

Solar under the shade: deceptive marketing practices in the residential solar sector and utility certification as a response

Beyond the Meter Working Group



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Webinar



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Beyond the Meter (BTM) Working Group



- This working group of the UCRC will bring together utilities and vendors to better understand, design, and implement BTM services
 - Business case development
 - Program design
 - Performance metrics & benchmarking
 - Voice-of-the-customer surveys and research
 - Case studies of innovation and market success
 - Regulatory considerations
 - Utility-Vendor partnership models
 - Marketing / Messaging Strategies

Challenge statement



The economy-wide move to decarbonize brings a massive influx of money to make it all work and new actors entering the industry. While most are well-intentioned and operate in good faith, there are also predatory, bad-faith actors that are looking to take advantage of the vulnerable all for a quick dollar.

Utilities play a role in mitigating bad actors, particularly for door-to-door sales of rooftop solar, which can be rife with misinformation and targeting vulnerable customers.

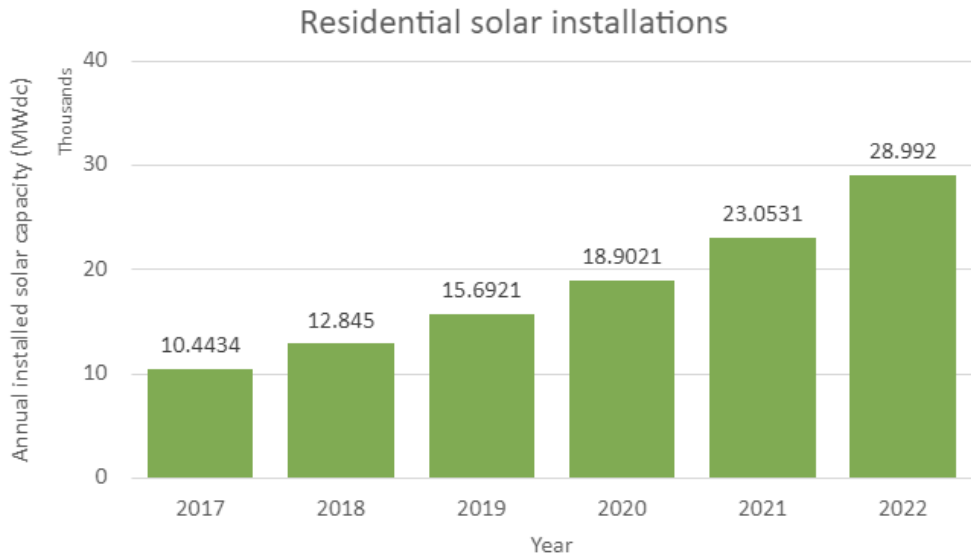
State of solar market



U.S. solar installations



- According to the Solar Energy Industry Association's (SEIA) research, the solar industry saw an average annual growth of 33% between 2012 and 2022
- Residential solar alone has seen a 177.61% more installed capacity in 2022 than in 2017



Source: SEIA, [Solar Industry Research Data](#), 2022

Inflation Reduction Act (IRA)



Nearly \$400 billion
for clean energy in
the IRA

This includes tax
credits, adders,
grants, new
programs, etc.

This new money
can mean a lot of
good, it also means
more bad actors
entering the space

IRA's effects on solar industry



“ SEIA's post-IRA industry projection of solar installations sees an average annual increase of 35% compared to pre-IRA projections.

—[Solar Industry Research Data](#), SEIA (2022)

Solar headwinds



Continued supply chain issues

Geopolitical tension with China

Demand will outpace supply in the near-term

Shortage of trained people for installations

As solar grows, so does misinformation



- Investment Tax Credit Extension (Section 1302), Production Tax Credit Addition (Section 1301), and Transition to New Technology Neutral Credit (Sections 13701 and 13702)
- Allocated Adder Credit for Low Income Communities
- Commercial Energy Storage
- Advanced Production Manufacturing Credit
- 48C Manufacturing Capex Support
- High-Efficiency Electric Home Rebate Program
- Environmental and Climate Justice Block Grants
- Interconnection Costs
- Residential ITC (Section 25D)
- Section 25C Investment Tax Credit for Energy Efficient Home Improvement (including panelboards)
- Transmission
- Direct Pay and Domestic Content
- Transferability
- Greenhouse Gas Reduction Fund
- Climate Pollution Reduction Grants

Source: SEIA, [Inflation Reduction Act Solar Summary](#), 2022

Current state of solar marketing practices



Community Voices



Common false or misleading claims



Installers work/partner
with a State or utility

Consumers will receive
government rebates or
payments

Customer will never
have to pay a power
bill again

The state is
experiencing an energy
shortage

Solar customers will be
“locked in” to current
rate pricing established
by the regulatory
commission

During an electrical
power outage,
consumers will still
have power

Source: [Attorney General Issues Tips for Homeowners on Solar Installations - Idaho Office of Attorney General](#) (2022)

Headlines around the country



- [Alabama](#) - “Free Solar Panels” can cost you big time! How to spot a phony offer
- [Indiana](#) - Solar scammers want your money. How do I spot and avoid them?
- [Nevada](#) - Reno Police Department warns community of residential rooftop solar scams
- [Georgia](#) - Georgia PSC 'getting lit up' with complaints about home solar ripoffs

Campaign for Accountability (CfA)



2016 – CfA, a watchdog NPO, investigated practices by rooftop solar companies and their installers

CfA wrote to several state attorney generals asking them to investigate certain deceptive practices

Their letters organized the information they had on certain companies detailing shady marketing strategies and empty promises

SolarCity is the largest and most well-known rooftop solar company that employed questionable tactics

They had a laundry list of lawsuits and controversies over their practices in the 2010s, including being fined \$13 million by Oregon in part for deceptive sales practices

Role of utilities



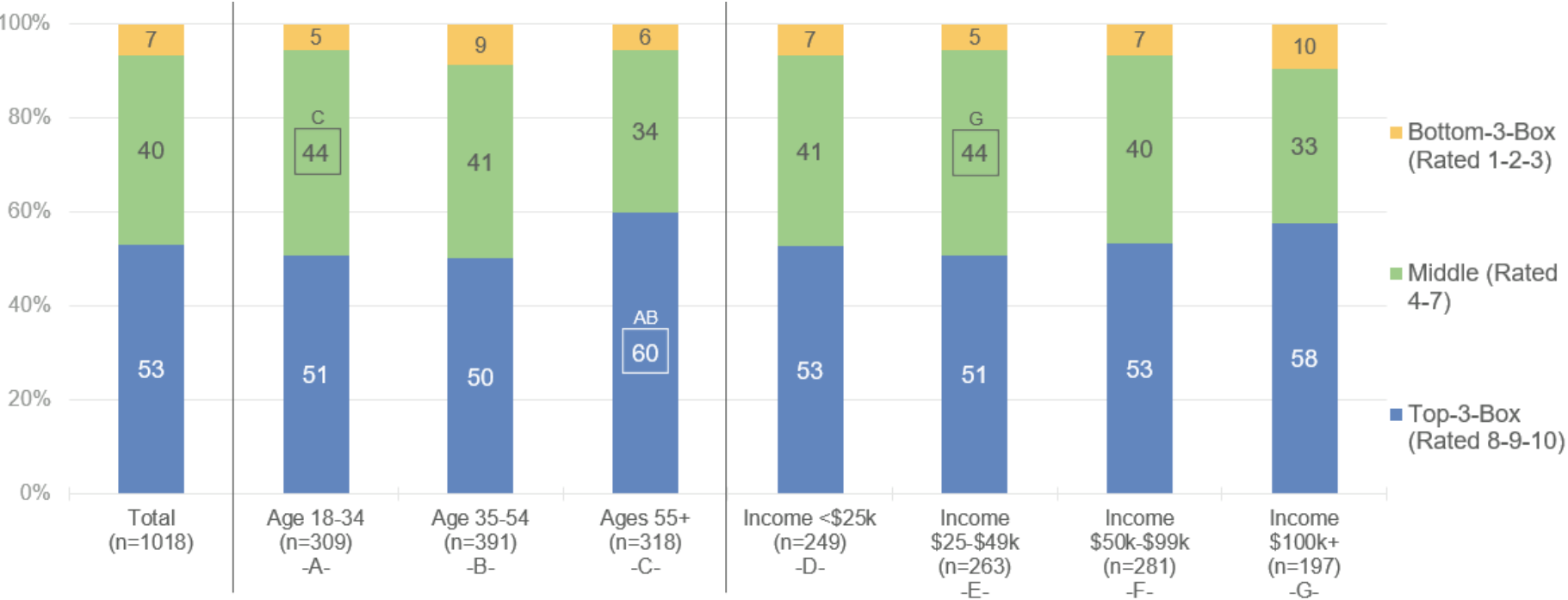
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The key challenge today revolves around local and regional installers. Large companies like SolarCity are still around, but with the increased funds going into residential solar, the presence of local companies is growing.

It's harder to track and assure the quality of all these smaller companies. How do customers know which companies to trust? How do they know which companies to hire?

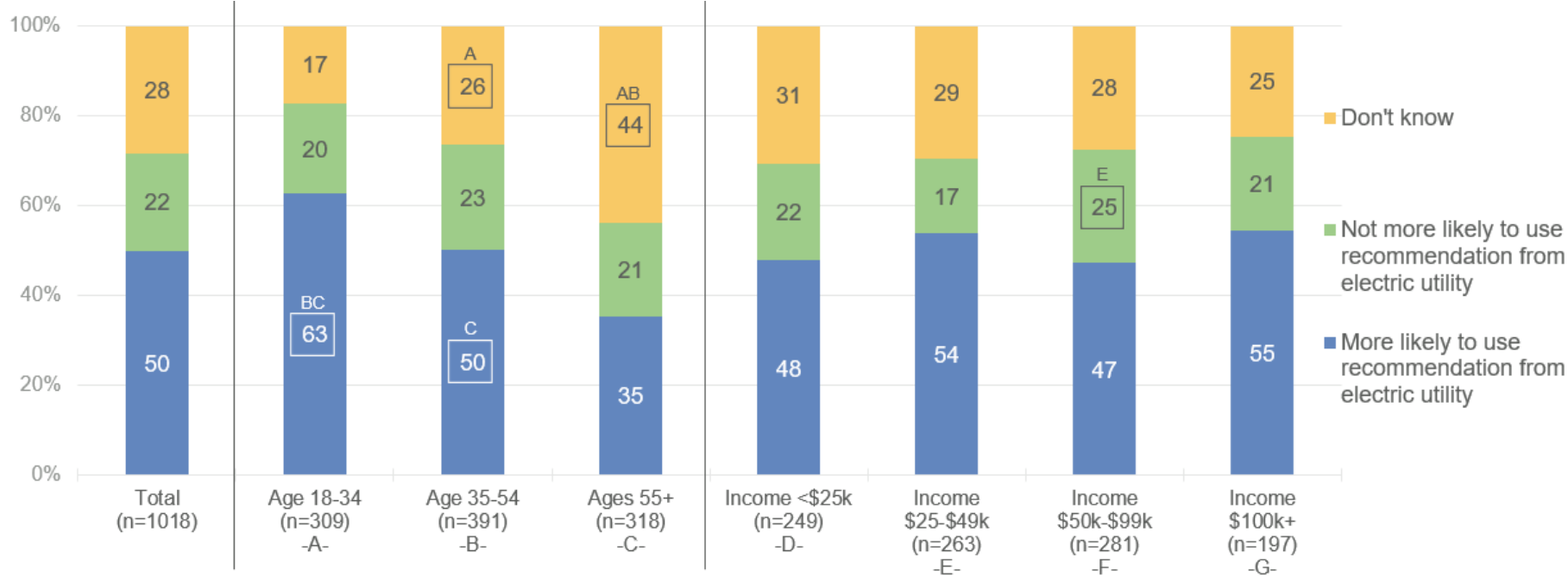
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Majority of customers view electric utility as a trusted energy advisor



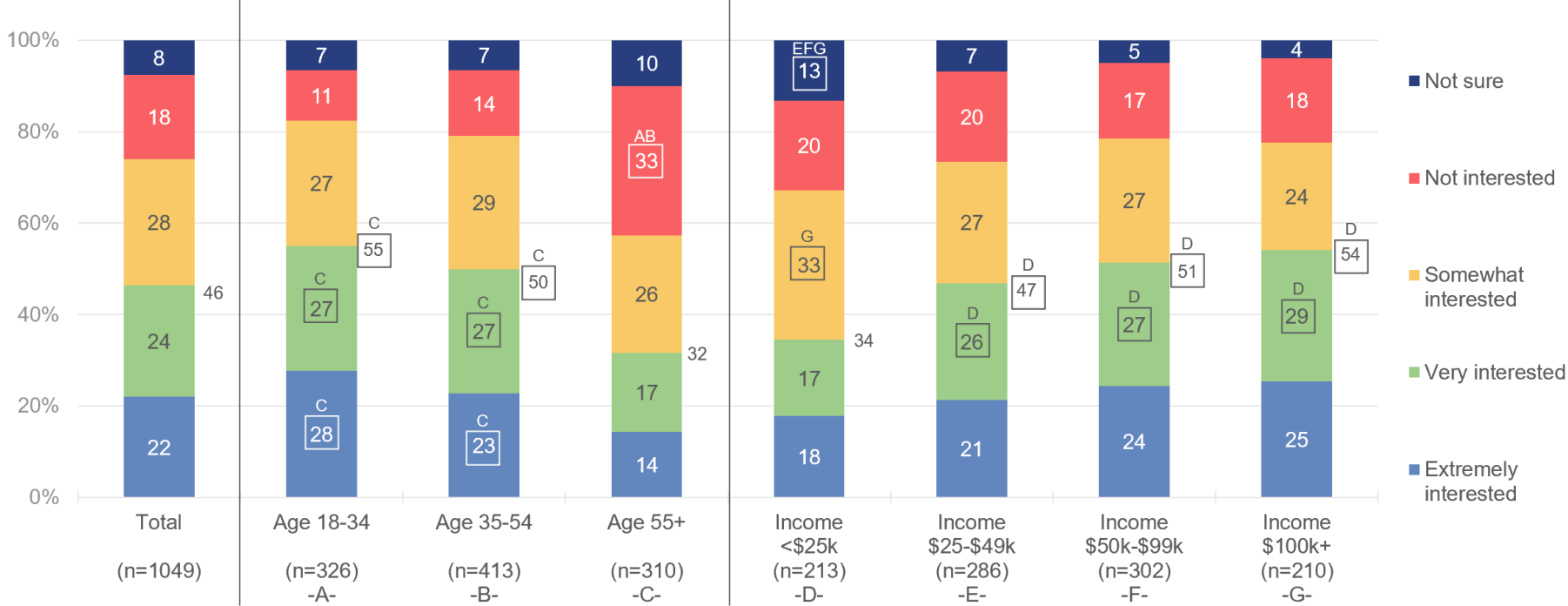
Base: Total Respondents. B3. How would you rate your electric utility as a trusted energy advisor?

Utilities have influence over customer choices relating to home services



Base: Total Respondents. (Use of Utility Service Recommended Home Service/Repair) Q.B4b. If you needed home services or repairs, would you be more likely to use a service that was recommended by your electric utility?

Customer interest level in local utility installation and technical support for BTM products



Base: Total Respondents. M3. How interested would you be in assistance from your local utility for installation and technical support for energy-related products and services?

Mitigating bad practices

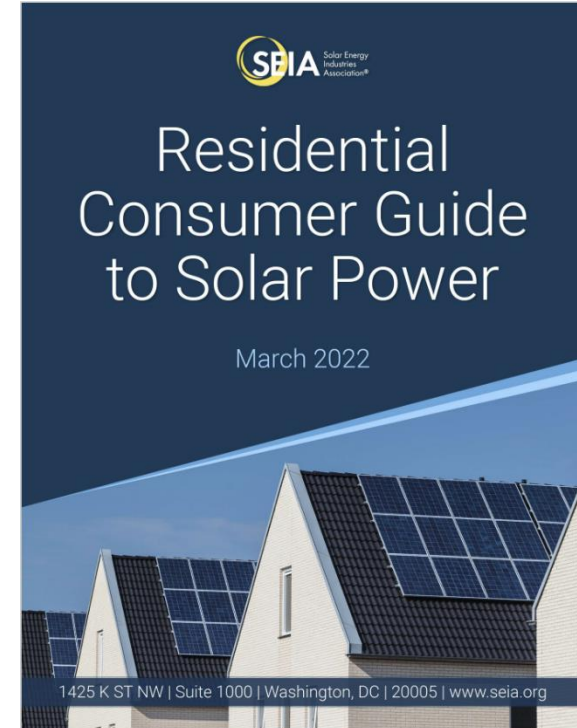


- Utilities are in a unique position to help filter out the bad actors for their customers and can act as a referee
 - Educate customers on solar
 - Be proactive in low-income and/or elderly communities that are typically targeted
 - Create a pledge or code of ethics for installers to acknowledge
 - Create a trade ally network with certain requirements to join and ensure those allies receive value back
 - Document fraudulent activity for law enforcement

SEIA – Residential Consumer Guide to Solar Power

SEIA released an 8-page consumer guide as an overview of what solar does and doesn't do

Educating customers on solar and busting common myths (i.e. “never pay for energy again”) can help customer protect themselves



Australia SEIA Code of Ethics



Solar Energy Industries Association INC



1. Produce solar energy products and systems to meet the highest standards of quality and performance.
2. Present honestly the capabilities, performance and energy savings potential of solar products.
3. Present honestly and openly any government incentives or rebates for purchasers of solar power.
4. Protect the health and safety of consumers in the design and provision of products and services
5. Offer and honor clear, understandable warranties that comply with all applicable regulations.
6. Perform servicing and repairs in a professional manner.
7. Be responsive to, and act upon, consumer suggestions and complaints.
8. At all times act in the best interests of the solar industry, as a whole, in Australia

Source: [Code of Ethics - Solar Energy Industry Associations Inc](#)

Trade ally network requirements


Common requirements to join a trade ally network:


- Having liability insurance
- Obtaining state or provincial licenses or certifications (the one offered by North American Board of Certified Energy Practitioners [NABCEP] is popular)
- Successfully completing program-specific quality-assurance training
- Providing customer or trade references
- Being in business for a minimum period of time
- Completing a minimum number of installations
- Being in good standing with the US or Canadian Better Business Bureau



Trade ally example: Renewable Energy Vermont's Solar & Wind Partnership Program



 Proof of liability insurance of at least \$1 million per incident

 Three installation references for three separate PV systems of at least 1 kilowatt each

 Proof of NABCEP certification if they can't provide references

 At least a one-year warranty on any system they install

Ensure trade allies are getting value back



Value utilities can provide:

- Potential sales leads
- Co-branded marketing materials
- Training and certifications
- Networking opportunities
- Access to requests for proposals
- Rewards and recognition
- Case studies and press releases
- Ensure a smooth interconnection process

Ensure allies receive this value by requiring customers to use a certified trade ally in order to receive rebates or other incentives

Source: [What credentials should utilities require for solar contractors in their trade ally network? \(esource.com\)](https://www.esource.com/insights/what-credentials-should-utilities-require-for-solar-contractors-in-their-trade-ally-network/), 2019

Interstate Renewable Energy Council (IREC) – National Solar Licensing Database



- IREC offers a broad overview of [state licensing requirements across the US](#)
- Database shows broadness of state requirements that utilities must navigate when making their own requirements
- This also shows the various types of solar (i.e. photovoltaic, solar thermal, etc.) and the different licensing requirements



IREC: New Mexico state requirements for solar installation



General licensing

Solar installations (PV and solar thermal) are included under electrical and mechanical licenses

A company must have a Qualifying Party (master electrician or master plumber) of the appropriate trade to contract for a solar installation and a person with a journeyman license is expected to do the hands-on work

PV licensing

A journeyman certificate of competence...is required of all individuals performing electrical wiring

An apprentice may work under the direct supervision of a validly certified journeyman...Journeyman certifications shall be issued such that the certificates parallel the electrical license classification scopes

Source: [National Solar Licensing Database](#), IREC (2023)

Past work



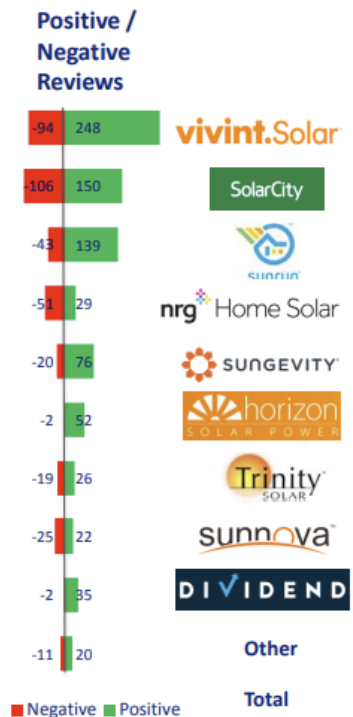
Solar marketing practices deep dive



- In 2017, we conducted a research project that captured a lot of the misleading claims and predatory practices that some solar installers were using to make a sale
- This process included
 - Contract analysis
 - Customer review collection
 - Mystery shoppers
 - Interviews with installers

1 Customer Experience

However, some solar providers receive many more negative reviews than others



Sample Size	Net Total	General	Discovery/ Site Visit	Contracting	Installation	Billing	Maintenance
378	41%	58%	-10%	-4%	0%	-2%	-3%
281	16%	32%	-12%	-2%	12%	-6%	-8%
201	48%	57%	-8%	-1%	7%	-1%	-5%
123	-18%	7%	-10%	-2%	3%	-5%	-12%
99	57%	65%	-9%	-3%	7%	0%	-3%
60	83%	80%	0%	0%	3%	0%	0%
54	13%	20%	-20%	0%	19%	0%	-6%
50	-6%	14%	-4%	0%	16%	-18%	-14%
38	87%	76%	0%	0%	13%	0%	-3%
312	41%	46%	-8%	-1%	14%	-2%	-8%
1,596	+523 33%	+737 46%	-145 -9%	-31 -2%	+127 8%	-47 -3%	-98 -6%

SolarCity has positive marks for installation but negative for sales and marketing tactics

High number of complaints on sales and marketing tactics and warranty requests

High number of complaints on sales and marketing tactics

Dividend had the highest percentage of positive reviews

Source: www.bestcompany.com Top 100 Solar Providers Reviews (1,596 reviews), Sample size is the total number of reviews, net total shows the net of positive and negative reviews (% of sample size), general includes both positive and negative reviews on pricing and other general issues. Percentages are based on the net of positive and negative and therefore do not add up to 100%.

ENOVATION PARTNERS - PRIVILEGED AND CONFIDENTIAL

2 Conduct of PV providers

Misleading, incomplete and outright untrue claims are common during the discovery phase

"Mystery shopping"

Approach	Step	Quote
<p>2 Mystery shoppers</p> <p>11 PV providers</p>  <p>Mystery shoppers presented themselves as residential customers with interest in solar in CA, IL, FL, MA, MD, and VA</p>	<p>Discovery/ Site visit</p> <p>Contacting</p> <p>Installation</p> <p>Billing</p> <p>Maintenance</p> <p>Optimization</p> <p>End of life/ Contract</p>	<p>"Once you sign a contract, we'll come out and take a look at your roof"</p> <p>"Don't worry about a contract a consultant will explain everything to you"</p> <p>"We'll install everything in one day, and you'll be ready to go"</p> <p>"You will never receive another utility bill again" "You can offset 50-100% of your electric bill" "You will always pay lower than utility rate"</p> <p>"There is no maintenance, you just sit back and enjoy the lower bill"</p> <p>"You should get an oversized system if you plan to get a Tesla"</p> <p>"If you move, it'll increase the value of your house"</p>

vivint.
DIVIDEND

SUNGEVITY

sunrun

PETERSEN DEAN
Roofing & Solar

Semper Solaris

SOLAR SERVICE

AMERICAN GENTRY
SOLAR

SOLAR DAY

SolarCity

Direct Energy Solar

Observations

- Although providers seem to be making headways in improving their contracts, some are still dense and complex
- Customer are often required to sign only the front page
- PPA contracts generally the hardest to understand, and require the most commitment from the customer (complexity of financial obligations, time commitment, contract termination clauses, and warranty)
- Customers are often required to waive their rights to take complaints to court (mandatory arbitration)
- Rates are often higher than 3rd party supplier or even utility rates, especially later in contract life

Contract Example

[illegible]

Who would call first for billing questions or price of solar power

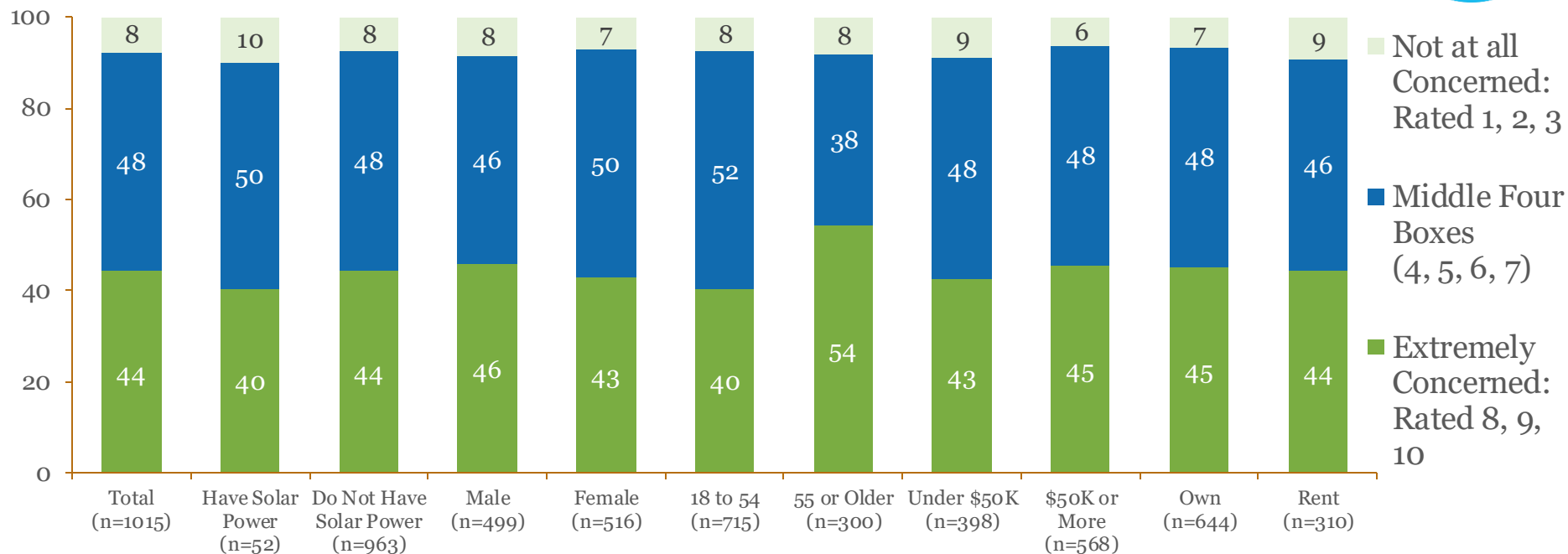


		Have Solar Power		Gender		Age		HH Income		Home Ownership	
	Total	Yes	No	Male	Female	18-54	55+	Under \$50K	Over \$50K	Own	Rent
Total Respondents	(1015)	(52)	(963)	(499)	(516)	(715)	(300)	(398)	(568)	(644)	(310)
	%	%	%	%	%	%	%	%	%	%	%
Local electric utility	29	22	29	29	29	29	29	26	32	29	29
Solar leasing company	26	36	26	26	27	25	30	30	23	24	30
Solar installation company	29	26	29	28	30	28	31	28	29	31	27
Non-profit agency focused on renewable energy	7	6	7	8	5	7	6	6	7	7	6
Consumer advocate	4	5	4	5	3	5	2	3	4	5	3
Friend or family	4	4	4	3	5	5	1	4	4	3	5
Other	0	2	0	1	0	0	1	1	0	1	0
Don't know	0	-	0	-	0	0	-	0	0	0	-

Base: Total Respondents

Q. B10: If you had billing questions connected to solar power or the price of solar power, who would you call first?

Concern that solar leasing company will remain in business for life of rooftop leasing contract (or beyond)



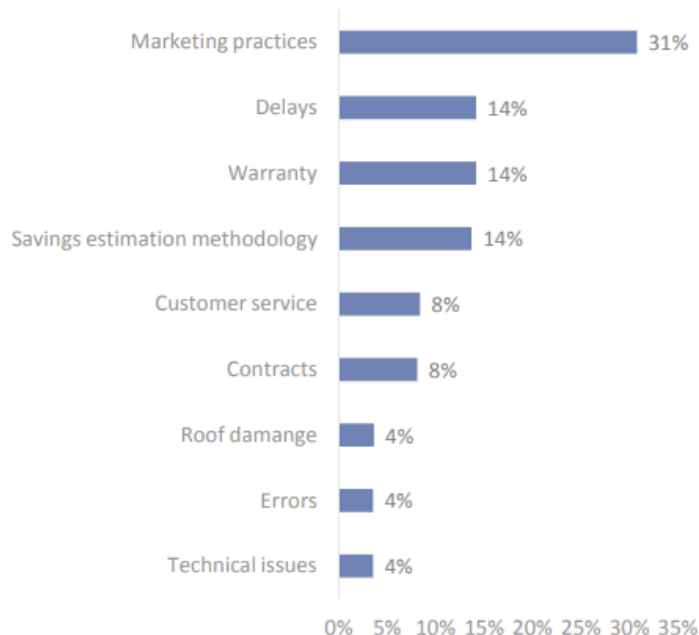
Base: Total Respondents

Q. B15: Most solar customers enter into a contract with a leasing company to lease the customer's rooftop. The leases are typically for 15 years or more. How concerned are you that your solar leasing company will remain in business for the life of your contract / lease or beyond?



Marketing practices is by far the largest area of improvement for PV providers

Impact on customer satisfaction (share of negative reviews)



Largest improvement areas

- Marketing practices
 - Eliminating high pressure sales techniques
 - Ensuring honesty in marketing materials
 - Guaranteeing completeness of information communicated to the customers
- Delays
 - Working closely with utility before and during installation
 - Anticipating and proactively managing delays in installation and repair
- Warranty
 - Communicating clearly about what warranty does and does not cover (and for how long)
 - Building in more comprehensive warranty in the package offered
- Savings estimation methodology
 - Establishing a sound and accurate savings estimation methodology

Source: : www.bestcompany.com Top 100 Solar Providers Reviews

Research refresh

Recreate this work from 6 years ago with a similar process:

- Mystery shoppers
- Review customer complaints
 - BBB
 - Google
 - Yelp
 - FTC
- Analysis of investigations by states or watchdogs
- Customer interviews
- Review customer contracts
- Customer surveys and interviews



Takeaways



Takeaways



- Utilities can have a significant impact by acting as a filter for solar installers that don't meet certain ethical standards
- Utilities should provide education to customers about the ways solar can or cannot benefit them
- Trade ally networks can be an important tool to ensure there are quality companies operating in a utility's service territory
- Revisiting previous work around sales practices could provide insight into how best to combat these practices

Questions?



Next steps



- Receive a copy and recording of this presentation in the next 24 hours
- Recreate work from past years
- Upcoming:
 - Quarterly regulatory review from Aaron Lunt
 - Market assessment from Judith Schwartz
 - Utility case study from FirstEnergy

Contact



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