Colorado Springs Utilities

It's how we're all connected

Solar Survey Results

2026

Agenda

1. Insights
2. Demographics
3. Survey Comparisons
4. Solar Survey Results
5. Non-Solar Survey Results
6. Verbatims

Key Insights

Rate Design Concepts Are Not Well Understood

What customers are telling us

- Customers do not understand what a **demand charge** is or how it is calculated.
- What goes into the utility's **"cost to serve"** model is unclear to most customers.

Why this matters

- When customers don't understand how rates work, they are less likely to view changes as fair or justified.
- Lack of understanding increases skepticism and resistance, especially when bills increase.

Trust Gap Exists Around The "Cost Shift" Narrative

What customers are telling us

- Solar customers do not believe a **cost shift** exists and perceive it as something created by the utility.
- Non-solar customers are largely **unaware of prior net metering discussions**.

Why this matters

- There is a disconnect between utility rationale and customer perception.
- Without shared understanding, rate changes risk being seen as credibility issues rather than policy decisions.

Key Insights

Customers Are Open To Market-Based Pricing – If It Is Explained

What customers are telling us

- There is general agreement with a rate structure that uses **market-based prices** for credits and billing.
- Non-solar customers are not willing to support residential solar through rates.

Why this matters

- Customers are not inherently opposed to change.
- Acceptance increases when pricing logic feels transparent, objective, and grounded in external market forces.

Solar Adoption Is Financially Constrained For Many Customers

What customers are telling us

- **40% of solar customers** still have 10+ years remaining on their system loans.
- Only **15% have fully paid off** their systems.
- The upfront and ongoing **cost of solar is a major pain point** for both current and prospective adopters.

Why this matters

- Rate changes may impact customers who are already financially committed and have limited flexibility.
- Financial pressure increases sensitivity to bill increases.

Key Insights

Rate Changes Will Create Affordability Challenges For A Subset Of Customers

What customers are telling us

- Solar bill increases will reduce **disposable household income** for most customers.
- An estimated **6% of customers may struggle to pay bills on time**.

Why this matters

- Even modest bill increases can have outsized impacts on vulnerable households.
- This raises equity and customer support considerations alongside rate design decisions.

Solar Is Meeting Expectations – But Savings Drive Motivation

What customers are telling us

- **74% of solar customers** say their systems meet or exceed expectations.
- The primary motivation for installing solar is **bill savings**, followed by environmental benefits.

Why this matters

- Customers evaluate solar success primarily through a financial lens.
- Changes that alter perceived savings directly affect satisfaction and trust.

Sampling Considerations

Quantitative

Random sampling methodology used

- Residential results align with customer population demographics
- Confidence level = 95%

Qualitative

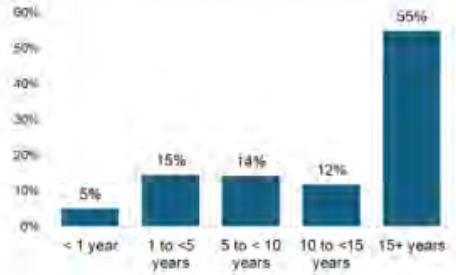
Random sampling methodology not used

- Open survey results do not align with customer population demographics
- Open respondents self-selected
- Some IP addresses were recorded taking both survey paths

Solar Rates Community Outreach

Solar Customers	Non-Solar Customers	Open – Solar Customers	Open – Non-Solar Customers
n=827	n=453	n=275	n=107
Margin of Error ± 3.18%	Margin of Error ± 4.6%	Voluntary Response Bias	Voluntary Response Bias

Demographics

	RESPONDENT DEMOGRAPHICS SOLAR CUSTOMERS n=827		RESPONDENT DEMOGRAPHICS NON-SOLAR CUSTOMERS n=453
HOME OWNERSHIP	Homeowner 99% / Renter <1%	Renters under represented	Homeowner 68% / Renter 31%
INCOME	Under $50,000 7% $50,000 to $99,999 23% $100,000 to <$150,000 18% $150,000+ 30% Prefer not to answer 22%	Under $50K under represented $150K+ over represented	Under $50,000 17% $50,000 to $99,999 27% $100,000 to <$150,000 19% $150,000+ 19% Prefer not to answer 19%
GENERATION	1947 to 1965 41% 1966 to 1981 30% 1982 to 1996 21% 1997 and later 1%	Baby Boomer over represented, Millennial and Gen Z under represented	1947 to 1965 28% 1966 to 1981 30% 1982 to 1996 31% 1997 and later 8%
GENDER	Male 66% / Female 32%	Females under represented	Male 49% / Female 51%
LENGTH OF TIME AS A CUSTOMER		New customers under represented	

RESPONDENT DEMOGRAPHICS
OPEN SURVEY
SOLAR CUSTOMERS
n=275

RESPONDENT DEMOGRAPHICS
OPEN SURVEY
NON-SOLAR CUSTOMERS
n=107

HOME OWNERSHIP

Homeowner	Renter		Homeowner	Renter
99%	<1%	Renters under represented	91%	8%

INCOME

Under $50,000	7%		Under $50,000	7%
$50,000 to $99,999	24%	Under $50K under represented	$50,000 to $99,999	23%
$100,000 to <$150,000	19%		$100,000 to <$150,000	18%
$150,000+	33%	$150K+ over represented	$150,000+	30%
Prefer not to answer	21%		Prefer not to answer	22%

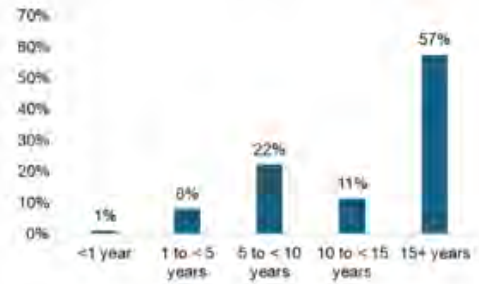
GENERATION

1947 to 1965	40%	Baby Boomer over represented	1947 to 1965	28%
1966 to 1981	31%		1966 to 1981	30%
1982 to 1996	19%	Millennial and Gen Z under represented	1982 to 1996	27%
1997 and later	%		1997 and later	6%

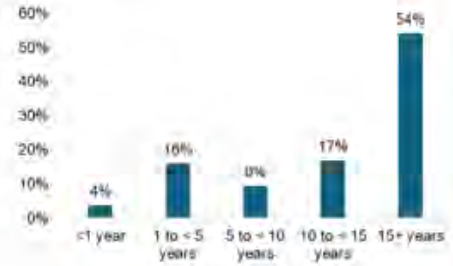
GENDER

Male	Female		Male	Female
67%	32%	Females under represented	65%	34%

LENGTH OF TIME AS A CUSTOMER

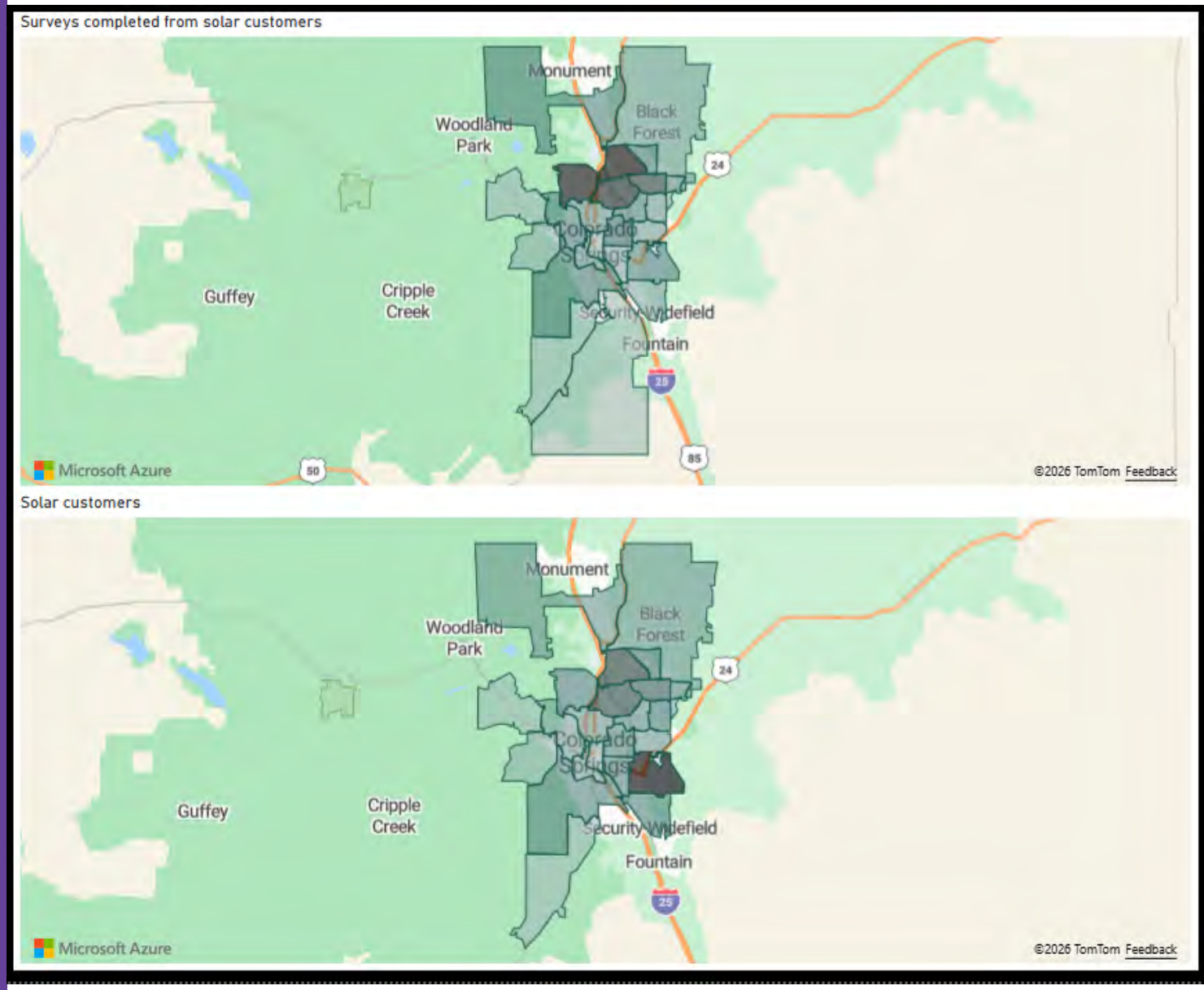


New customers under represented



Completion Rate Comparison By Zip

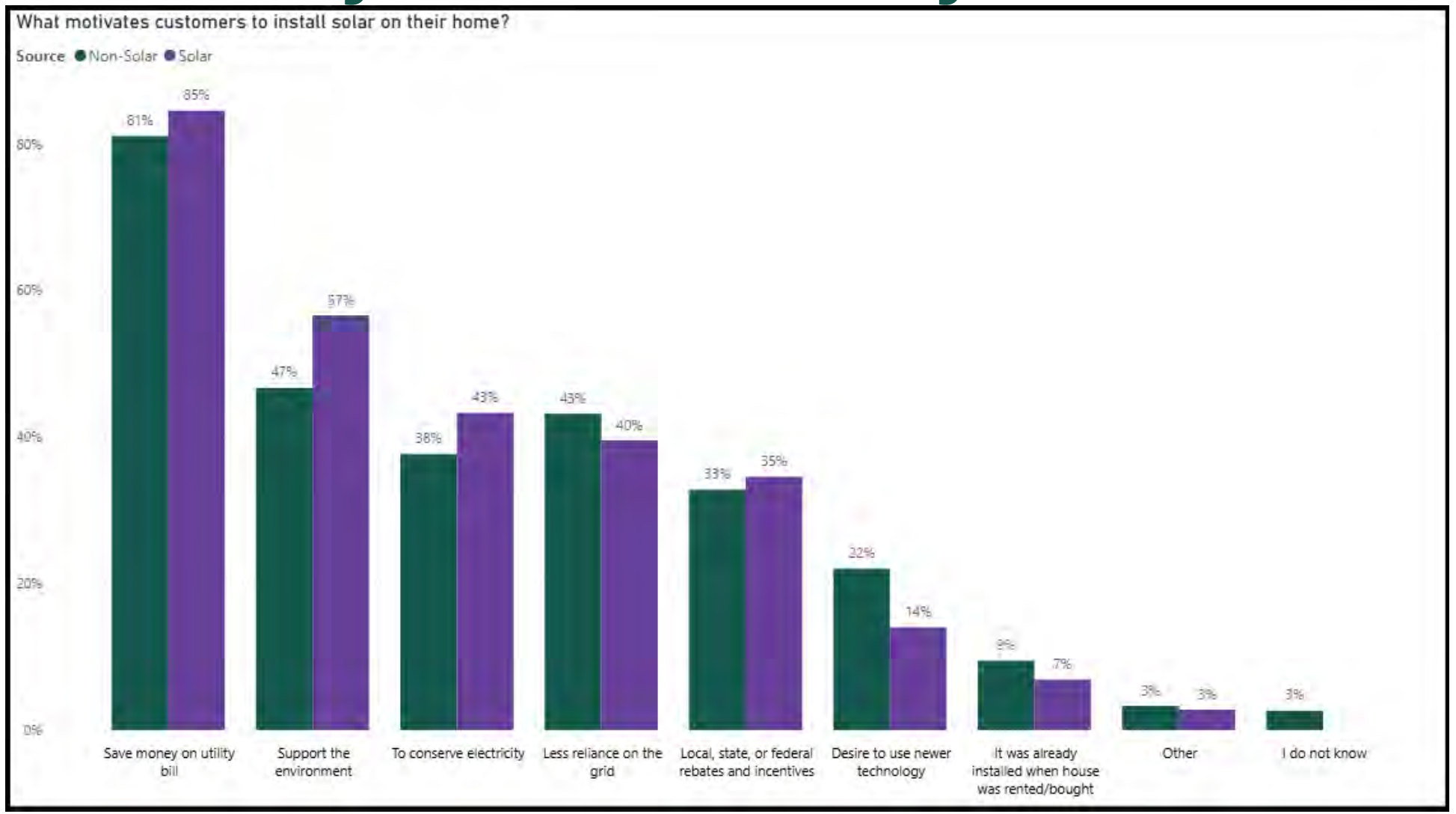
- Zip codes with the highest completion rate:
  - 80919 (510 customers/ 31% completion)
  - 80903 (140 customers/ 29% completion)
  - 80904 (243 customers/ 29% completion)
- Zip codes with the lowest completion rate:
  - 80916* (1073 customers/ 6% completion)
  - 80911 (457 customers/ 6% completion)
  - 80910 (445 customers/ 9% completion)



Source: 2026 Solar Survey and internal customer data (n=827)

Survey Comparison

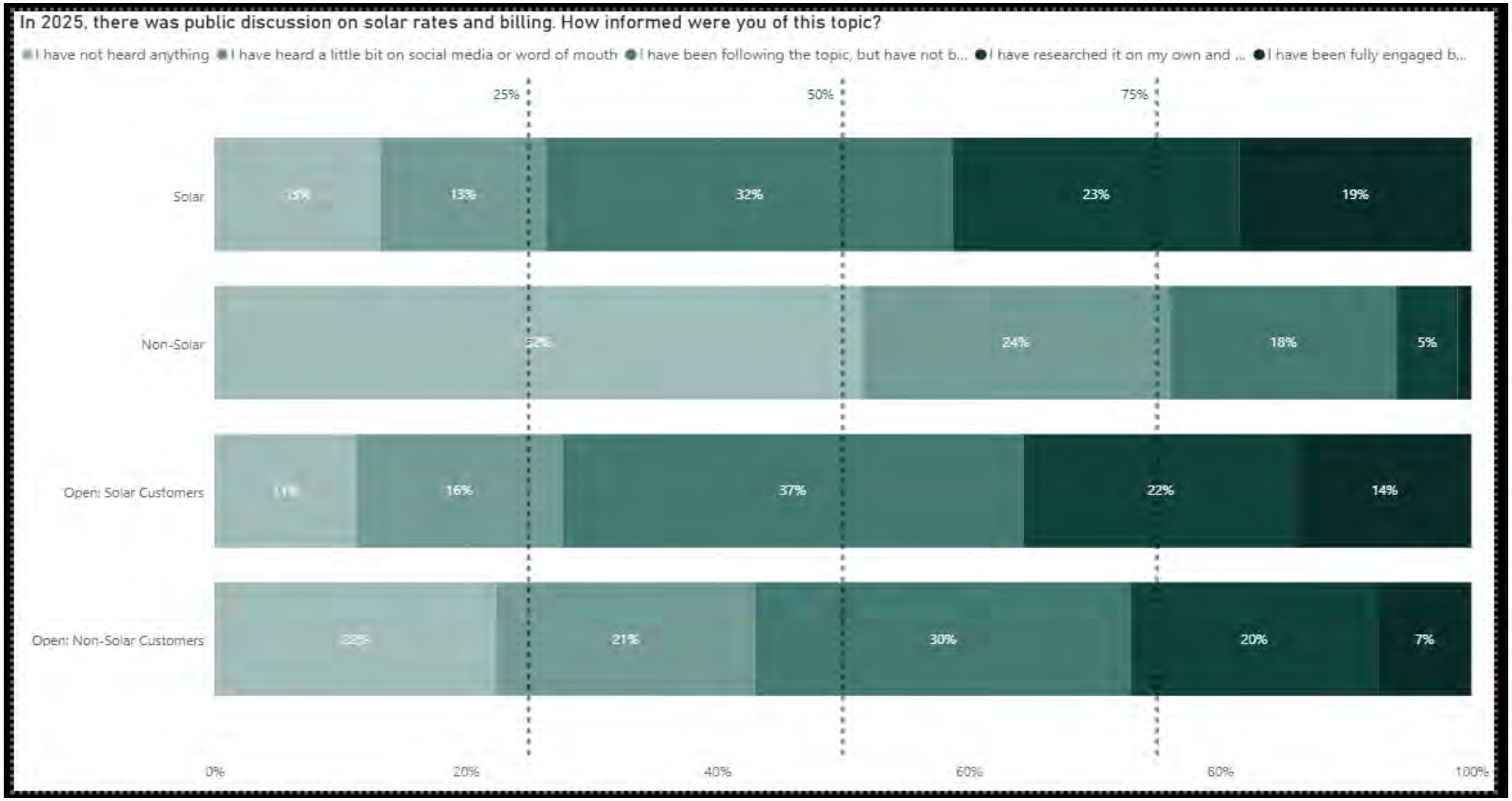
85% Of Solar Customers Bought Solar To Save Money On Their Utility Bill



Source: 2026 Solar Survey (n=827) and 2026 Non-Solar Survey(n=453)

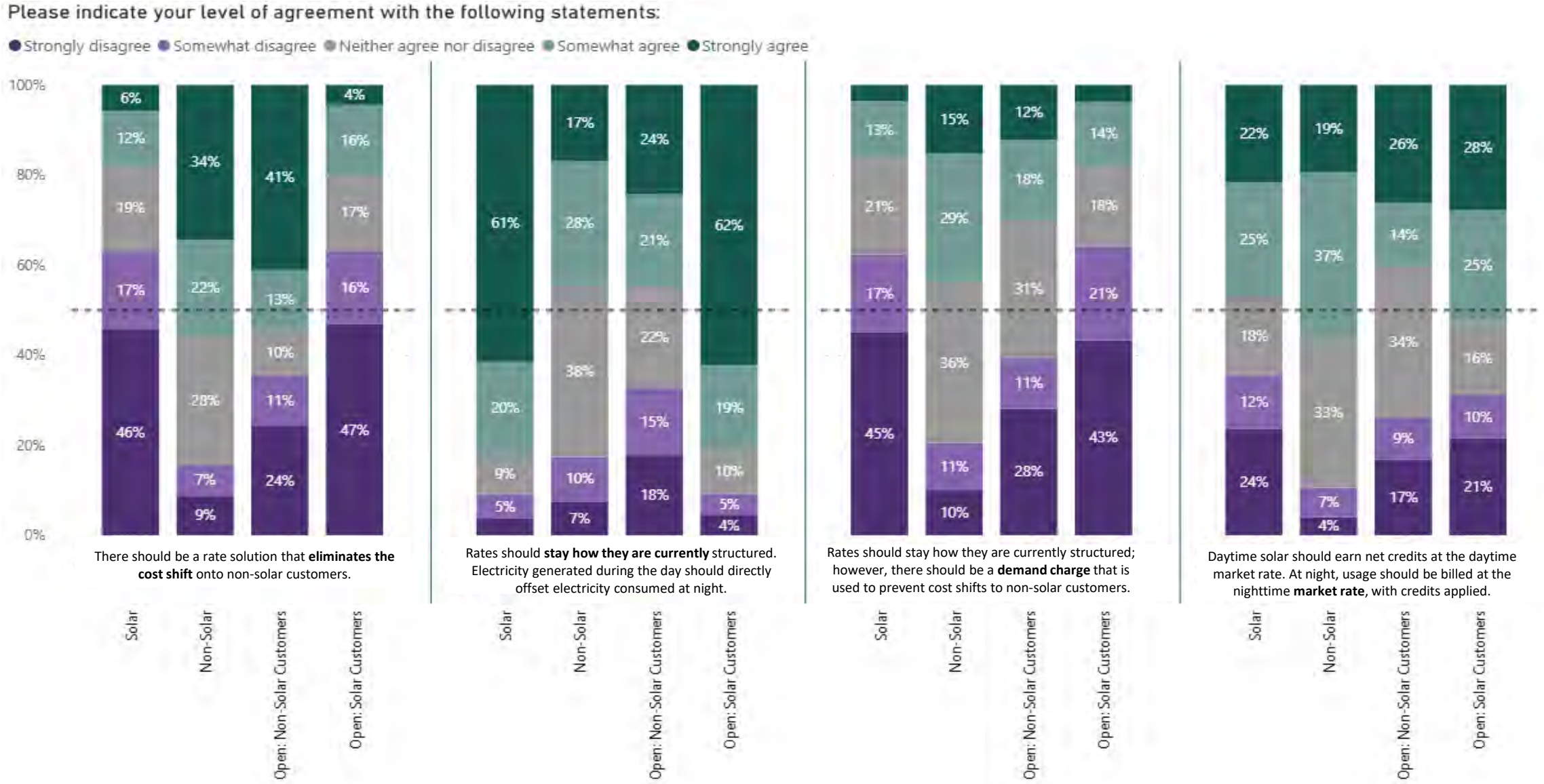
Original questions: Solar (What motivated you to install solar on your home? Please select all that apply.)
Non-Solar (What do you believe motivates others to install solar on their home? Please select all that apply.)

75% Of Solar Customers Have Been Engaged And Following The 2025 Discussion Of Solar Rates And Billing



Sources: 2026 Solar Survey (n=827), 2026 Non-Solar Survey(n=453), and 2026 Open Solar and Non-Solar Survey (n=382)

Agreement Of Rate Statements – All Segments



There should be a rate solution that **eliminates the cost shift** onto non-solar customers.

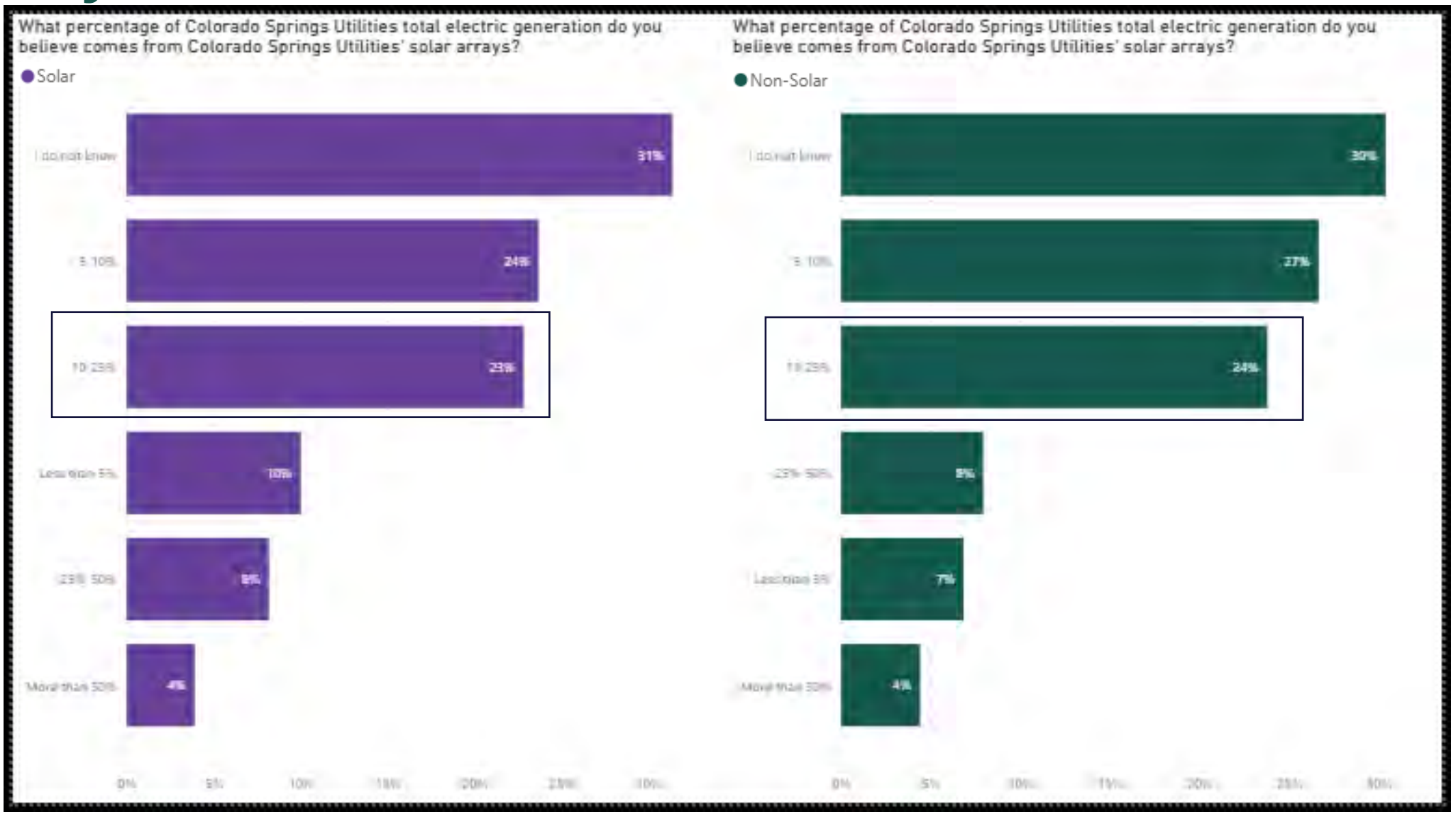
Rates should **stay how they are currently** structured. Electricity generated during the day should directly offset electricity consumed at night.

Rates should stay how they are currently structured; however, there should be a **demand charge** that is used to prevent cost shifts to non-solar customers.

Daytime solar should earn net credits at the daytime market rate. At night, usage should be billed at the nighttime **market rate**, with credits applied.

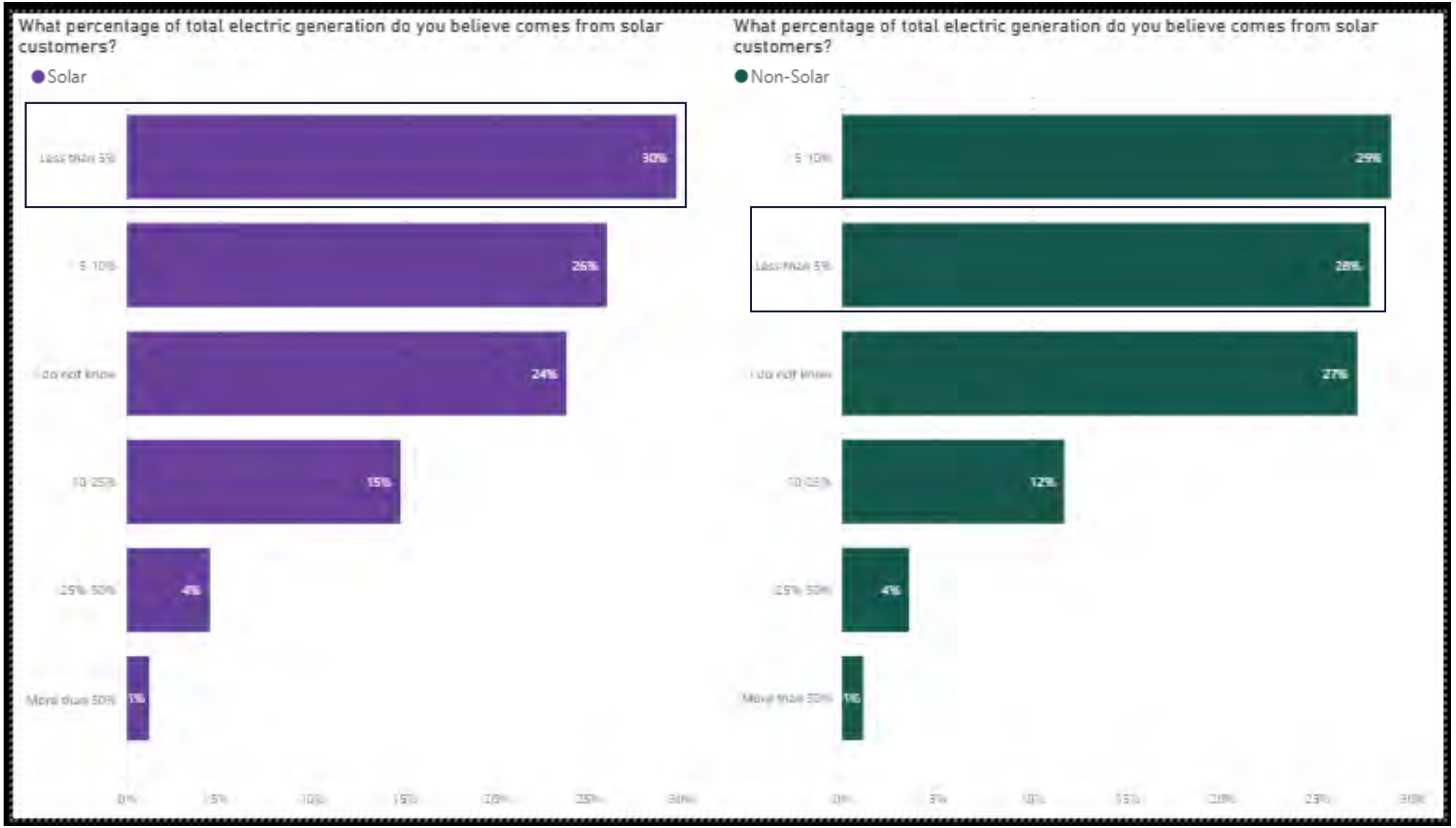
Sources: 2026 Solar Survey (n=827), 2026 Non-Solar Survey(n=453), and 2026 Open Solar and Non-Solar Survey (n=382)

Comparison Of Customers' Perceptions Of Solar Arrays' Share Of Total Power Generation



Sources: 2026 Solar Survey (n=827)
and 2026 Non-Solar Survey(n=453)

Comparison Of Customers' Perceptions Of Rooftop Solar's Share Of Total Power Generation



Sources: 2026 Solar Survey (n=827)
and 2026 Non-Solar Survey(n=453)

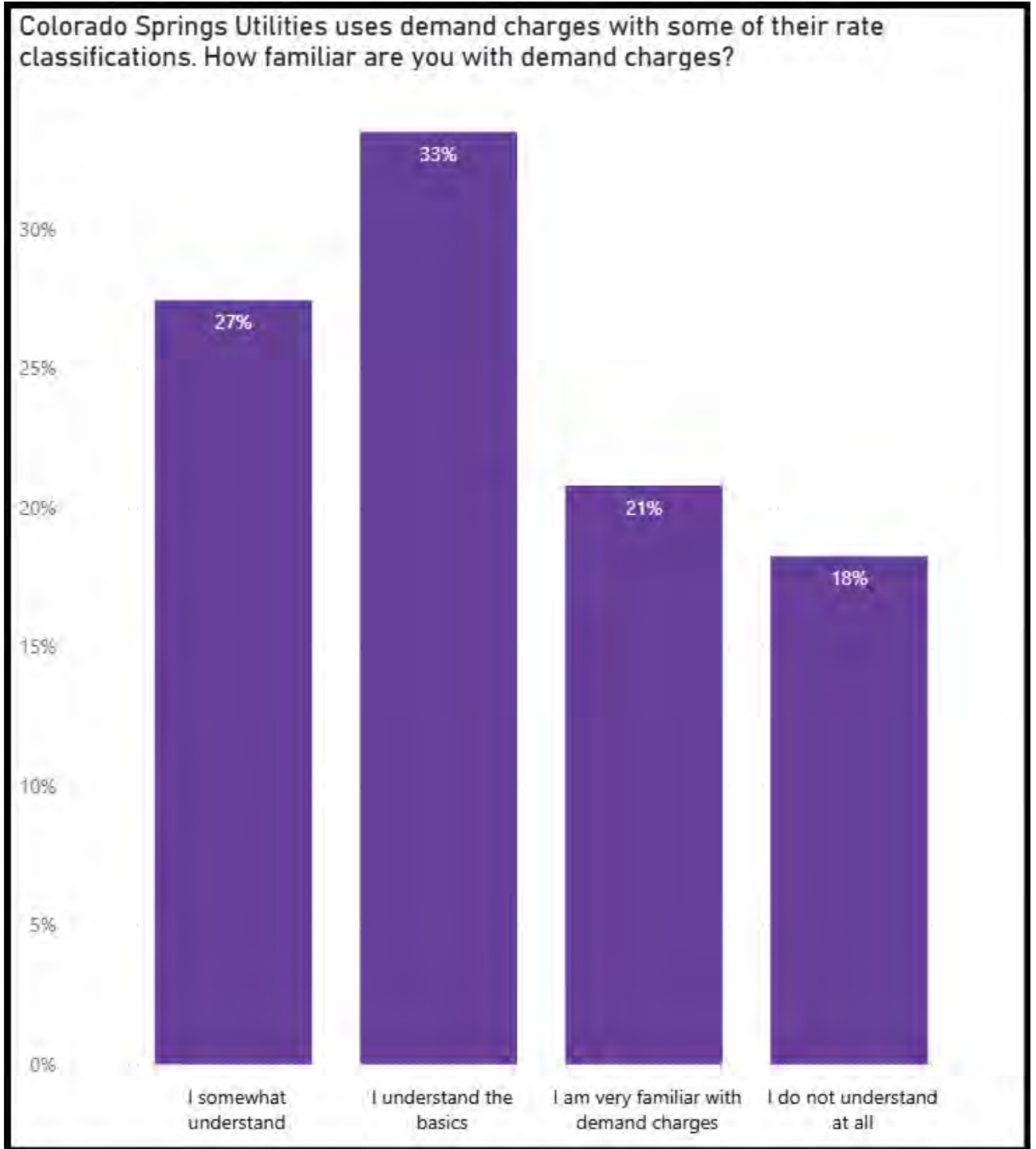
Solar Survey Results

Majority Believe They Understand Demand Charges

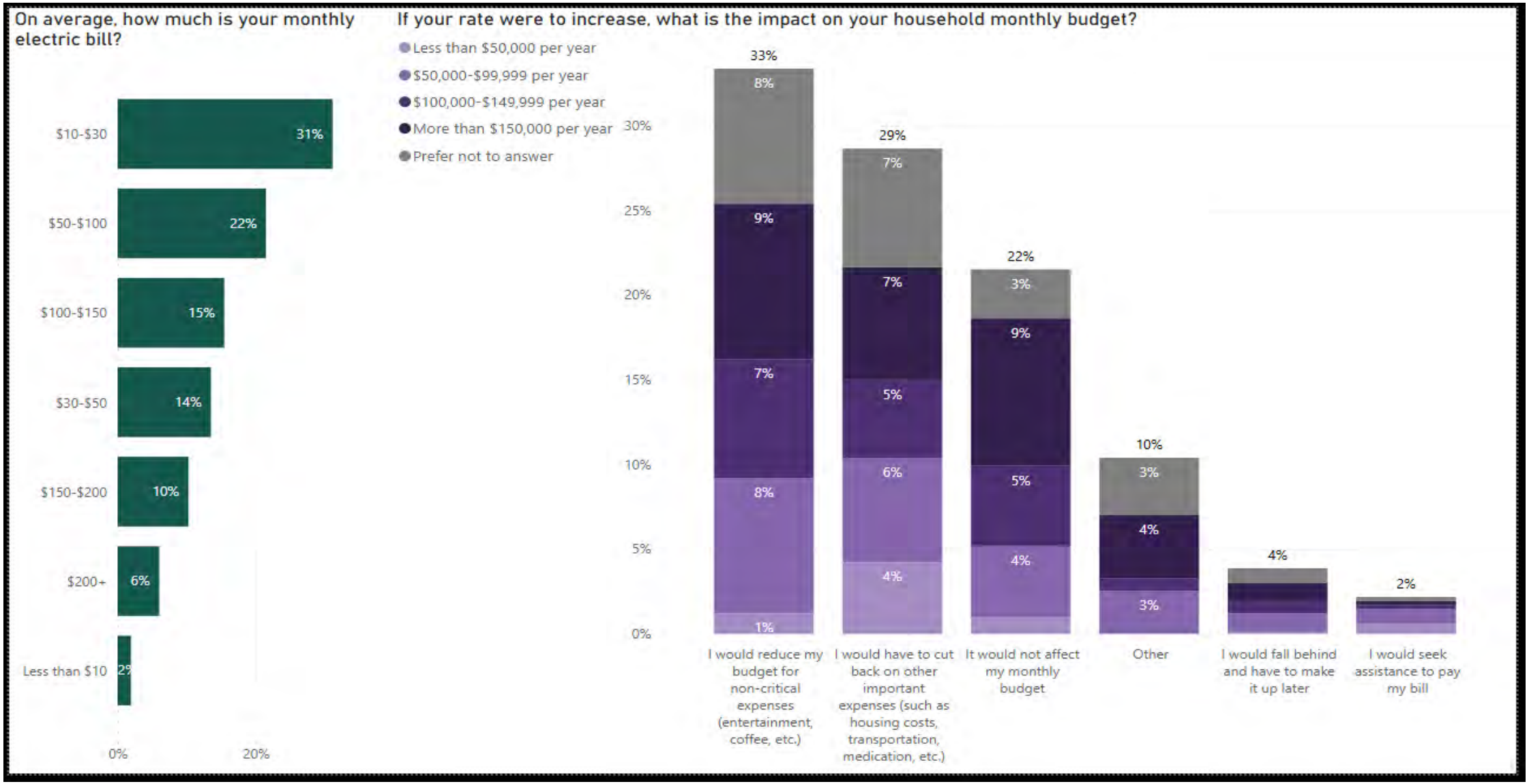
- Customers may feel confident in their understanding, yet confusion often persists.
  - The ones who understand it best are the closest to getting it right, though still not fully accurate.

“During specific time periods M-F 5pm-9pm a higher rate is charged.”
–A verbatim from a customer who selected “I am very familiar with demand charges”

Source: 2026 Solar Survey (n=827)

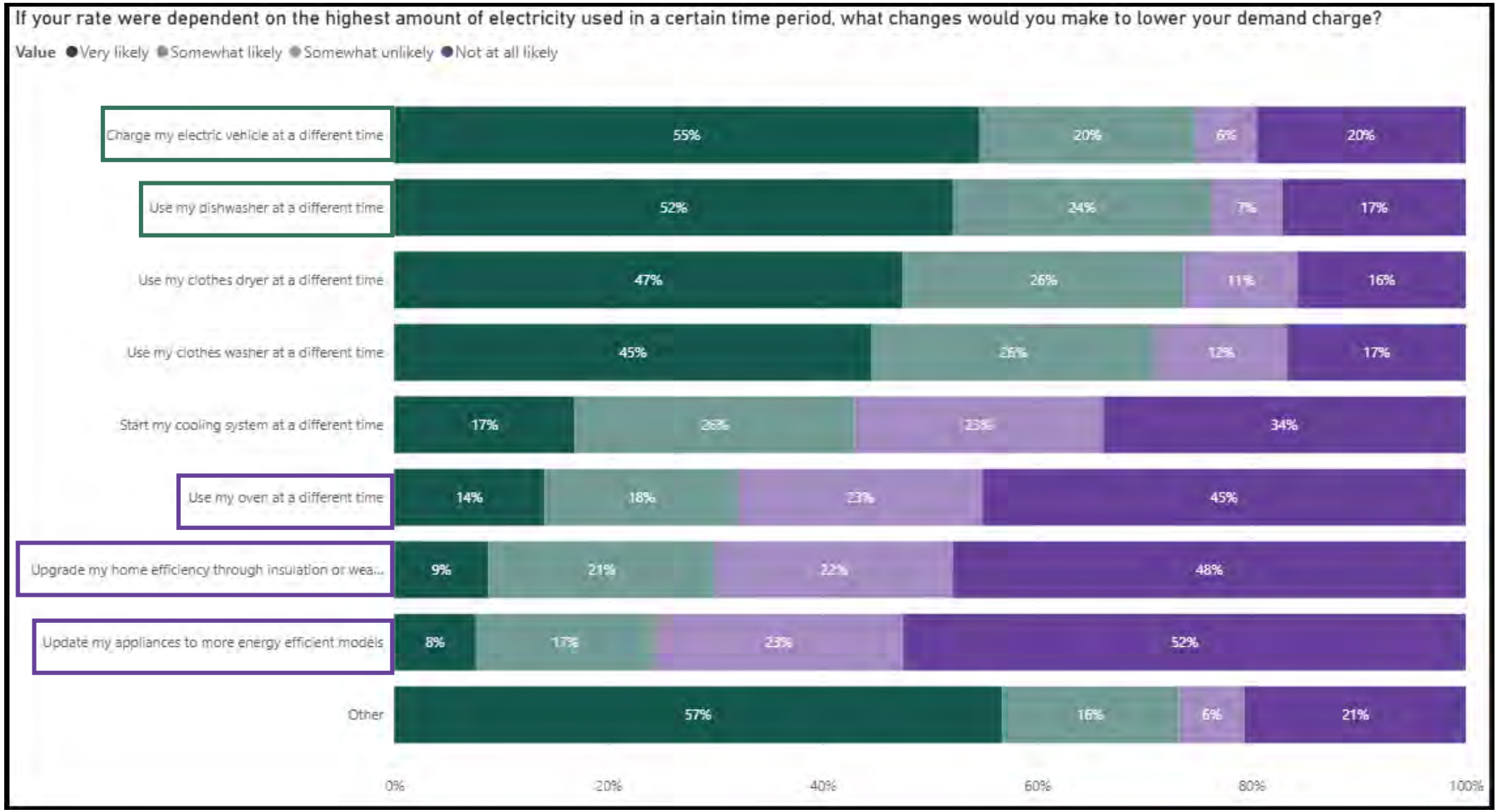


About One-Third Of Our Solar Customers Would Need To Cut Discretionary Spending, And Another 30% Would Need To Reduce Essential Expenses



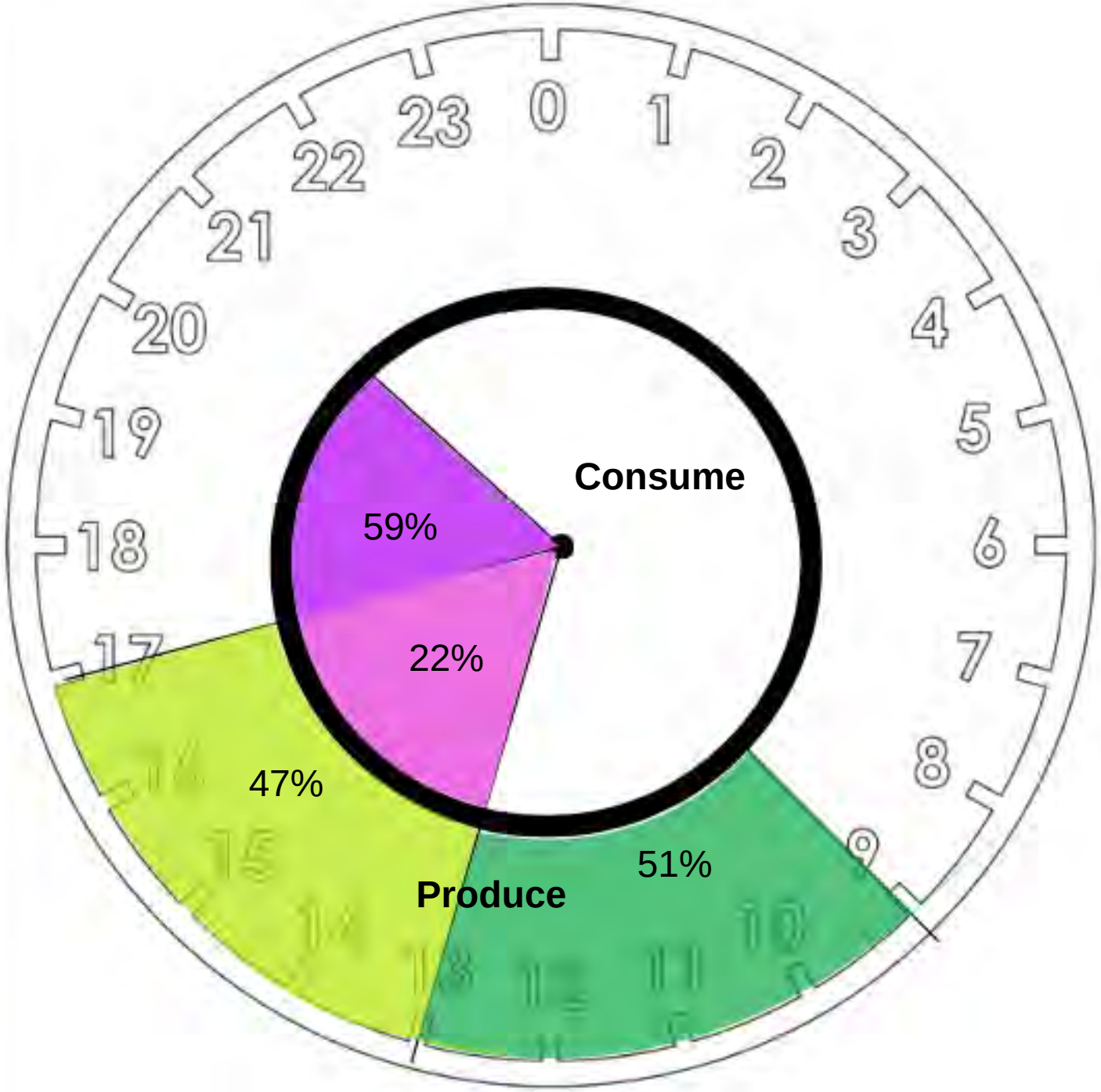
Source: 2026 Solar Survey (n=827)

Solar Customers Are Willing To Change



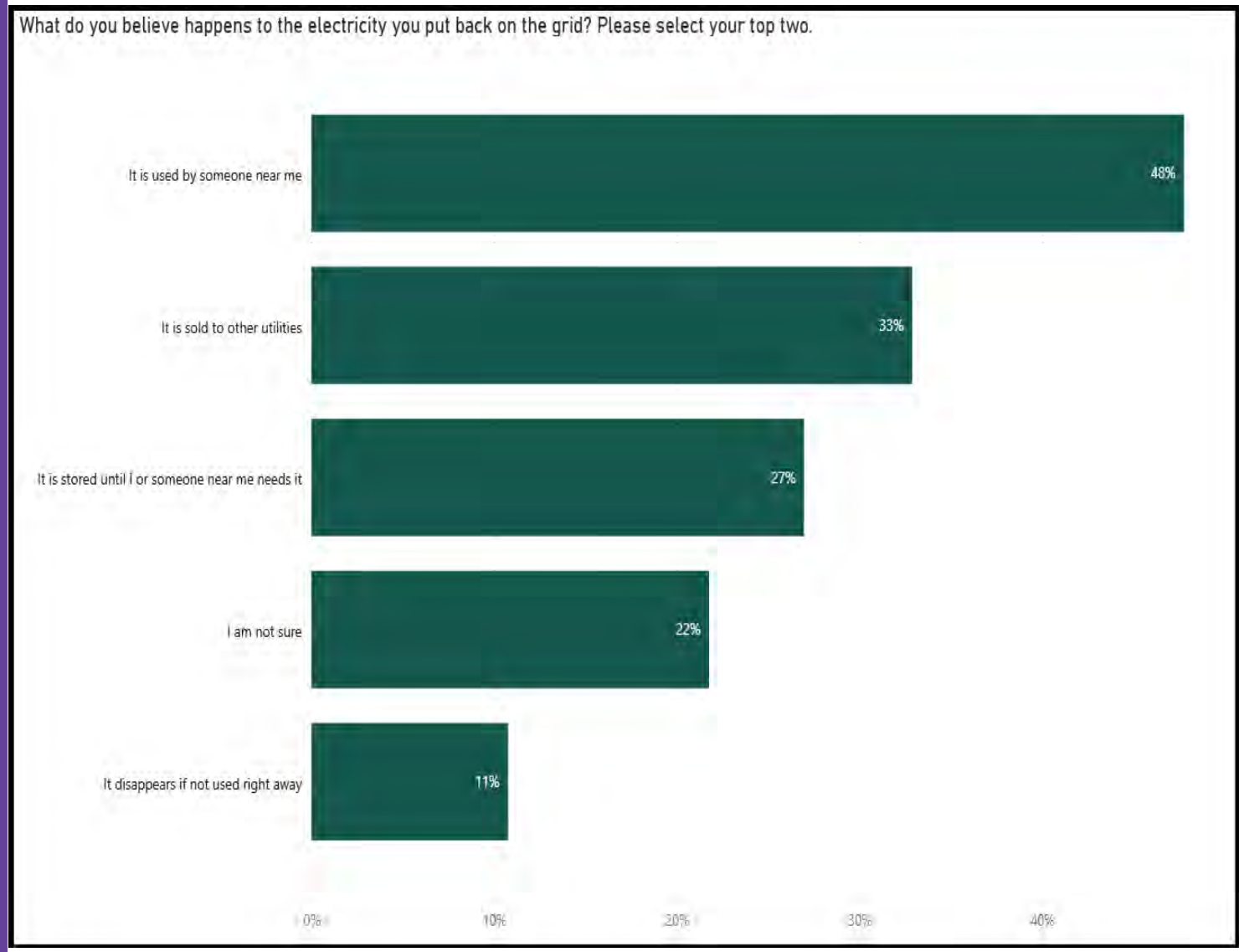
Source: 2026 Solar Survey
(n=827)

Solar Customers Understand They Produce The Most Energy From 9:00am-1:00pm And Consume The Most From 5:00pm-9:00pm



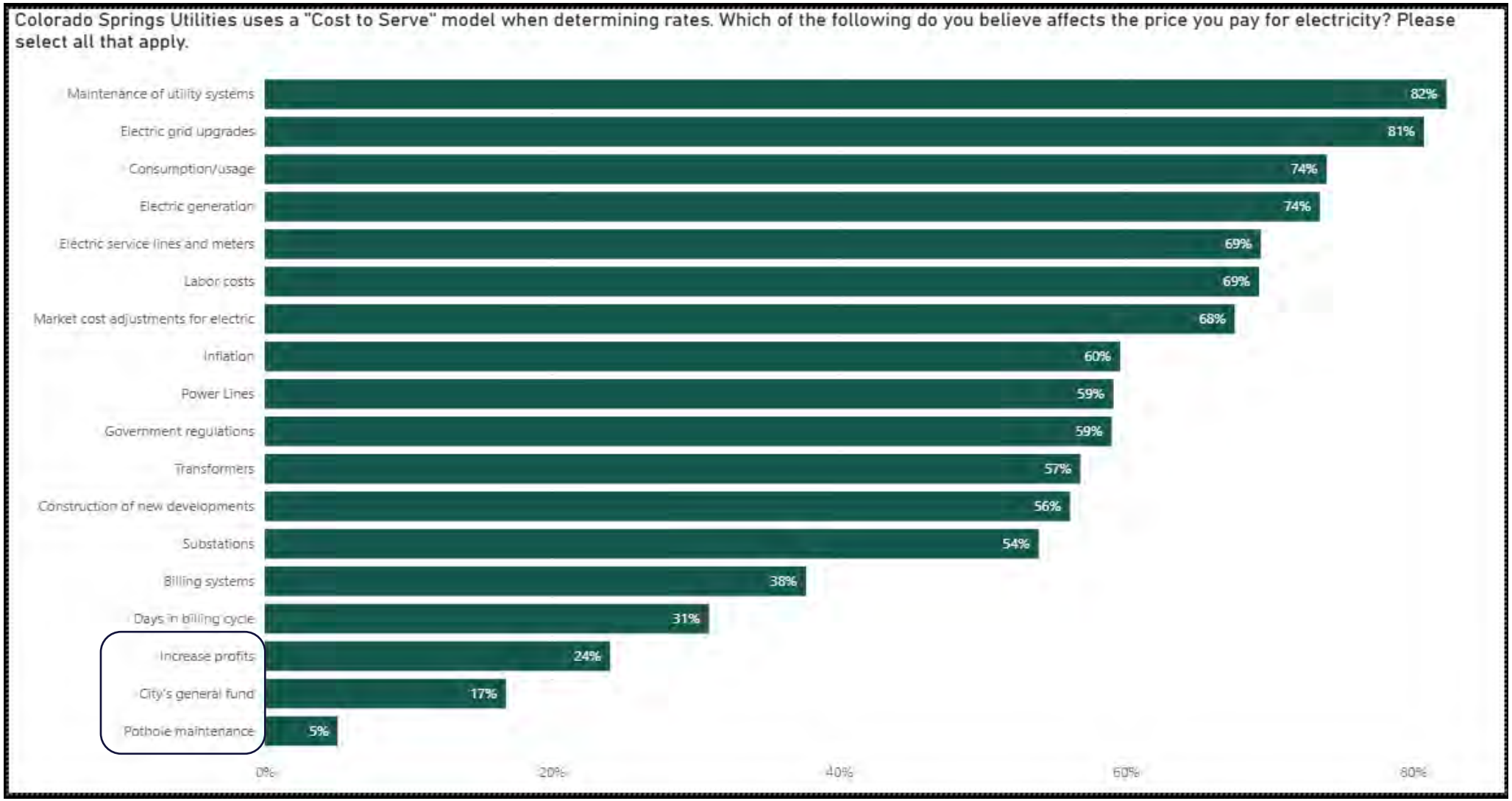
Source: 2026 Solar Survey (n=827)

48% Of Solar Customers Are Aware That The Electricity Put Back On The Grid Is Used By Someone Near Them



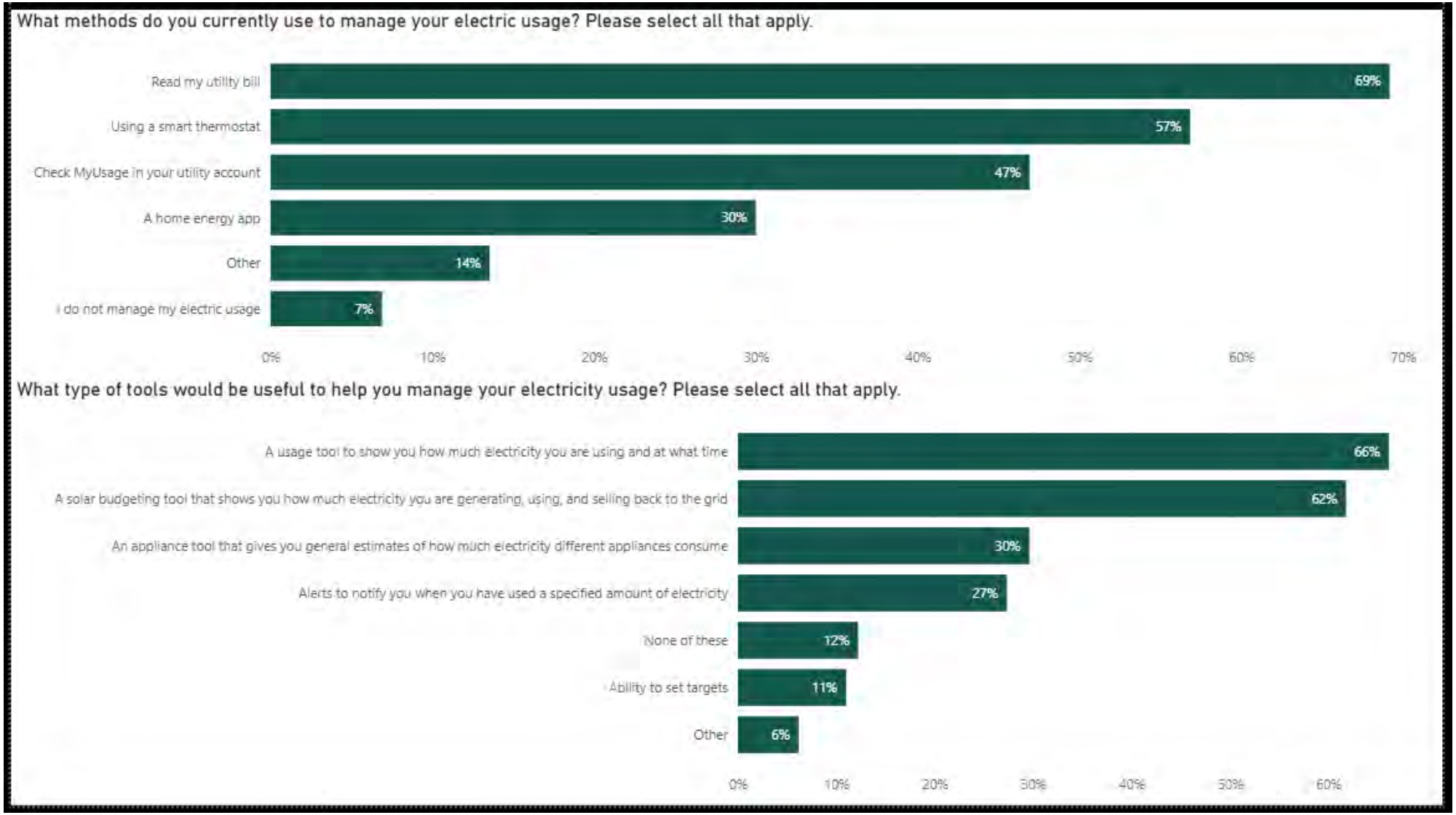
Source: 2026 Solar Survey (n=827)

Not All The Inputs To Rates Are Understood



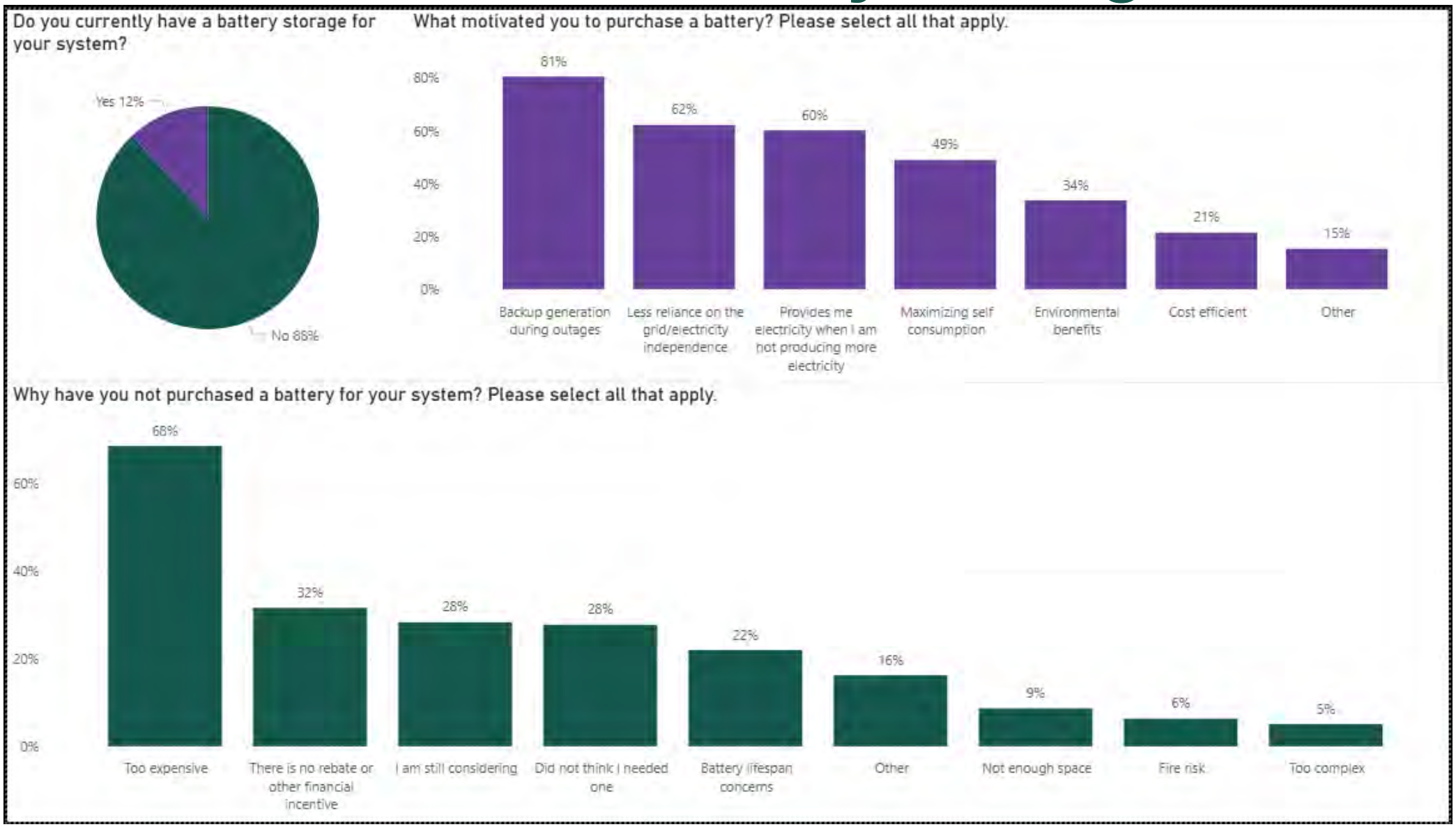
Source: 2026 Solar Survey (n=827)

The Main Method To Manage Their Utility Is Still Their Bill



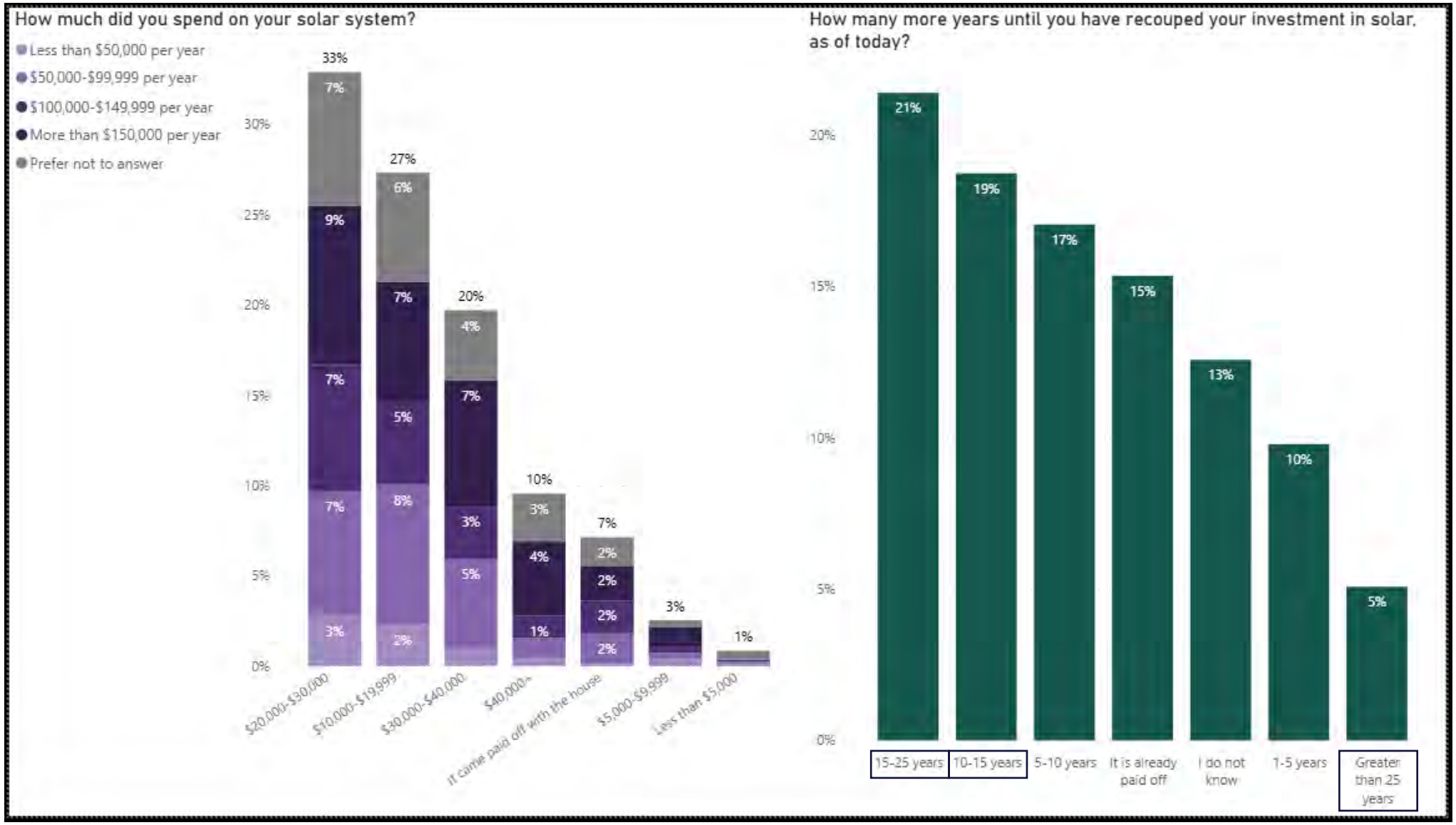
Source: 2026 Solar Survey
(n=827)

Most Do Not Have Battery Storage



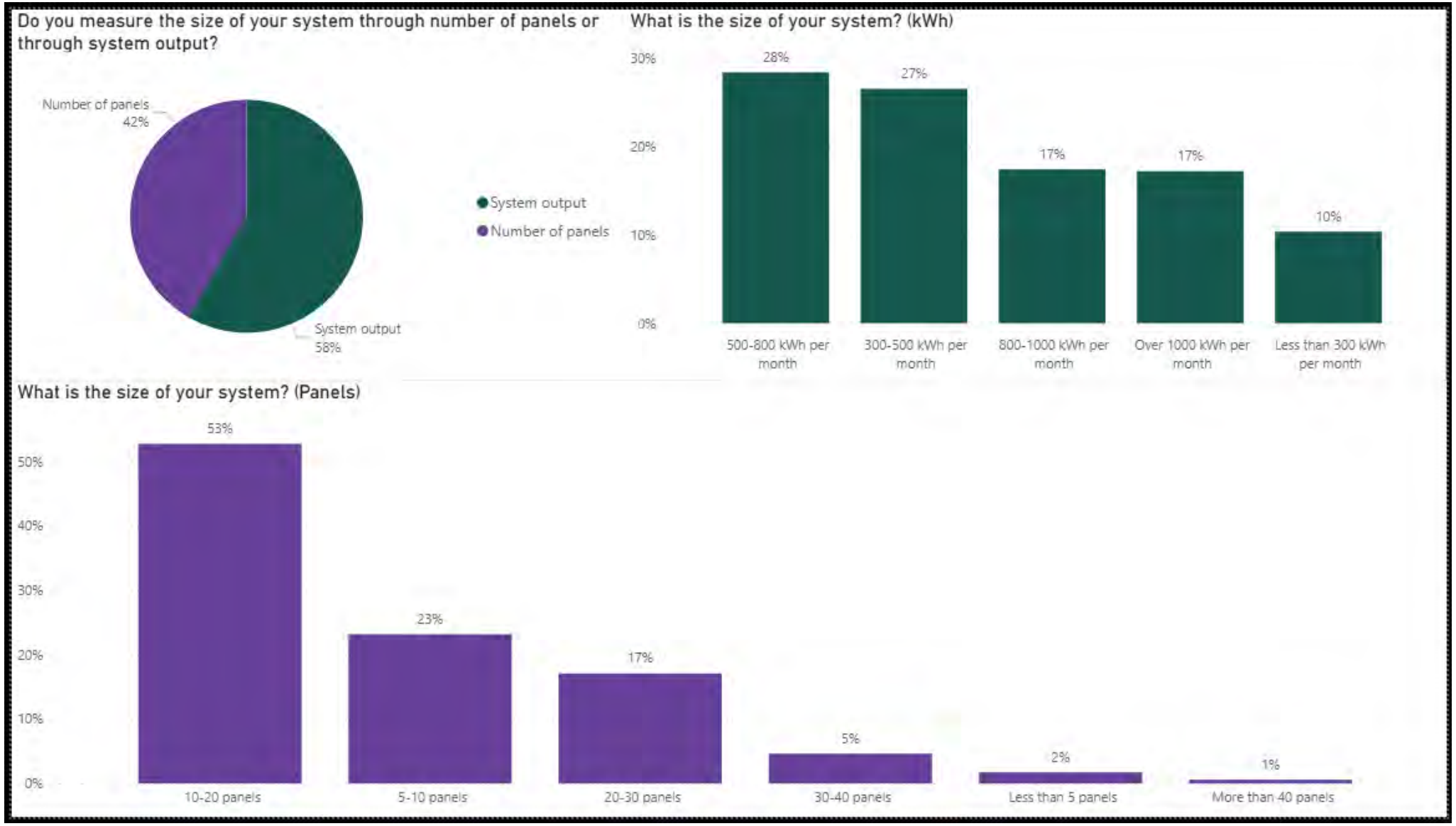
Source: 2026 Solar Survey (n=827)

About Half Of Our Solar Customers Have At Least 10 Years Until They Pay Off Their Solar System



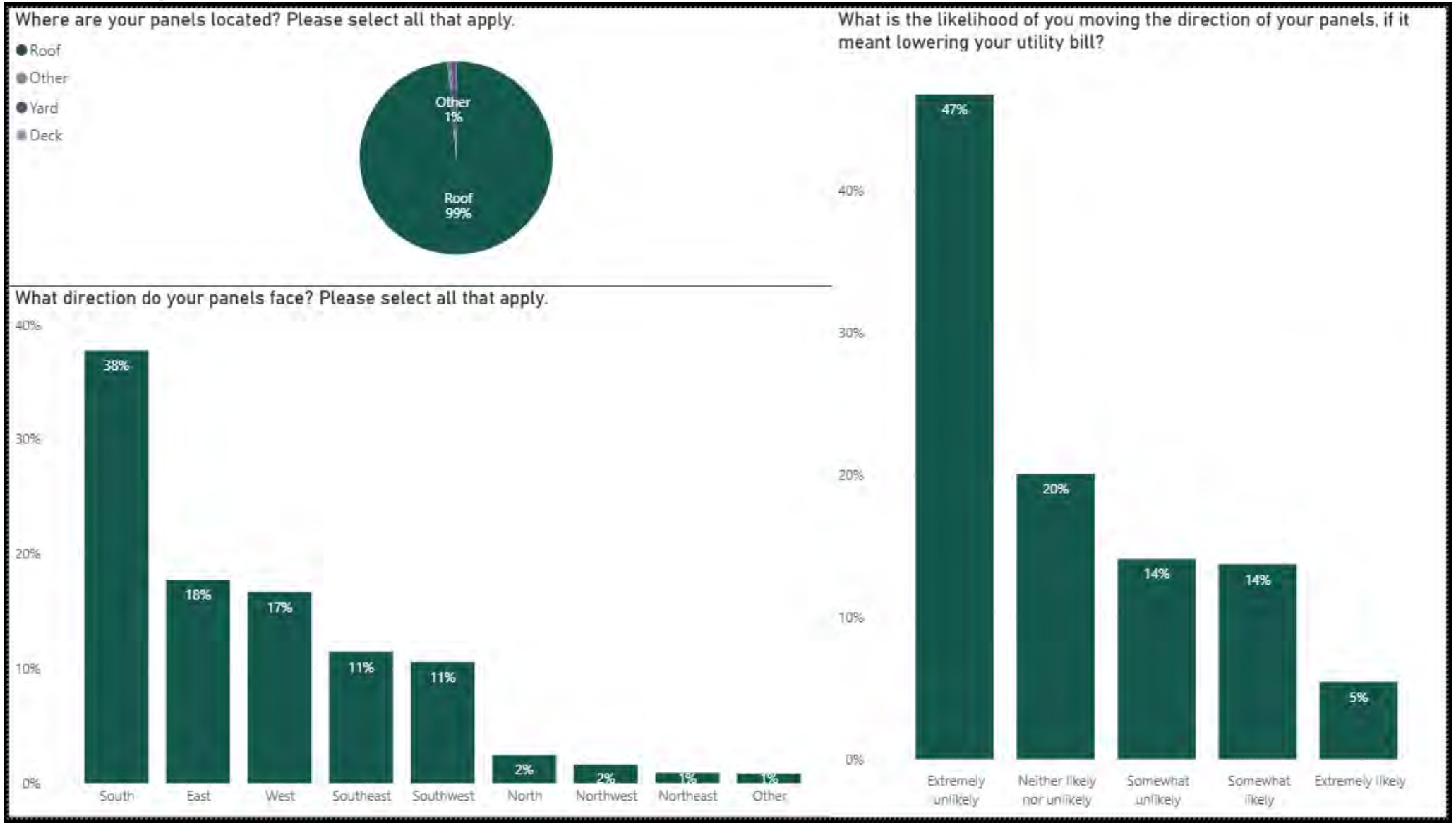
Source: 2026 Solar Survey (n=827)

Majority Of Systems Are 10-20 Panels Or 500-800 kWh



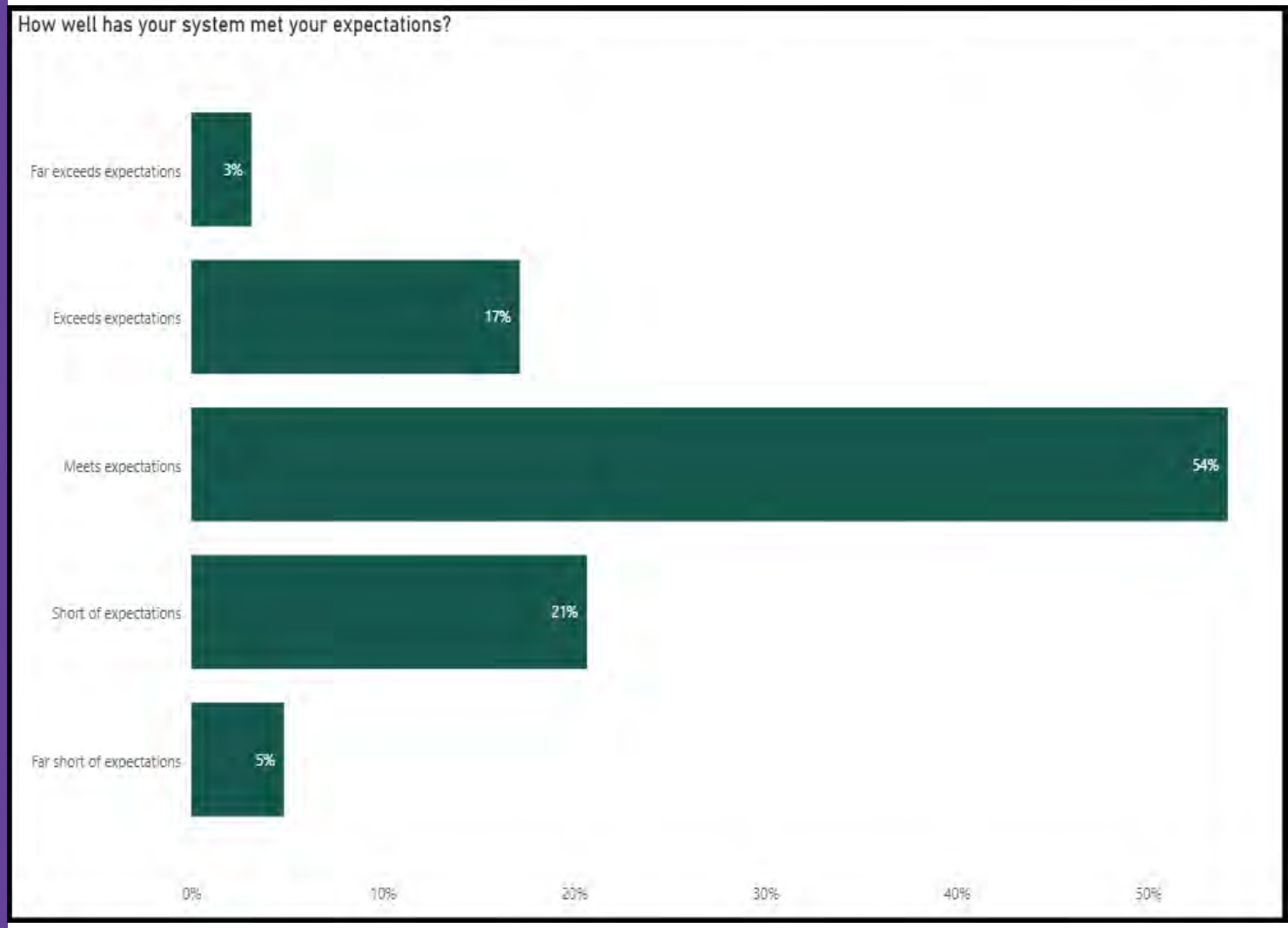
Source: 2026 Solar Survey (n=827)

99% Of Panels Are On The Roof And Customers Are Unlikely To Move Their Direction



Source: 2026 Solar Survey (n=827)

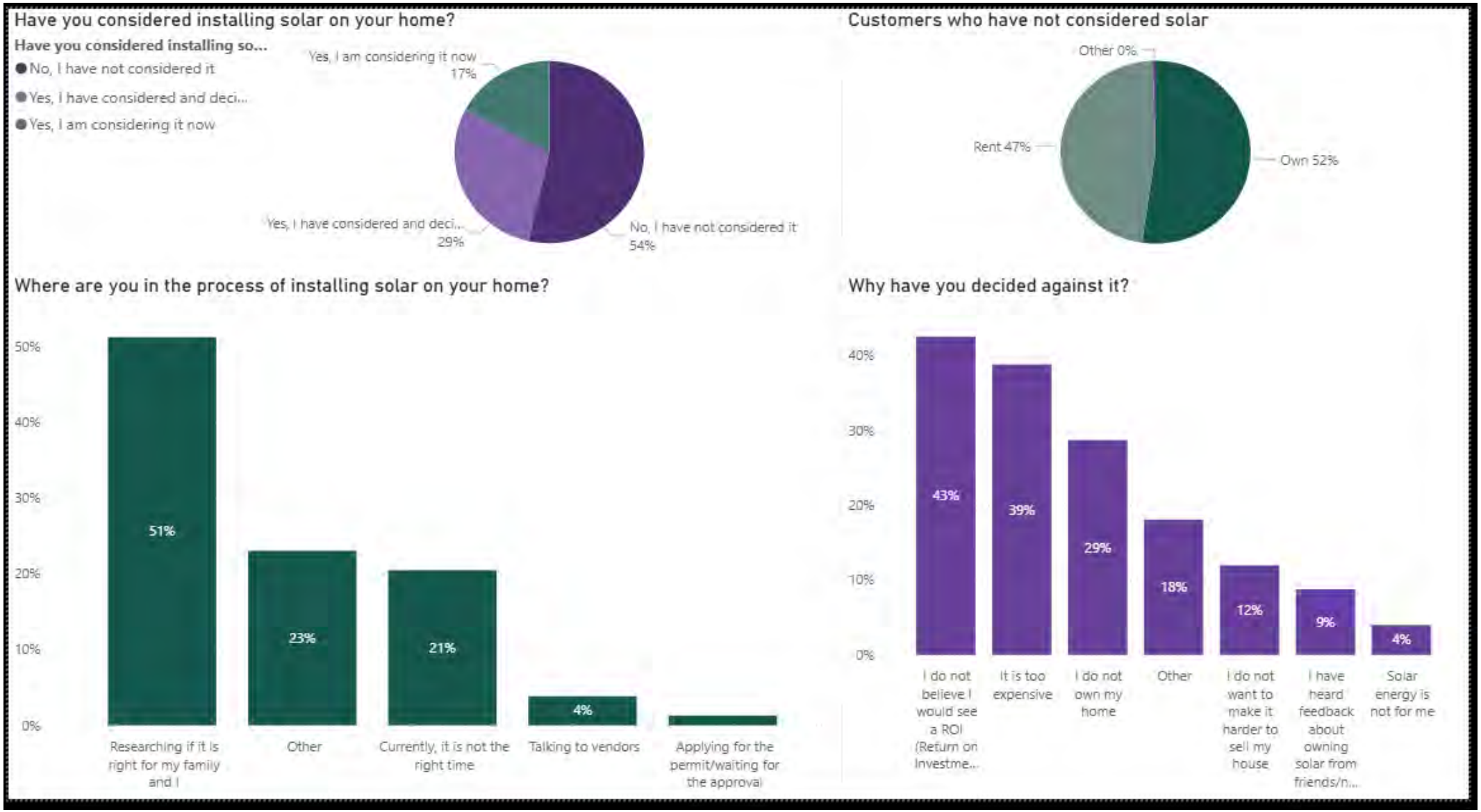
54% Of Solar Customers Believe Their System “Meets Their Expectations”



Source: 2026 Solar Survey (n=827)

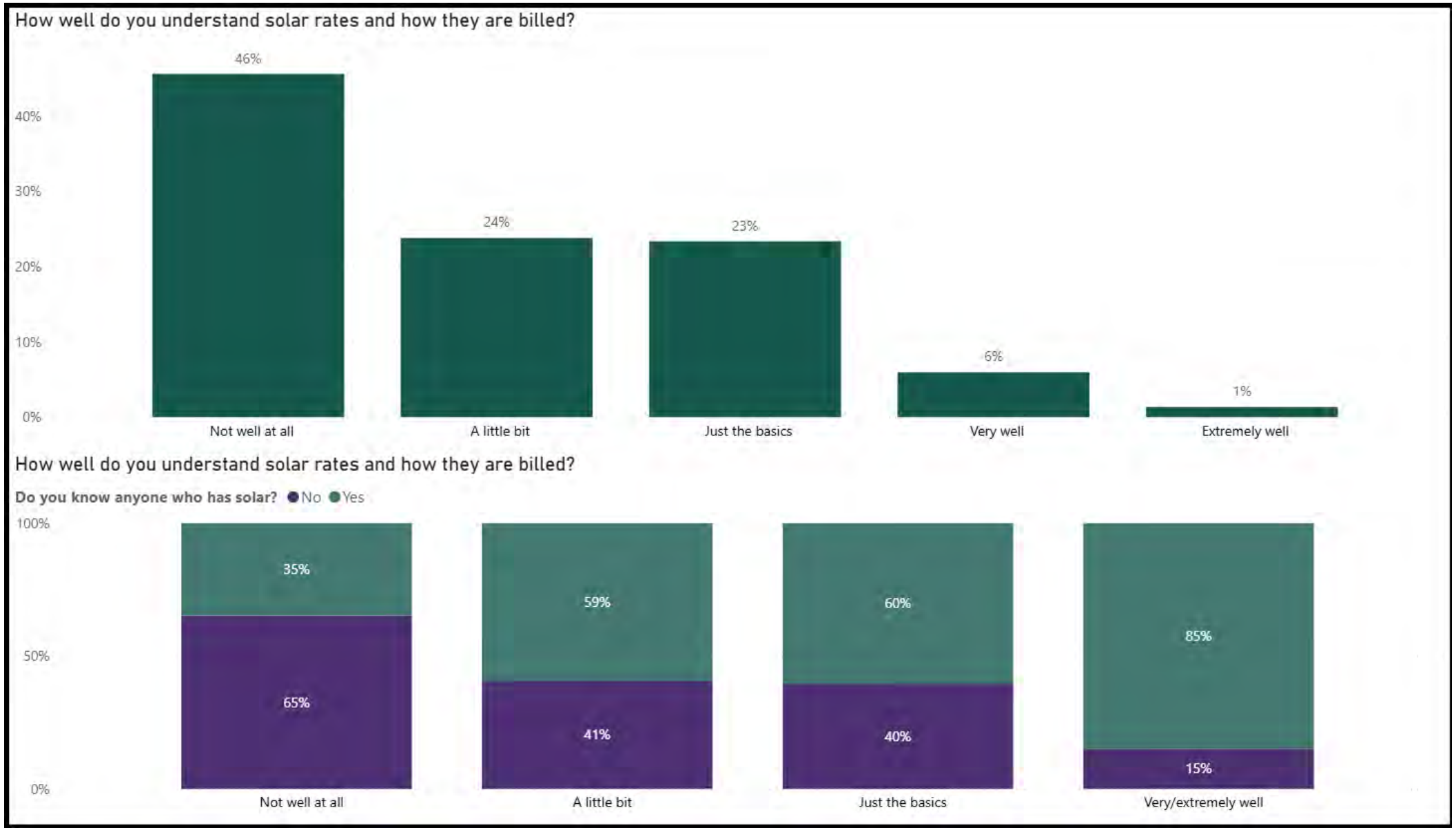
Non-Solar Survey Results

Almost Half Have Considered Installing Solar



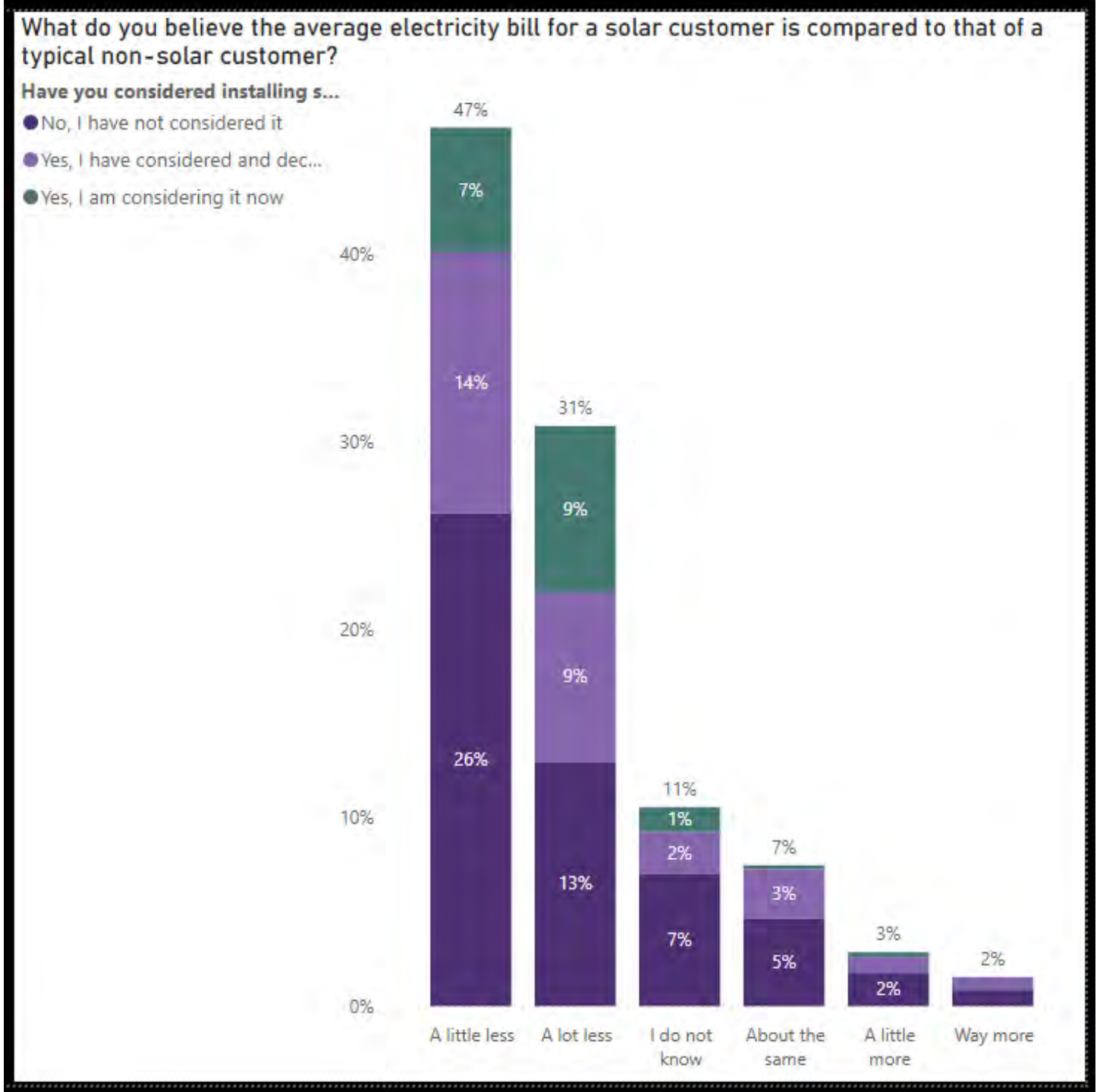
Source: 2026 Non-Solar Survey
(n=453)

Low Understanding Of Solar Rates And How They Are Billed



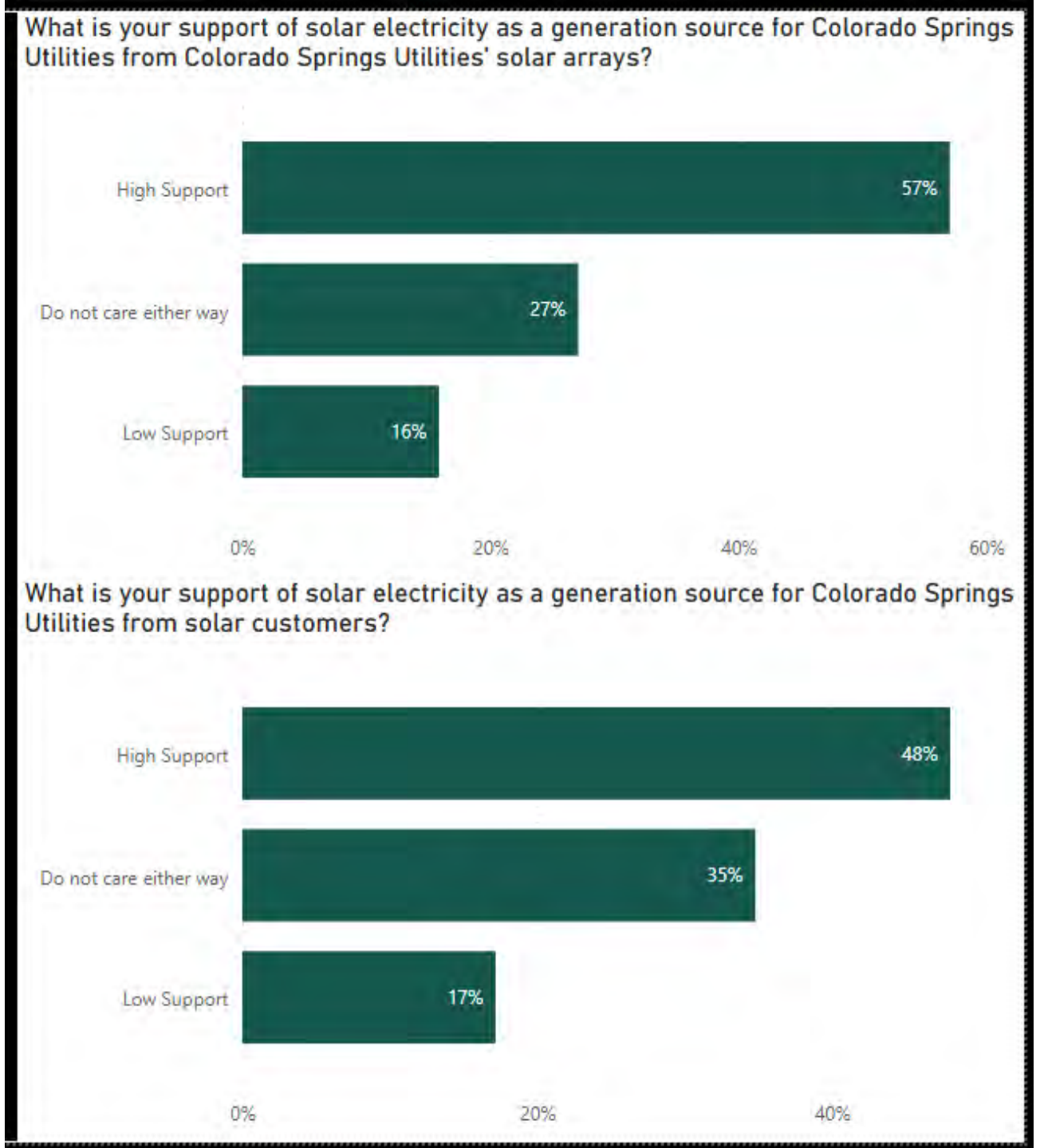
Source: 2026 Non-Solar Survey
(n=453)

Customers Who Are Currently Considering Solar Believe A Typical Electric Bill Is Less Than A Bill For A Non-Solar Customer



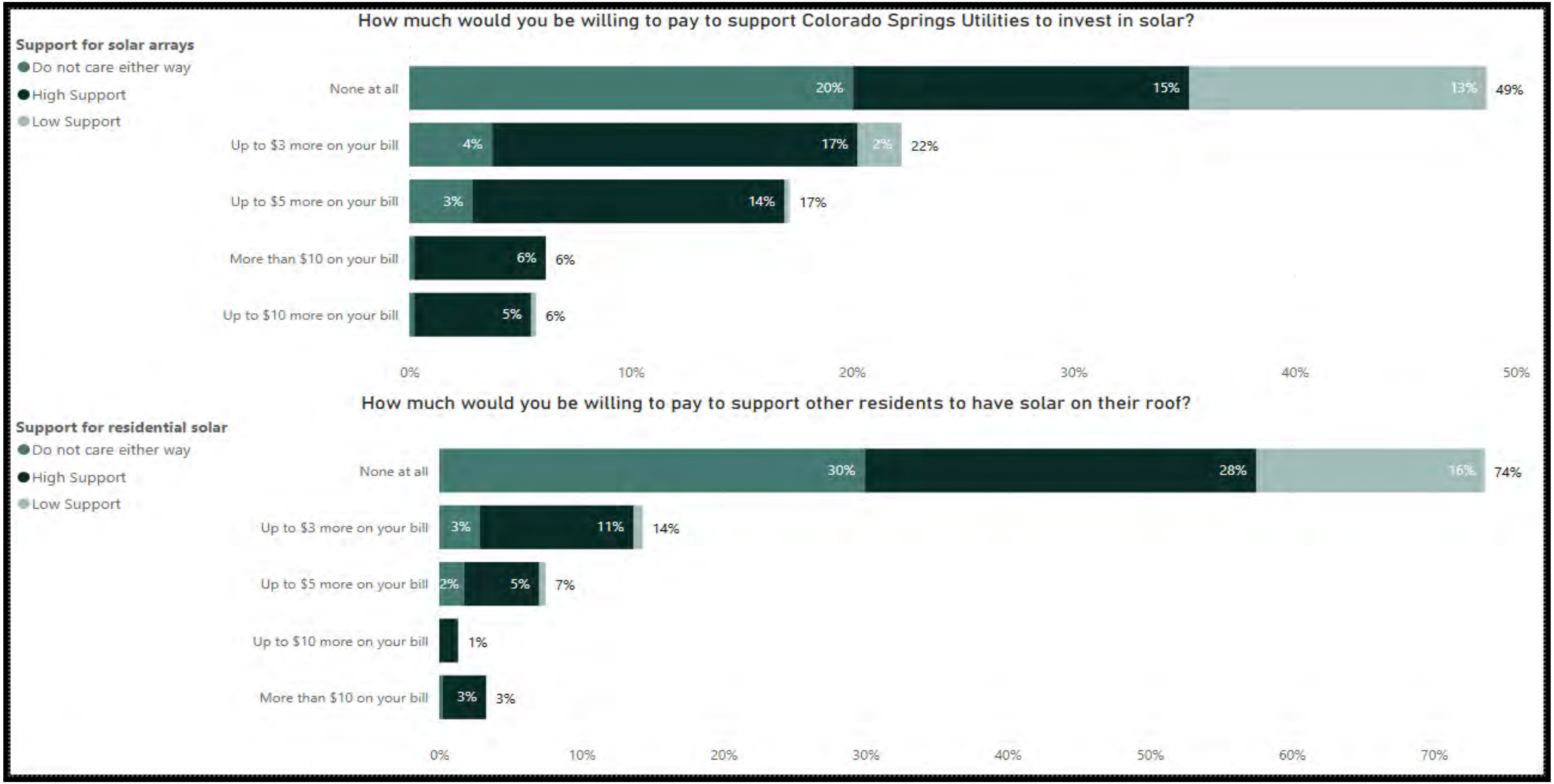
Source: 2026 Non-Solar Survey (n=453)

High Support For Solar Electricity As A Generation Source for Both Colorado Springs Utilities' Solar Arrays And Solar Customers



Source: 2026 Non-Solar Survey (n=453)

Although Customers Have High Support For Solar, They Are Not Necessarily Willing To Pay To Support It



Source: 2026 Non-Solar Survey
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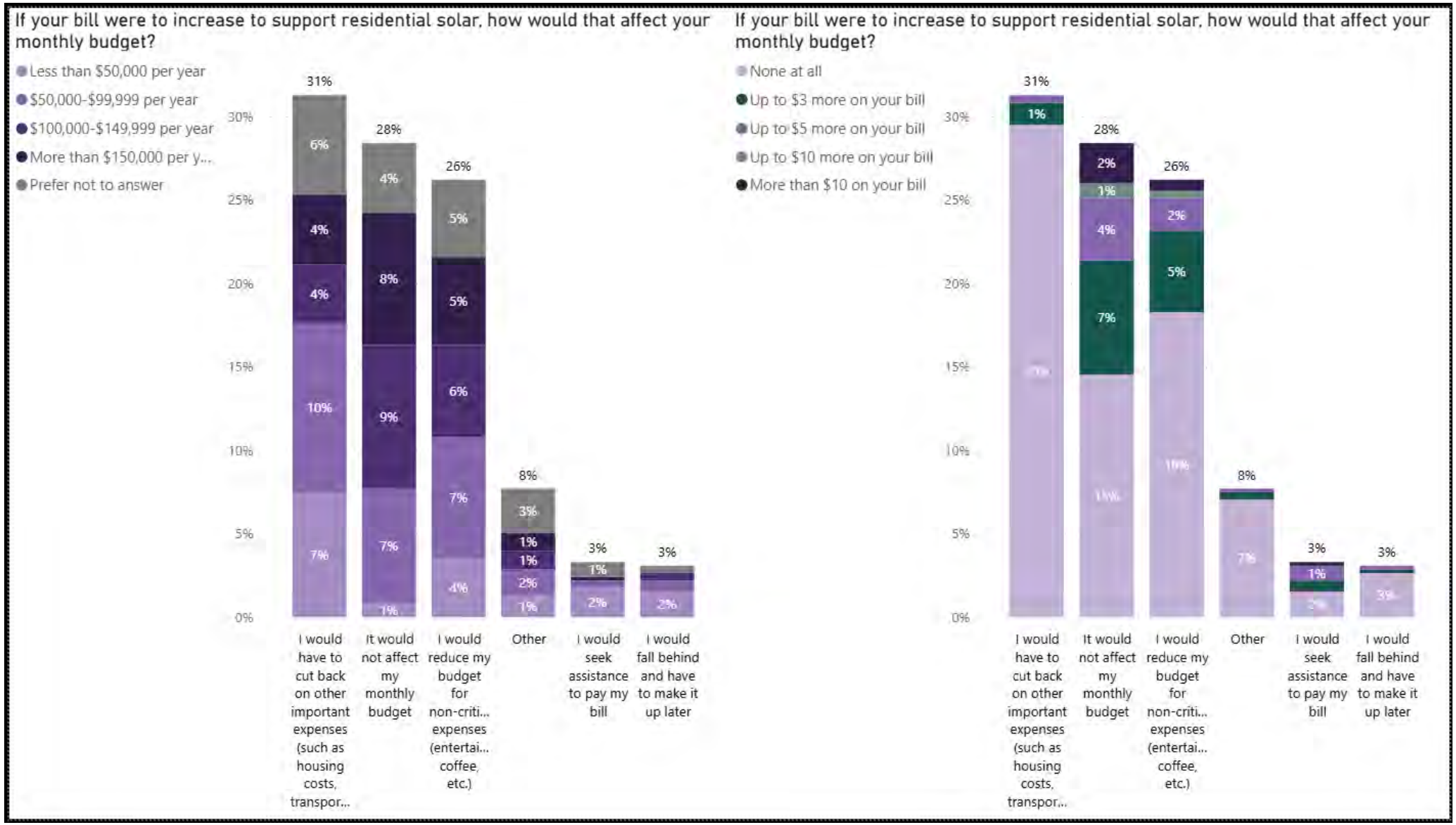
About 30% Of Customers Would Have To Cut Back On Important Expenses If Their Bill Increased To Support Residential Solar



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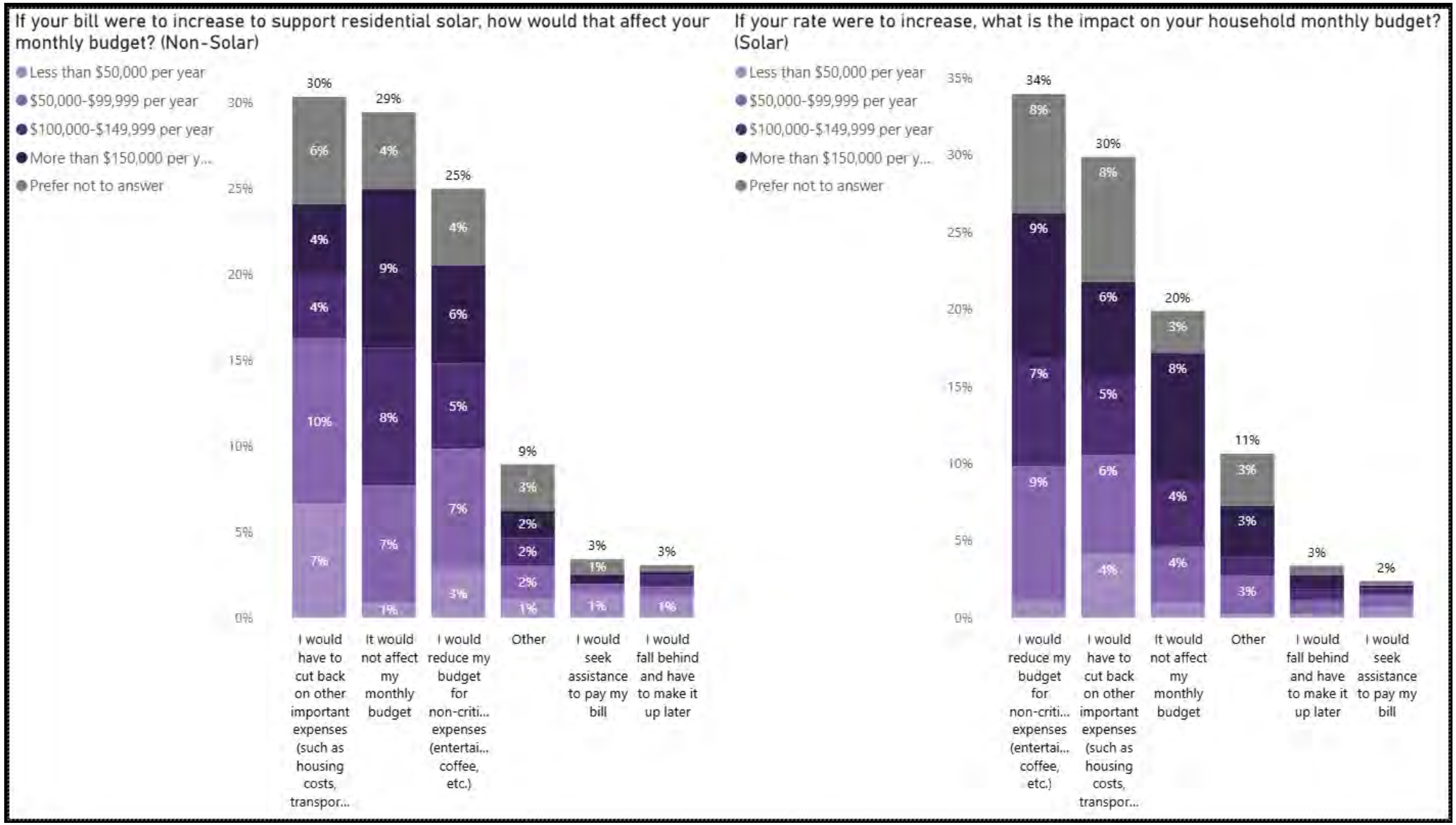
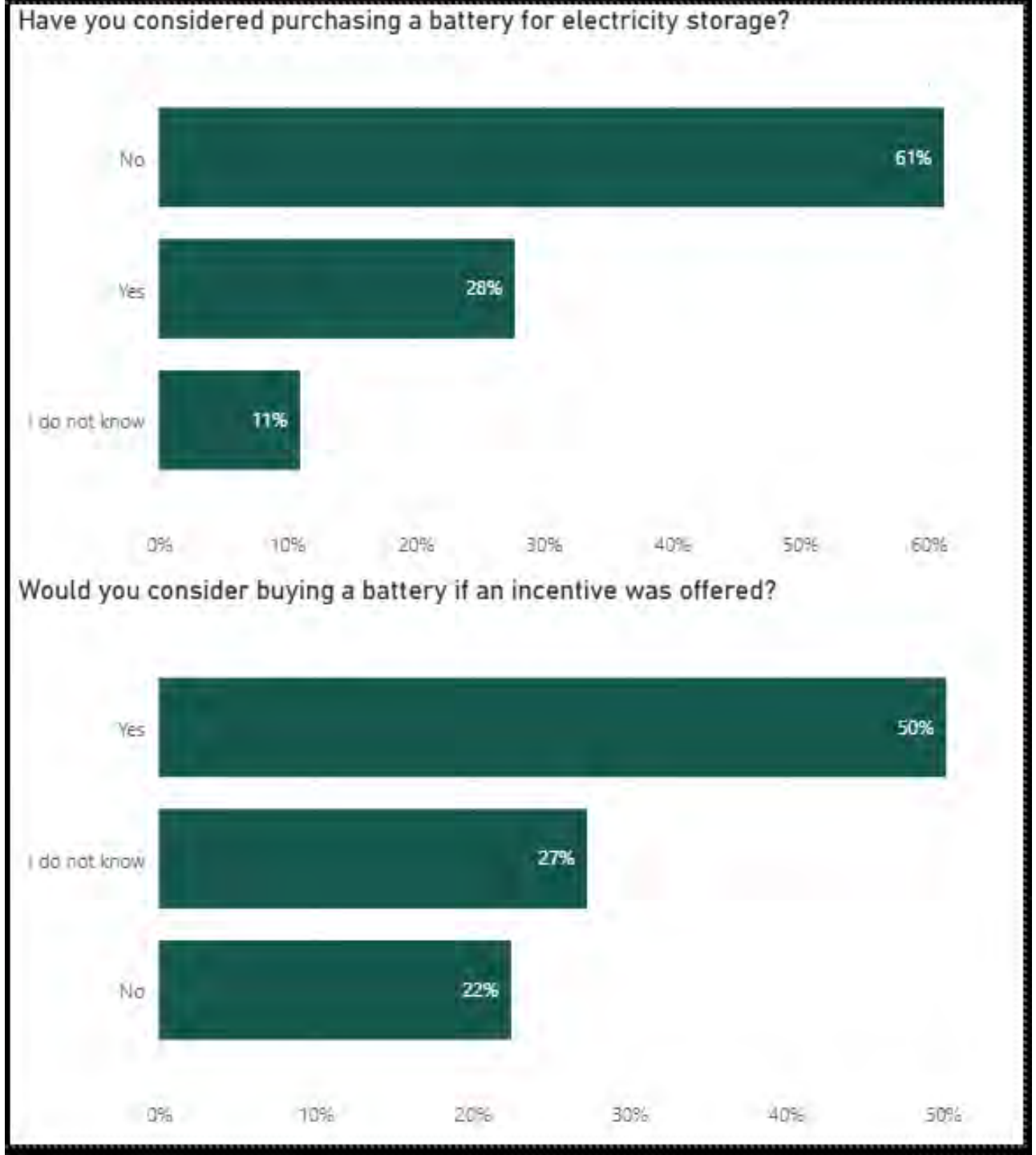


Source: 2026 Non-Solar Survey (n=453)

61% of Non-Solar Customers Have Not Considered A Battery For Electric Storage; However, 1/3 Of Those Customers Might If There Was An Incentive



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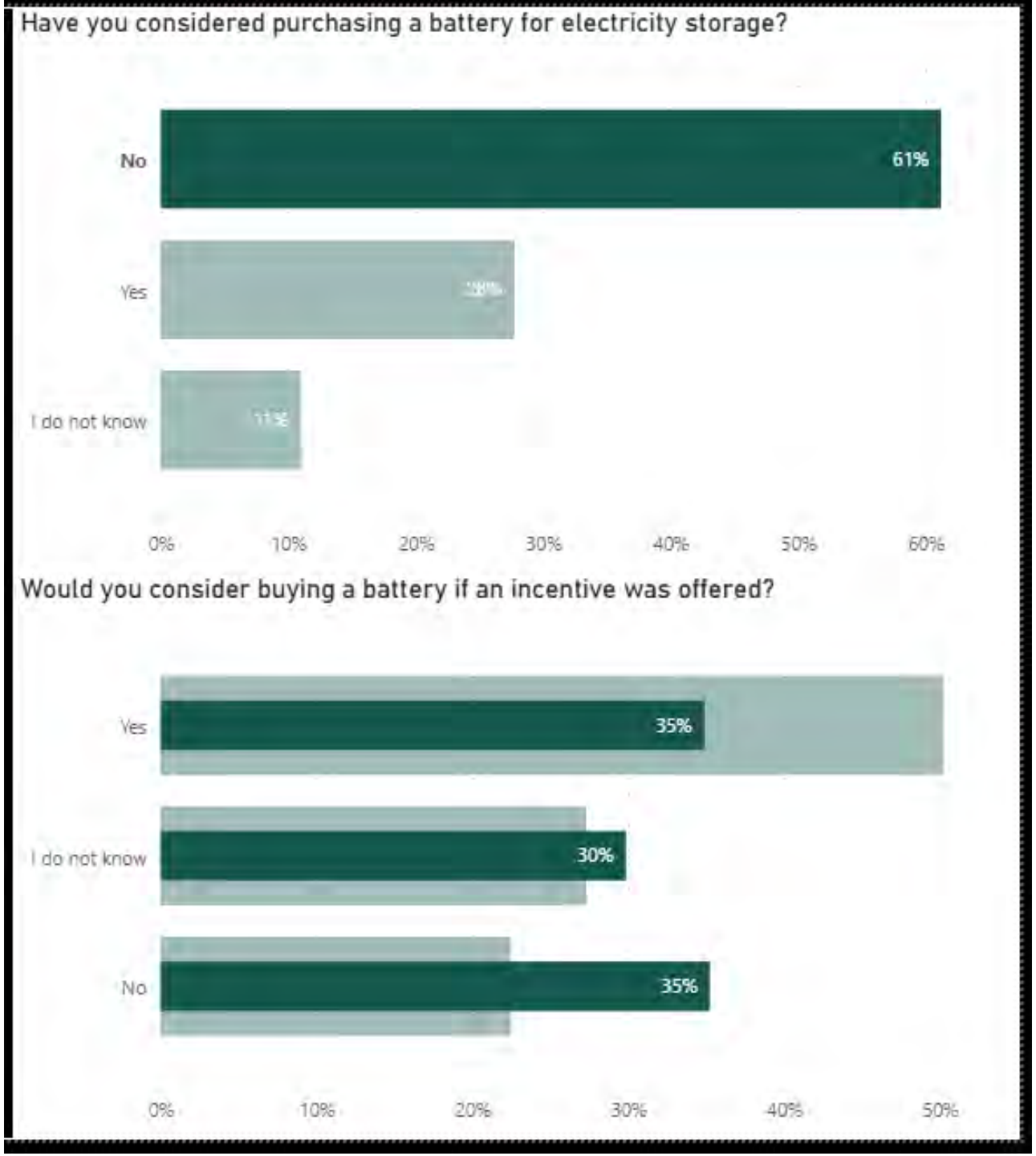


Source: 2026 Non-Solar Survey (n=453)

Verbatims

Robust Feedback Was Received And Reviewed

Is there anything else you would like to us to know about your ideas on residential solar generation?

800 comments

45,000 words

58 average words per comment

Examples Of What Our Customers Are Saying

"I am sick and tired of funding these **environmental** wackos. I want no responsibility for their decision to install solar and fail to see why, as a rate payer, I am required to **fund solar residential customers**. It was their call to install solar. What's next, I fund EV users using CSU energy? Not my choice and me having to fund solar panels residential users was not a choice I was ever given. They had a choice whether to install them. **Where is my choice in NOT funding their choice**. Super frustrating for non solar and never will be customers, YOUR customers. Outrage is more from us subsidizing them and they ha e no regard to passi g on their expense to me" –A Non-Solar Customer

"We made a significant financial decision investing tens of thousands of dollars up front with the understanding that **the energy we send to the grid would offset the energy we pull from the grid**. It feels like we were lied to and a bait-and-switch is being pulled on us. The financial impact of the **supposed demand cost shift** to non-solar customers is extremely minimal (less than $25 per year). $25 per year is a whole heck of a lot less than the tens of thousands I spent to install my system. This whole situation feels like a solution where there is no problem. Existing solar users should be **grandfathered** in with the rules they signed up for. **New solar customers can be offered a different cost format**. Eventually existing solar systems will get old and stop working and there will be no one left on the **"unfair" system**. If CSU wants to buy my solar system I'll sell it to them at cost and happily just be a normal non-solar customer." –A Solar Customer

Customer Thoughts On Residential Solar Generation By Survey Type

Solar Responses (427)

Solar customers overwhelmingly focus on:

- Rate fairness and stability
- ROI protection and fear of rate changes
- Strong desire for grandfathering
- Desire for batteries and system expansion flexibility

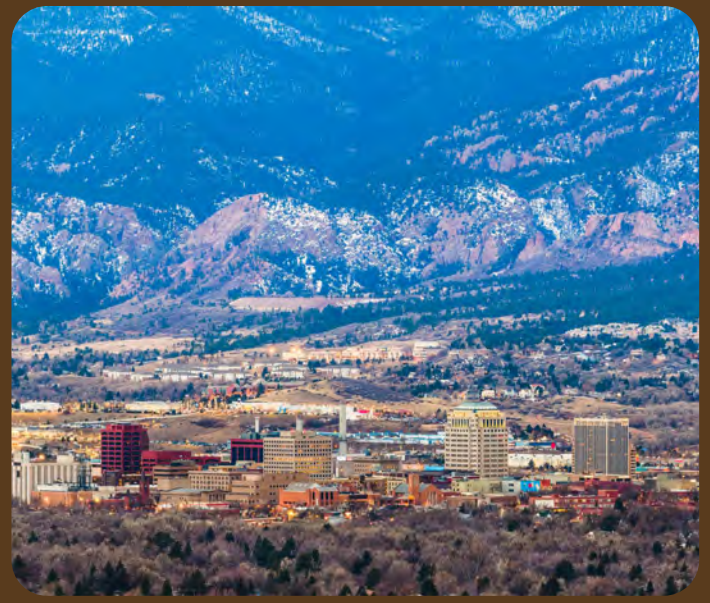
Their comments frequently reference personal investment, past agreements, and expectations set by the utility. Comments in this group tend to be the most combative and oppositional, pushing back hard on policy changes and emphasizing fairness.

Non-Solar Responses (134)

Non-solar customers primarily emphasize:

- Opposition to subsidizing solar customers
- General support for solar generation
- Some skepticism toward solar's effectiveness and environmental impact
- Interest in solar only if costs drop or incentives increase

They often frame the solar ecosystem as inequitable or inaccessible. Overall, responses in this group exhibit the least hostility, focusing more on enablement and education.



Open Survey Responses (220)

This group behaves like a blend of the other two and includes both solar and non-solar customers.

- Polarized with both pro and anti-solar sentiments appearing often
- Rebates and incentives frequently mentioned
- They also have a uniquely high concentration of requests for more information, reflecting lower familiarity with rate design, metering, and storage policies

Less strongly opinionated compared to the other survey respondents.

Customer Comment Alignment
Similar comments from both customer segments

Frustration with complexity

- Customers find rate structures and terminology about solar confusing

Desire for transparency and explanation

- Customers request better communication about policies and impacting change

Storage as a solution

- Comments suggest support for **utility-scale storage** as a solution for supply and solar generation issues, and to a lesser extent **residential batteries**

Solar Respondent Comment Themes

Rates	Battery storage	ROI concerns	Trust and transparency	Grandfathering
• Complaints about solar rates (unfair or do not want to change) • Solar respondents express the strongest opposition to rate changes	• Strong support for residential and utility battery/storage solutions and mention VPPs • Solar customers consider batteries a way to navigate rate structures	• Concerns about how rate changes would impact their investment	• Solar respondents frequently describe feeling misled or confused	• Customers who invested in solar may sometimes understand the need for rate changes but they generally believe that changes should not affect them

Is there anything else you would like to us to know about your ideas on residential solar generation?

I bought solar panels to lower my electric bill, I should not be penalized because I can't generate electricity at night. All the customers who DON'T have solar panels should pay for their electricity, why should I be penalized? I spent thousands of dollars to lower my reliance on the grid. I help lower overall energy consumption by generating electricity myself. Charging me or anyone with solar panels more for electricity is UNFAIR. We invested.

Adding batteries to the system should be easier, the city should waive all fees on the permits to help accomplish a mutual goal of reducing peak usage in the evening.

The city should be building more solar and battery systems for city-wide energy independence.

I invested in solar panels and that needs to be factored in my "cost for electricity" when considering rate changes for so-called cost shift.

…If the base charges are increased the amount of time to recoup our investment could double or triple, resulting in our investment being essentially worthless.

I don't think you really advertise the shifting to other customer as well and it still doesn't make sense to me...
…It was hard to find information about it on the website. If you really thought it was a good idea. I feel like you would've been more open and honest about it. I'm not sure if you can tell, but you've really lost a lot of of my trust with the way that was managed. I'm hoping you can do better.

*Changing the rate structure for *future* residential solar customers makes sense, but altering the rules for existing customers who already made an irreversible investment is not a fair change.*

Honor your commitment to those who installed in good faith

Source: 2026 Solar Survey (n=827)

Non-Solar Respondent Comment Themes

Subsidizing solar	Solar support	Solar skepticism	Rebates & Incentives	Battery storage
• Customers without solar often express dissatisfaction with the idea of their bills being affected by utility solar support	• Many customers have not/cannot install solar but still support it at the residential and utility scale	• Concerns about solar's effectiveness, cost, and environmental impact • Sometimes accompanied by support for gas, coal, or nuclear	• Customers without solar are more likely to express the desire for utility support of solar generation through rebates and incentives	• Non solar customers are aware of energy storage issues related to renewables • Many support battery storage at the residential or utility level

Is there anything else you would like to us to know about your ideas on residential solar generation?

I am strongly supportive of both residential and CSU solar and other renewable energy sources! However, I also strongly feel that people who don't own their homes (renters, apartments, etc) should NOT be penalized for being unable to have their own solar and should NOT have to pay more in investment or higher rates because of their living situation. Especially because those of us who don't (and likely won't) own homes are in this situation because we can't afford to do so!

Solar and other renewables plus storage systems are the energy source which will be required in the future, so the investment into them is not optional.

I don't want to be in my home long enough to install and pay for solar panels, but I would like to be able to install a solar system on my next home.

I am totally against solar power. It is expensive and unreliable. I would much rather use nuclear and have CSU invest in SMR's which have a much longer life, zero emissions and cost less. I hate the fact CSU is wasting my hard earned money on expensive solar power.

Please provide rebates for customers to invest in solar systems and home battery storage.

I think additional credits, rebates, etc from CSU to help create a unique community-owned solar generation is a great balanced support that CSU has the unique ability to encourage…

The issue as solar rolls out broadly is mostly one of storage and matching supply/demand. Simple net-metering is great for getting the ball rolling, but can cause issues as a greater percentage is supplied by solar. The best solution is to encourage (through incentives, or through variable billing) homeowners to have local battery storage

Source: 2026 Non-Solar Survey (n=453)

Next Steps

Focus Groups April

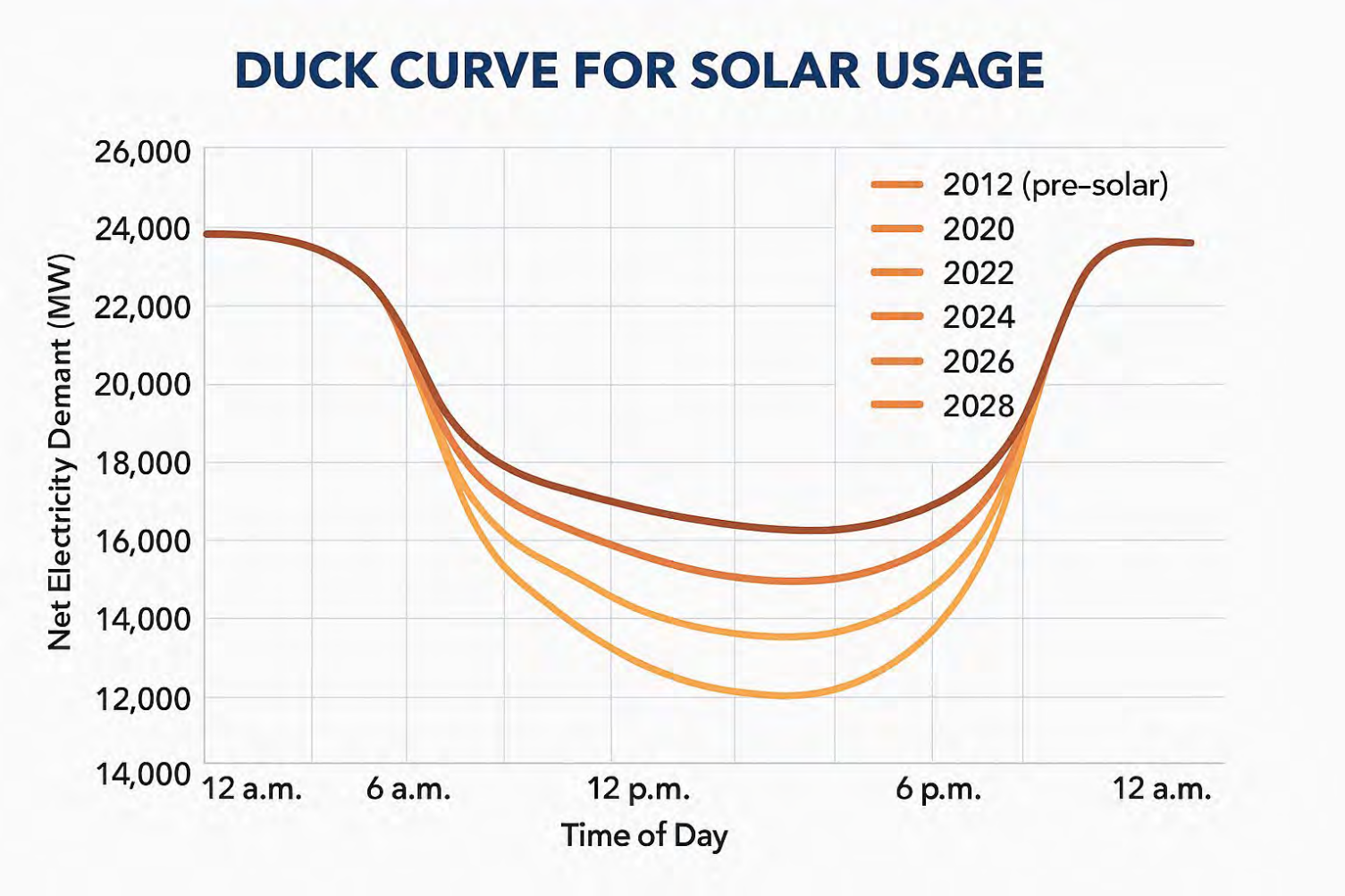
Board Update on Focus Groups April

Rate Recommendation June

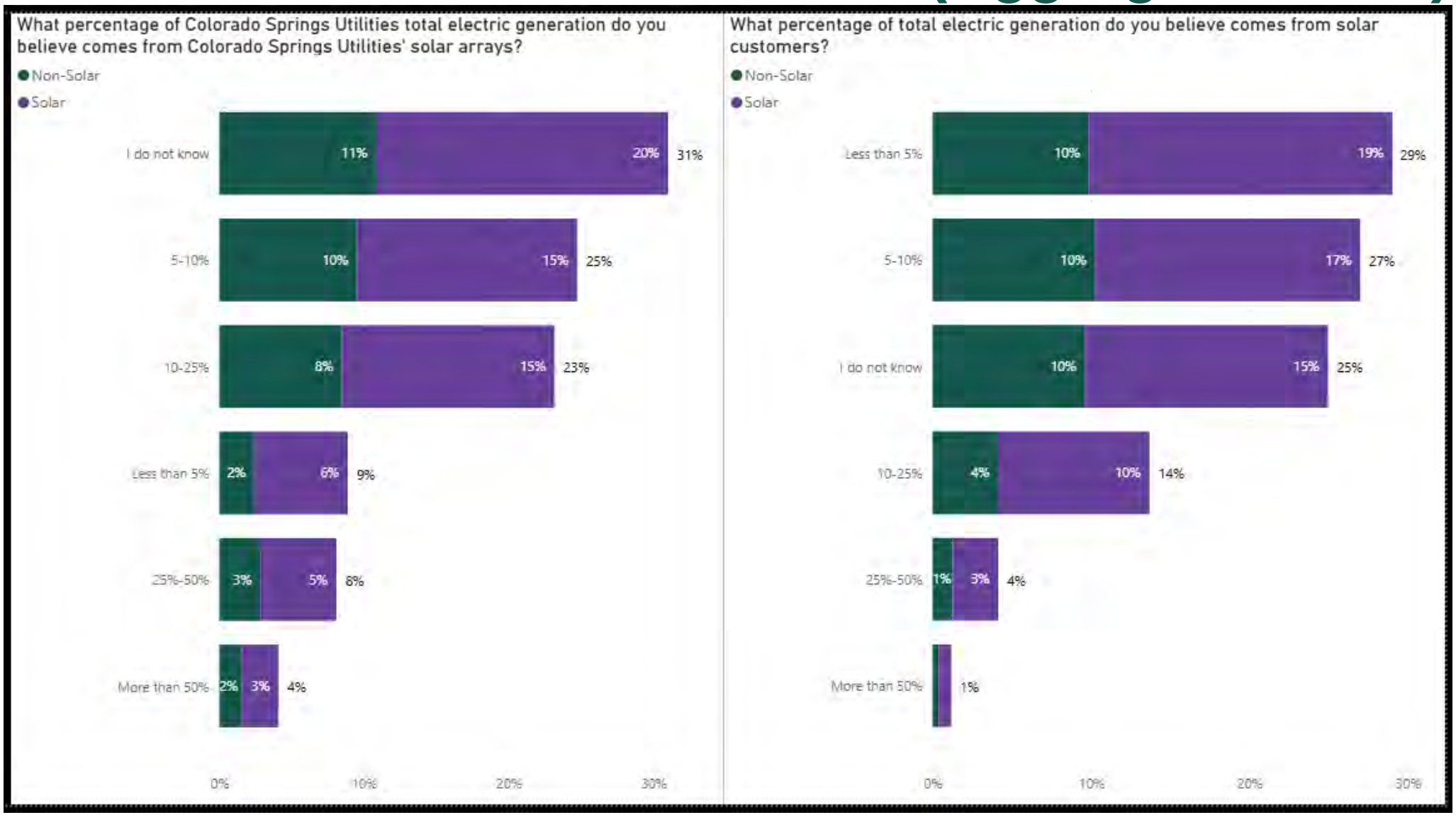
Appendix

Solar Usage

- Solar reduces net system load during midday
- Demand rises quickly in the evening when solar fades
- This creates operational and cost challenges for utilities



Comparison Of Customers' Perceptions Of Solar's Share Of Total Power Generation (Aggregated Data)



Sources: 2026 Solar Survey (n=827)
and 2026 Non-Solar Survey(n=453)