Apples, Oranges…and Bananas : What Solar Companies Don't Tell You

No down payment! ZERO out of pocket! Cut your power bill! Be energy independent! Lowest interest rate in the industry! There may be some truth in these advertisements for rooftop solar, but there are a few things that solar salespeople don't tell you. Some of their claims exaggerate the benefits of their product or products while inflating the future cost of electricity.

Citizens Electric reviewed two competing rooftop solar proposals shared by an interested member and compared these with SharedSolar Advantage, the community solar offering from CEC. For reference, the CEC member's average monthly power bill is about $136.

So, what did the rooftop proposals include? Where was the hype? Where were the exaggerations?

Interestingly, one proposal (we'll call this one Proposal A) suggested a solar array that was 65% *larger* than the competing proposal (we'll call Proposal B) but cost almost 46% *less* than Proposal B. Why would Proposal B include a smaller array? And why was Proposal B so much more expensive? Glad you asked!

A Closer Look

When contrasting competing products, most consumers want to see an 'apples-to-apples' comparison. These two proposals were like 'apples-to-oranges' or, more appropriately, 'apples-to-bananas'. Proposal A was a straightforward rooftop solar offer. It financed the $20,000+ installation over 10 years at about 3% annual interest rate. (The proposal stated an interest rate of under 2.5% but the monthly installment quoted calculated to a higher interest rate).

Proposal B had to be peeled to uncover all of the details. After peeling back some of the details, an actual cost of the solar arrays was still not evident. The proposal included a (smaller than Proposal A) solar array and several energy efficient measures unrelated to the solar installation *at a bundled cost*. These measures included additional attic insulation, an insulating blanket for the water heater, LED lights for the home, an attic fan, air sealant tape, and an attic tent (scuttle hole cover). The alleged savings for implementing these measures? Proposal B claimed a 25% reduction in annual electricity usage.

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Obvious assumptions were made to claim such a reduction including:

- Existing attic insulation has a very low R-value
- Existing air-source heat pump has a very low efficiency rating
- Current attic ventilation is inadequate
- Attic access is in a conditioned space
- Ductwork is not taped and is in an unconditioned space
- No LEDs currently used in home

How much did these additional measures cost? Based on the installed cost per watt of competing, solar-only Proposal A, the energy efficient measures alone in Proposal B would cost almost $27,000. According to IRS guidelines, these expenditures *do not* qualify for the current 26% solar tax credit.

Other Exaggerated Claims

The estimated annual electricity production for both proposals does not correspond with other CEC member rooftop solar installations. Again, the assumptions included the ideal solar orientation and optimum tilt for the arrays as well as zero shading factors. Unfortunately for the homeowner, his home was not at the ideal orientation and his roof pitch was not optimal. The proposed solar panels would also be in shade a few times per day from the two trees flanking the array. Oops! The bottom-line is that each proposal exaggerated the energy production that their panels would produce.

Proposal B also assumed that electricity rates would increase by 4% per year for the next 30 years. The graph included in their sales material illustrates national electricity price increases since 2000. The annual increases on the graph actually calculate out to under .8% per year. As a matter of reference, Citizens Electric has not raised rates since May 2015.

What is behind all of these (false) claims and assumptions? It is the need to inflate the homeowners' benefits of having solar panels installed on their roofs and to exaggerate future electricity costs. These exaggerated claims can give homeowners false comfort and justification to pay tens of thousands of dollars for rooftop solar. Each proposal required monthly payments exceeding the member's current monthly power bill. In fact, Proposal B had to require paying for its bundled proposal over 25 years (and assume the solar tax credit applies to the entire bundled package) to keep monthly payments under $150. That's right, the homeowner would be obligated to pay for the bundled solar package for the next quarter century!

Said & Unsaid

At least Proposal B included a one-page legal disclaimer which is summarized as, "We don't guarantee anything we claimed in this proposal." Proposal A did not include a disclaimer; however, the homeowner would be wise to review the fine print when a $20,000+ contract is laid before them. Look for the disclaimer!

What else aren't the solar salespeople telling you?

- How much less power per year will the panels produce as they age? Yes, they do degrade with time.
- How much will these panels increase your homeowner's insurance premiums?
  - Liability?
  - Fire?
  - Comprehensive?
- What is the future cost of removal and disposal of the panels?
- How many years are the inverters warranted?
- What is the cost of replacing the inverters after the warranty period?
- How many holes are made in my roof to secure the panels?
- What is the cost of removing the panels if my roof needs to be repaired or re-roofed?

Compare & Contrast

ARRAY DETAILS & COSTS

	SharedSolar Advantage	PROPOSAL A 	PROPOSAL B 
System size (KW)	4.5	5.3	3.2
Installed cost before tax credit[1]	$3,190	$21,700	$40,000
Installed cost after tax credit[2]	$3,190	$16,058	$36,581
Monthly Installment	$63.83	$154.71	$173.28
Term (years)	5	10	25
Annual Interest Rate	0%	2.95%	2.99%
Total Payments	**$3,830**	**$18,565**	**$51,984**

MEMBER UTILITY DATA & PROJECTED COSTS

Annual Electric Usage (Kwhs)	11,400	11,400	11,400
Average Monthly Electric Cost	$136	$136	$136
Annual Solar Generation (Kwhs)[3]	6,624	7,123	4,317
Energy Efficiency Savings (Kwhs)[4]	0	0	1,140
Adjusted Electric Bill	$76.79	$71.99	$88.01
Solar Adder	$63.83	$154.71	$173.28
Monthly Electric + Solar Cost	**$140.62**	**$226.70**	**$261.29**

[1] Federal tax credit of 26% for 2020 installations does not apply to SharedSolar Advantage

[2] Solar cost per watt on Proposal A was used on Proposal B since actual solar installation cost was not separated in the bundled Proposal B that included non-solar energy efficient measures. The energy efficient measures identified in Proposal B do not qualify for the federal solar tax credit.

[3] Annual solar generation is based on average 2019 capacity factor of 15.4% for CEC net metering members with installations 2016-2018. This factors conditions that are not ideal for optimum year-round generation: orientation and tilt of solar panels and shading issues. Community solar applied the three-year average capacity factor of 16.8%.

[4] The claimed savings in electricity usage from the energy efficient measures in Proposal B was adjusted to a more realistic 10% from the 25% stated in the proposal.

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SharedSolar Advantage: An Easier Option

CEC is committed to providing an easy, no-hassle option to rooftop solar: SharedSolar Advantage. This community solar offering allows participants to share in the carbon-free, sustainable electricity generated by the cooperative solar parks in Missouri, Illinois, and Indiana. The benefits to SharedSolar Advantage vs rooftop options:

- No hardware is required on your premises. The solar parks are owned and maintained by Wabash Valley Power Alliance, Citizens Electric's wholesale power provider.
- Orientation not ideal and roof pitch not optimum at your home or business? No worries. WVPA solar parks are designed with ideal orientation, zero shading, and optimum solar tilt to maximize year-round electricity production.
- All CEC members are eligible; renters, businesses, HOA-restricted and shade-limited homeowners.
- No-hassle, Easy Terms. A one-page agreement allows members to begin participating for as little as $19.99 per month.
- Pre-payment Option. A one-time pre-payment option allows participants to receive a 20% discount from the monthly option and receive energy credits for the next 60 months.
- Portability. Moving? No problem. If you prepaid and are still within the 60-month term, you have several options. You can transfer the unused portion to your new CEC-served premises. CEC will refund the unused portion, you can sell the unused portion to another CEC member, or you can donate the unused portion to a CEC-served non-profit organization.

Interested? Call us at 877-876-3511 and choose option 5.

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