LPCs/ TVA (Concept C – Confidence)

‘Confidence’ results in the strongest affinity for LPCs and TVA

Q20. If your local power company made a program like this available, how much would you agree or disagree with the following? My local power company…

- Is a trusted energy advisor: 80%
- Helps make the community better: 79%
- Helps me make smart energy choices: 77%
- Cares about the community: 77%
- Would give me a realistic account of solar savings and costs: 74%
- Would give me unbiased advice about solar being right for me: 70%
- Cares about me: 67%
- Advocates for me: 66%
- Has a relationship with me: 62%

Q21. If the Tennessee Valley Authority (TVA) made a program like this available, how much would you agree or disagree with the following? The TVA…

- Supports renewable energy in the Tennessee Valley: 88%
- Makes the Tennessee Valley a better place to live: 85%
- Is a trusted energy advisor: 84%
- Supports growth of solar energy in the Tennessee Valley: 83%
Participation & Recommendation Intent; Likes & Dislikes
(Control Concept G – GPP Current)

The Control Concept is among the highest of all concepts for Participation Intent and Likelihood to Recommend

- Concept 'Likes' are primarily about saving energy and saving, or even making money

Q14. Based on the program description you just saw, how likely would you be to participate in the program?
Q18. Based on the program description you just saw, how likely would you be to tell other people about this program?

I love the thought that I can generate my own power and actually sell some as well.

I like the idea of saving energy and the busy work being done by someone else.

The things I LIKE about the program are that I could provide green energy for more than just myself. I also like that I would get paid for this energy I provide so I could potentially eliminate my electric bill.

I don’t want the hassle of installing solar panels, nor selling back the (extra) generated power.

T2B Participation Intent & T2B Likelihood to Recommend

67% 67%
The possibility of making money on solar panels is most important feature of the control concept

**Concept G (GPP Current) – T2B Feature Importance**

- **85%**
  - You continue purchasing all your power from the local power company, but some of the cost is offset by the power you sell to them. If you generate enough power, they could even pay you more than you pay them.

- **74%**
  - TVA and your local power company purchase all the solar power you generate for a 20 year contract.

- **69%**
  - Because TVA purchases all of the energy and associated environmental attributes, I enable other Valley residents to support green energy by purchasing my solar panel generation.

Q19A: The program would include all of the features listed in the description you read. We would like to know how important each feature is to you. Please read each one carefully, and indicate how important it is to you that the program includes this feature.
Affinity towards LPCs/ TVA (Control Concept G – GPP Current)

Control concept results in directionally lower affinity for LPCs and TVA in most areas than ‘Confidence, with two exceptions – ‘Has a Relationship with Me’ for LPCs and ‘Supports growth of Solar’ for TVA.

Q20. If your local power company made a program like this available, how much would you agree or disagree with the following? My local power company...

- Helps make the community better: 77%
- Is a trusted energy advisor: 74%
- Helps me make smart energy choices: 74%
- Cares about the community: 74%
- Would give me a realistic account of solar savings and costs: 69%
- Has a relationship with me: 64%
- Cares about me: 60%
- Would give me unbiased advice about solar being right for me: 58%
- Advocates for me: 55%

Q21. If the Tennessee Valley Authority (TVA) made a program like this available, how much would you agree or disagree with the following? The TVA...

- Supports renewable energy in the Tennessee Valley: 85%
- Supports growth of solar energy in the Tennessee Valley: 85%
- Makes the Tennessee Valley a better place to live: 83%
- Is a trusted energy advisor: 82%
Participation & Recommendation Intent; Likes & Dislikes
(Concept M – Understand Money)

‘Understand Money’ has relatively low Likelihood to Participate, with ~average Likelihood to Reco
• ‘Likes’ are about understanding savings and power used from solar

Q14. Based on the program description you just saw, how likely would you be to participate in the program?
Q18. Based on the program description you just saw, how likely would you be to tell other people about this program?
Importance of Concept Features (Concept M – Understand Money)

All features have similar importance, with >80% who feel each is extremely/very important.

Q19A. The program would include all of the features listed in the description you read. We would like to know how important each feature is to you. Please read each one carefully, and indicate how important it is to you that the program includes this feature.
**Affinity towards LPCs/ TVA (Concept M – Understand Money)**

'Making Money' has the lowest affect on LPCs and TVA of all concepts tested

**LPC – T2B Agreement (Strongly/ Somewhat Agree)**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Agree (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helps make the community better</td>
<td>73%</td>
</tr>
<tr>
<td>Is a trusted energy advisor</td>
<td>70%</td>
</tr>
<tr>
<td>Cares about the community</td>
<td>67%</td>
</tr>
<tr>
<td>Would give me a realistic account</td>
<td>65%</td>
</tr>
<tr>
<td>Would give me unbiased advice about solar</td>
<td>57%</td>
</tr>
<tr>
<td>Helps me make smart energy choices</td>
<td>63%</td>
</tr>
<tr>
<td>Cares about me</td>
<td>53%</td>
</tr>
<tr>
<td>Has a relationship with me</td>
<td>51%</td>
</tr>
<tr>
<td>Advocates for me</td>
<td>50%</td>
</tr>
</tbody>
</table>

**TVA – T2B Agreement (Strongly/ Somewhat Agree)**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Agree (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Makes the Tennessee Valley a better place to</td>
<td>83%</td>
</tr>
<tr>
<td>live</td>
<td></td>
</tr>
<tr>
<td>Supports renewable energy in the Tennessee</td>
<td>80%</td>
</tr>
<tr>
<td>Valley</td>
<td></td>
</tr>
<tr>
<td>Supports growth of solar energy in the</td>
<td>79%</td>
</tr>
<tr>
<td>Tennessee Valley</td>
<td></td>
</tr>
<tr>
<td>Is a trusted energy advisor</td>
<td>78%</td>
</tr>
</tbody>
</table>

Q20. If your local power company made a program like this available, how much would you agree or disagree with the following? My local power company...

Q21. If the Tennessee Valley Authority (TVA) made a program like this available, how much would you agree or disagree with the following? The TVA...
Participation & Recommendation Intent; Likes & Dislikes
(Concept R – Renewables)

‘Renewables’ has the second highest of all concepts for Participation Intent and Likelihood to Recommend
- ‘Likes’ are about understanding savings and power used from solar

Q14. Based on the program description you just saw, how likely would you be to participate in the program?
Q18. Based on the program description you just saw, how likely would you be to tell other people about this program?
Importance of Concept Features (Concept R – Renewables)

Billing that highlight monthly savings from solar panels is the most important feature of ‘Renewables’ concept.

**Concept R (Renewables) – T2B Feature Importance**

- **Billing that clearly shows the monthly savings from the power generated by my solar panels:** 89%
- **A meter display inside my home which shows how much of my energy consumption is powered by the solar panels vs traditional energy supply:** 84%
- **A regular update on the amount of environmental impact that was avoided via solar power:** 72%

Q19A: The program would include all of the features listed in the description you read. We would like to know how important each feature is to you. Please read each one carefully, and indicate how important it is to you that the program includes this feature.
Affinity towards LPCs/ TVA (Concept R – Renewables)

'Renewables' concept results in similar levels of high affinity for LPCs, but is directionally lower towards most TVA attributes

Q20. If your local power company made a program like this available, how much would you agree or disagree with the following? My local power company...

<table>
<thead>
<tr>
<th></th>
<th>LPC – T2B Agreement (Strongly/ Somewhat Agree)</th>
<th>TVA – T2B Agreement (Strongly/ Somewhat Agree)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cares about the community</td>
<td>80%</td>
<td>86%</td>
</tr>
<tr>
<td>Helps make the community better</td>
<td>77%</td>
<td>83%</td>
</tr>
<tr>
<td>Would give me a realistic account of solar savings and costs</td>
<td>77%</td>
<td>83%</td>
</tr>
<tr>
<td>Is a trusted energy advisor</td>
<td>75%</td>
<td>80%</td>
</tr>
<tr>
<td>Helps me make smart energy choices</td>
<td>75%</td>
<td></td>
</tr>
<tr>
<td>Has a relationship with me</td>
<td>63%</td>
<td></td>
</tr>
<tr>
<td>Would give me unbiased advice about solar being right for me</td>
<td>62%</td>
<td></td>
</tr>
<tr>
<td>Cares about me</td>
<td>57%</td>
<td></td>
</tr>
<tr>
<td>Advocates for me</td>
<td>55%</td>
<td>78%</td>
</tr>
</tbody>
</table>

Q21. If the Tennessee Valley Authority (TVA) made a program like this available, how much would you agree or disagree with the following? The TVA...
Participation & Recommendation Intent; Likes & Dislikes

(Concept S – Starting with Solar)

‘Starting with Solar’ falls into the middle of all concepts tested for both Participation and Recommendation.

- Most likes are about having someone to ‘help’ them with this process.

<table>
<thead>
<tr>
<th>Participation Intent</th>
<th>Likelihood to Recommend</th>
</tr>
</thead>
<tbody>
<tr>
<td>60%</td>
<td>58%</td>
</tr>
</tbody>
</table>

Q14. Based on the program description you just saw, how likely would you be to participate in the program?

Q18. Based on the program description you just saw, how likely would you be to tell other people about this program?

- [I like] the evaluation to see if I would qualify or benefit from solar panels, and if not, help in finding ways for efficiency of my electricity.
- [I like] that there would be a knowledgeable advisor to help me understand how this would work.
- I like that an expert would help decide what was right for our home.
- [I dislike] the time it would take to review my home to see if it is a good fit.
Features that help them understand if their home is right for solar, and the best system/steps to get started rise to the top for ‘Starting with Solar’

**Concept S (Starting with Solar) – T2B Feature Importance**

- **84%** A professional energy advisor provides an on-site evaluation of my home to determine if the lot and roof orientation works for solar panels.
- **81%** A professional energy advisor provides education about the best type and size of power generation system for me based on the amount of sun at my house.
- **81%** A professional energy advisor provides a list of steps I would need to take to generate power at my home and information about how to get started.
- **80%** A professional energy advisor provides an online solar calculator to show me the cost/benefit of a solar system.
- **79%** A personalized assessment of my home’s energy use and a tailored list of recommended energy upgrades to make my home the best it can be.
- **76%** A professional energy evaluation of my home to determine its unique energy opportunities.

Q19A. The program would include all of the features listed in the description you read. We would like to know how important each feature is to you. Please read each one carefully, and indicate how important it is to you that the program includes this feature.
Affinity towards LPCs/ TVA (Concept S – Starting with Solar)

Affinity towards LPCs and TVA fall into the middle of concepts tested for ‘Starting with Solar’

<table>
<thead>
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<td>74%</td>
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<tr>
<td>Helps me make smart energy choices</td>
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</tr>
<tr>
<td>Would give me a realistic account of solar savings and costs</td>
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</tr>
<tr>
<td>Would give me unbiased advice about solar being right for me</td>
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</tr>
<tr>
<td>Cares about me</td>
<td>57%</td>
</tr>
<tr>
<td>Has a relationship with me</td>
<td>54%</td>
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<tr>
<td>Advocates for me</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>TVA – T2B Agreement (Strongly/ Somewhat Agree)</th>
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<tr>
<td>Makes the Tennessee Valley a better place to live</td>
</tr>
<tr>
<td>Supports renewable energy in the Tennessee Valley</td>
</tr>
<tr>
<td>Supports growth of solar energy in the Tennessee Valley</td>
</tr>
<tr>
<td>Is a trusted energy advisor</td>
</tr>
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</table>

Q20. If your local power company made a program like this available, how much would you agree or disagree with the following? My local power company...

Q21. If the Tennessee Valley Authority (TVA) made a program like this available, how much would you agree or disagree with the following? The TVA...