SAMPLE REPORT - address and identifying details removed; roof shown as a generic schematic; shading is a sample apartment complex, for privacy.

Your Solar Analysis

Prepared for a homeowner · Austin, Texas (Austin Energy)

Prepared October 8, 2026 · SIA Solar Design Studio

OUR RECOMMENDATION

Solar is worth it for your home. Size it to cover your use (about 6 kW / 15 panels on your main south-east roof face) for a payback near 11 years at a fair price; if you want the best pure return, a smaller ~4 kW system pays back fastest. The whole-home battery you want is a backup purchase, not a money-saver — it won't pay for itself here. Aim for a solar price around $2.25–$2.75/watt.

$9,500	10.7 yrs	$17,087	Good
Net cost, 6 kW solar at a fair price, after rebate	Payback (solar only, best price)	Saved over 25 years (solar only, best price)	The Studio's rating — solar yes, battery optional

What we found

YOUR USAGE

7,860 kWh / yr

Your real 12 months — summer-peaked (cooling). Current bill about $96/mo.

YOUR ROOF

S1: 94% sun, TSRF 95%

Your SE face is an excellent, barely-shaded spot — the best on the roof. We put all panels there.

BEST SIZE FOR RETURN

~4–6 kW

A fixed $4,000 rebate makes smaller systems return more; ~6 kW still covers ~all your use.

HOW AUSTIN PAYS SOLAR

Value of Solar

Not net metering. Every kWh you produce earns a flat credit; you buy power at retail, separately.

THE RATE JUST JUMPED

9.9¢ → 12.9¢

Austin raised the Value of Solar on Oct 1. Your quotes used the old rate, so they understate your solar ~29%.

REBATE & CREDIT

$4,000 + VoS

Austin Energy's residential solar rebate. Federal tax credit is 0% (expired end of 2025).

PRICE (SOLAR ONLY)

$2.25–$3.15/W

Market range for Austin from several sources + our model. It's a competitively-priced market.

STORAGE

Backup, not savings

You want whole-home backup — fair. But it won't pay back here; treat it as resilience you're buying.

YOUR TWO QUOTES

Both solid; one cheaper

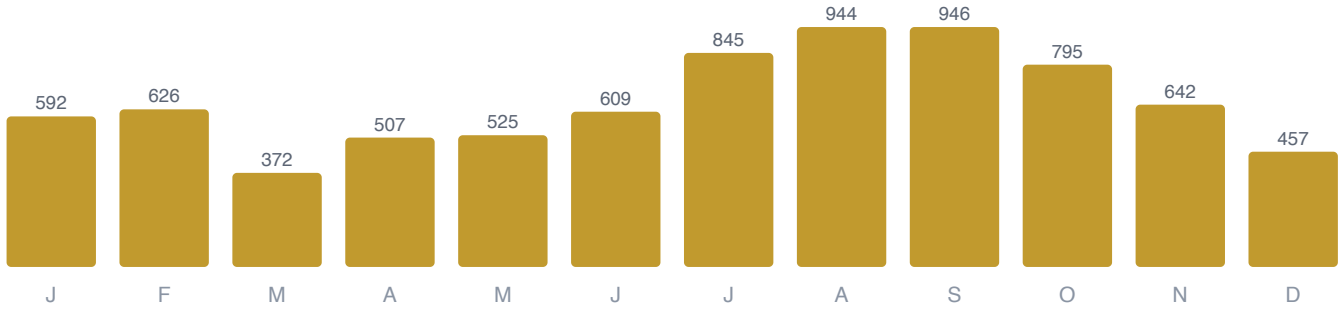
We ran both on the new rate (p.7). Solar pencils; the battery is what makes them look expensive.

Your electricity use

Prepared for a homeowner · Austin, Texas (Austin Energy)
Prepared October 8, 2026 · SIA Solar Design Studio

You sent your full 12 months, so there's no guesswork — we modeled your **actual** consumption: **7,860 kWh a year** (about 655 kWh a month, ~$96/mo). It's a classic Austin shape: a big **summer cooling peak** (S ≈ 946 kWh) and a mild winter (M ≈ 372 kWh).

MONTHLY USE — YOUR LAST 12 MONTHS (KWH)



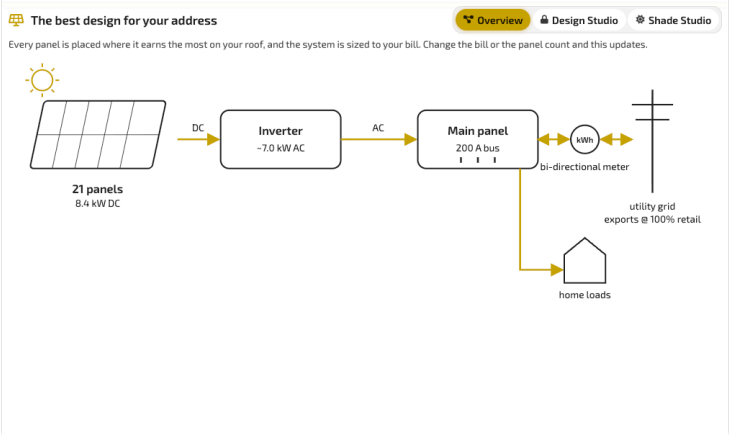
Source: the monthly kWh you provided. Because Austin Energy credits solar separately from what you use (next pages), this shape mostly tells us how big your bill is — not how much your solar is worth.

What this means for sizing

A ~6 kW system on your best roof face produces about as much over a year as you use (~98% offset). You could go a touch bigger or smaller; because of how Austin credits solar, the "right" size is driven by **price and the fixed rebate**, not by chasing 100% — which is why a slightly smaller system can actually return more (p.5).

Your roof and the system

Prepared for a homeowner · Austin, Texas (Austin Energy)
Prepared October 8, 2026 · SIA Solar Design Studio



Proposed system

Panels	**15 × 400 W (on S1)**
System size	**6.0 kW DC**
Year-1 production	**7,693 kWh**
Bill offset	**98%**
Roof face	**S1 — SE, 26° pitch**
Sun access / TSRF	**94% / 95%**

Capacity: S1 holds up to 18 panels, so your ~6 kW design fits comfortably on one face, with room to go larger if you choose.

highlighted SE face). Bright yellow is the most annual sun, purple the least. We kept the whole array on S1 — your single best face.

> **This layout is not a design recommendation.** It is a modeling placeholder used only to estimate system size and performance. Your installer sets the final panel count and placement after a site visit and code-compliant layout (fire-code setbacks and roof-access pathways).

Shading — every roof face

FACE	ORIENTATION	PITCH	AREA	SUN ACCESS*	TSRF**
S1 — our design	**ESE 120°**	**26°**	**53 m²**	**94%**	**95%**
S2	WNW 284°	25°	31 m²	81%	80%
S3	SSE 161°	11°	16 m²	93%	94%
S4	SSW 210°	37°	19 m²	96%	95%
S5	SSE 153°	7°	16 m²	74%	71%
S6	NNE 21°	38°	15 m²	60%	57%
S7	NW 322°	28°	12 m²	76%	71%
S8	ENE 59°	3°	5 m²	81%	73%

*Sun access = sunlight the face actually gets (tree shade included); **TSRF = quality vs. an ideal roof. **S1 wins clearly (95% TSRF, 53 m²)**, so the whole array goes there; the low faces (S5–S8) aren't worth using. Your trees' shade is modeled in — we design around them, we don't ask you to remove them.

How Austin Energy pays for solar

Prepared for a homeowner · Austin, Texas (Austin Energy)
Prepared October 8, 2026 · SIA Solar Design Studio

This is the single most important thing to understand about solar in Austin, and it's where your two quotes are already out of date.

It's not net metering — it's "Value of Solar"

Most people picture solar like a spinning meter running backward: a kWh your panels make erases a kWh you'd have bought, one for one. **Austin Energy doesn't work that way.** It keeps two separate tallies that never touch:

What you buy — every kWh your home uses	**billed at the normal tiered retail rate (~11.7¢–18.2¢)**
What your panels make — every kWh produced	**credited at a flat 12.9¢, used on-site or exported**

Your bill is simply **(what you used at retail) – (what you made at 12.9¢)**. Because the two are figured separately, your solar is worth the flat VoS rate — not your retail rate, and not a 1-for-1 swap.

What that looks like in a typical month

You use about **655 kWh** → billed at retail tiers	**$96**
Your panels make about **641 kWh** → credited at 12.9¢	**– $83**
Your net bill that month	**≈ $13**

Two things this means for you: a kWh you produce (12.9¢) is worth a little **less** than the priciest kWh you buy (18.2¢ top tier), so bigger isn't automatically better — and extra production doesn't push your bill below zero, it rolls forward as a credit while you still owe the fixed ~$17 monthly charge. That's exactly why we size to your usage, not to your whole roof.

The rate just went up — and your quotes missed it

On **October 1, 2026**, Austin Energy raised the Value of Solar from **9.9¢ to about 12.9¢/kWh** — roughly a **29% increase**. Both of your proposals were written on the old 9.9¢ rate, so **they understate what your solar is actually worth by about a third**. Every number in this report uses the new 12.9¢ rate, which is why our savings come out higher than either quote shows.

What you pay (retail)	**tiered, ~11.7¢–18.2¢/kWh**
Average all-in rate	**~14.2¢/kWh**
What solar earns (VoS)	**12.9¢/kWh (was 9.9¢)**
Austin Energy rebate	**$4,000 (flat)**
Federal tax credit	**0% (expired 12/31/2025)**

Two things we're flagging to confirm with Austin Energy before you sign: whether the VoS rate is **locked at your install year** or can change annually (it affects the 25-year math), and the current **battery rebate** amount and which batteries qualify.

The best size for your return

Prepared for a homeowner · Austin, Texas (Austin Energy)
Prepared October 8, 2026 · SIA Solar Design Studio

Here's how system size affects your return — and it's a little counter-intuitive: **smaller systems return more** here — because the **$4,000 rebate is a flat amount**, so it covers a bigger share of a small system. Every panel still earns the same flat VoS, so there's no bonus for going bigger.

SYSTEM	DC	OFFSET	RETURN (IRR)	PAYBACK (BEST PRICE)	25-YR NET (BEST PRICE)
10 panels	4.0 kW	65%	7.47%	8.7 yr	$12,726
12 panels	4.8 kW	78%	6.68%	9.7 yr	$14,468
14 panels	5.6 kW	91%	6.16%	10.4 yr	$16,214
15 panels ✓	**6.0 kW**	**98%**	**5.96%**	**10.7 yr**	**$17,087**
16 panels	6.4 kW	104%	5.8%	10.9 yr	$17,960
18 panels	7.2 kW	117%	5.52%	11.4 yr	$19,706

Max return: ~4 kW (10 panels)

Best IRR (7.47%), fastest payback (8.7 yr at a fair price), but it only covers ~65% of your bill.

Our pick: ~6 kW (15 panels)

Covers ~98% of your use with still-solid returns — the balance of real savings and a full offset, and it's the size that pairs sensibly with a backup battery.

Cash, solar only, on the new Value of Solar, after the $4,000 rebate. At the **high end of pricing** the larger systems slip toward break-even — one more reason price matters more than size. All sizes shown fit within S1's geometry; the installer's code-compliant layout (after fire setbacks and access pathways) sets the final count.

Why bigger isn't better here

Under Austin's Value of Solar every kWh is worth the same flat rate no matter how big your system is, and the rebate is fixed — so unlike most of the country, there's no payback reward for oversizing. Size to your goal (return vs. full offset), not to the roof.

What it should cost — price sensitivity

Prepared for a homeowner · Austin, Texas (Austin Energy)
Prepared October 8, 2026 · SIA Solar Design Studio

You asked how the economics move with the price you pay. Installed solar in Austin runs about **$2.25 to $3.15 per watt** (solar portion, from several market sources plus our model). Here's your recommended **6 kW system (6,000 W)** run at each price — first solar only, then with a battery added. Every row uses the new 12.9¢ Value of Solar and the $4,000 rebate.

Solar only — 6 kW (15 panels)

PRICE	NET COST (AFTER REBATE)	PAYBACK	25-YR NET	RETURN (IRR)
Low · $2.25/W	**$9,500**	**10.7 yr**	**$17,087**	**8.58%**
Typical · **$2.75/W**	$12,500	13.6 yr	$14,087	5.96%
High · **$3.15/W**	$14,900	15.7 yr	$11,687	4.43%

The price you negotiate swings your payback by about **5 years** and your 25-year result by roughly **$5,400** — a bigger lever than system size. Aim for the low end; it's a competitive market. Solar pencils out at every price in this range.

Solar + battery — add a Tesla Powerwall 3 (13.5 kWh)

SOLAR PRICE	NET COST (AFTER REBATE)	PAYBACK	25-YR NET	RETURN (IRR)
Low · $2.25/W	**$21,500**	**—**	**$5,087**	**n/a**
Typical · **$2.75/W**	$24,500	—	$2,087	n/a
High · **$3.15/W**	$26,900	—	-$313	n/a

What the battery does to the numbers

Adding a Powerwall 3 costs about **$12,000** installed (before any Austin Energy battery rebate) and, under Value of Solar, saves almost nothing — so it subtracts roughly that whole amount from your 25-year result and never pays back on its own. At typical and high solar pricing, solar-plus-battery lands near or below break-even. Buy the battery for the backup it gives you (see p.9), not for the economics.

Solar figures are from the engine at each price; battery is modeled as a fixed added cost with negligible VoS savings, so storage payback is shown as "—". Confirm the current battery rebate — it would reduce the battery's net cost dollar-for-dollar.

Your two quotes — the analysis

Prepared for a homeowner · Austin, Texas (Austin Energy)
Prepared October 8, 2026 · SIA Solar Design Studio

We ran both proposals through our model on the **new 12.9¢ Value of Solar**, both as quoted (solar + battery) and with the battery stripped out, so you can see exactly what each piece is doing. Names withheld — call them Quote A and Quote B.

CONFIGURATION	NET COST	PAYBACK	25-YR NET	NPV @5%
Quote A — solar + 15 kWh backup	$25,868	—	-$4,855	-$14,297
Quote A — solar only	**$11,868**	**11.9 yr**	**$17,545**	**$3,551**
Quote B — solar + 13.5 kWh backup	$21,530	24.8 yr	$300	-$9,591
Quote B — solar only	**$9,530**	**9.9 yr**	**$19,500**	**$5,707**

Both quotes: ~6.6 kW, 15 panels, ~8,400–8,500 kWh/yr, on the new VoS. Solar portions priced ~$2.05–$2.48/W.

What the numbers say

- **Solar alone is a clearly good buy in both** — payback ~10–12 years and a positive 25-year return ($17,545–$19,500). And it's **better than either quote told you**, because they used the old 9.9¢ rate.
- **The battery is what makes them look expensive.** Adding it costs ~$12–14k and returns almost nothing under Austin's rules (no time-of-use arbitrage to capture), so it drags each quote's 25-year number down by that much.
- **Quote B is the better value** — cheaper solar (~$2.05/W vs ~$2.48), the stronger solar-only return, and a Tesla Powerwall 3 is excellent, high-power backup.
- **Quote A's edges** are a longer workmanship warranty and panel-level microinverters — though on your clean, barely-shaded S1 face, the microinverter shade advantage matters less than it would on a shaded roof.

Two things to check on the quotes

Quote A added **~$1,800 in sales tax** — Texas generally exempts solar equipment from sales tax, so ask about that line. And Quote B's installer is strong but we couldn't fully confirm two of our vetting checks (installer certification and license status) — worth a direct question before signing.

The battery you want — honestly

Prepared for a homeowner · Austin, Texas (Austin Energy)
Prepared October 8, 2026 · SIA Solar Design Studio

Whole-home backup is your top priority, and that's a completely legitimate reason to buy a battery. We just want you to buy it knowing the trade: **under Austin Energy's rules, a battery saves you almost nothing** — there's no time-of-use price gap to arbitrage, and your solar is already credited at the flat VoS whether a battery stores it or not. So it's a **resilience purchase, not an investment.**

What storage costs vs. returns

Across every battery we tested on your 6 kW design, **none pays for itself** — the best case still **reduces your 25-year position by about $14,095**. That's the price of backup, not a savings shortfall to fix. Both of your quotes show the same thing (p.7): the solar is the money-maker, the battery is the comfort.

If backup is worth it to you — and it may well be

The question isn't "does it pay back" (it doesn't) — it's "is riding through an outage worth roughly $12–15k to you?" For whole-home backup that keeps the AC running, both quotes are reasonable:

BATTERY	USABLE	BACKUP*	ADDED COST (INSTALLED)
Tesla Powerwall 3 (Quote B)	**13.5 kWh**	**~9–15 hrs**	**~$12,000**
FranklinWH aPower 2 (Quote A)	15.0 kWh	~10–16 hrs	~$14,000
Smaller single unit (if you flex)	5 kWh	~9 hrs essentials	~$8,500

*Runtime depends on how much you run during an outage; your solar recharges it daily, which is what stretches it (Austin sun is generous). The Powerwall 3's high power output handles whole-home loads, including AC start-up, well. If pure resilience-per-dollar is the goal, a smaller battery on essential circuits costs less and lasts longer per use.

Backup power — how many days you actually get

Prepared for a homeowner · Austin, Texas (Austin Energy)
Prepared October 8, 2026 · SIA Solar Design Studio

You told us whole-home backup matters most, so here's the honest version with your own numbers. The useful question isn't "will it back up my house" — it's "for how long, doing what, and in which kind of outage." The answer is excellent for the outages Texas actually has, and it has real limits in a deep freeze. We'd rather you know both before you buy.

1.9 days	3.9 days	Indefinite
Essentials on **one battery**, sun blocked (Uri-type freeze)	Essentials on **two batteries**, sun blocked	Essentials in any **sunny** outage — solar refills daily

Two very different outages

The common one: grid down, sun still shining (summer heat, storms, hurricane remnants)

This is most Texas outages. Your panels recharge the battery every morning, so your **essentials run indefinitely** — fridge, lights, internet, fans, phones, the furnace blower. Even running closer to your whole house (AC included), August solar covers about 27 of your 30 kWh/day, so one battery stretches to **~4 days** and two to **~8 days** before anything has to give.

The hard one: a Uri-type freeze, snow on the panels, solar near zero for days

Now you're living on stored energy alone. Running just your essentials (~7 kWh/day), one battery lasts **1.9 days** and two last **3.9 days**. Trying to run the whole house (~22 kWh/day in February) drains one battery in **~14 hrs**. Uri kept power off for roughly one to four days for most Austin homes — so **two batteries on essentials spans the worst of it**; one battery carries a typical outage and the first couple of days of an extreme one.

URI-TYPE FREEZE (NO SOLAR)	ESSENTIALS (~7 KWH/DAY)	WHOLE HOME (~22 KWH/DAY)
One battery (13.5 kWh)	**1.9 days**	**~14 hrs**
Two batteries (27 kWh)	3.9 days	1.2 days

The one thing that breaks winter backup: electric space heaters

Your winter electric use is low (December 457, March 372 kWh) while summer runs high — that pattern says you heat with gas, which is exactly why your freeze-time essentials are so manageable. But a single plug-in electric heater pulls ~1.5 kW; run it around the clock and it eats **~36 kWh/day** — more than two batteries hold. In a freeze, keep the gas heat and skip the space heaters, and the days above hold up. Lean on electric heat and no battery will carry the house for days.

Runtimes use your 6 kW (15-panel) production and your 12-month usage, modeled at daily energy. Real results vary with how much you run, how cold it gets (batteries lose some capacity in extreme cold), and your backed-up circuits. Whole-home backup also needs your main panel and the battery's power rating checked — the Powerwall 3 handles AC start-up well.

The bottom line

Prepared for a homeowner · Austin, Texas (Austin Energy)
Prepared October 8, 2026 · SIA Solar Design Studio

RECOMMENDATION

Go solar — it's a good investment for your home, and better than either quote showed. Put ~6 kW (15 panels) on your SE face (S1) to cover ~all your use, or ~4 kW if you want the fastest payback. Negotiate the solar to around $2.25–$2.75/watt. Buy the battery only if whole-home backup is worth ~$12–15k to you — it's great resilience but won't pay you back. Of your two quotes, Quote B is the stronger value, with Quote A's longer warranty as the main reason to pay more.

Using this to decide between your two quotes

You mentioned wanting a graceful way to decline one. You don't need a reason beyond the numbers — here's honest, no-drama language you can use:

> *"Thank you so much for the detailed proposal — I really appreciate the time you put into it. After comparing both options side by side with an independent analysis, I've decided to move forward with another installer whose pricing and terms fit my situation a little better. It was a close call and I was glad to have your quote in the mix."*

Open items we'd confirm before you sign

- **Value of Solar:** confirm the current rate and whether it's **locked at your install year** (big effect over 25 years).
- **Battery rebate:** confirm Austin Energy's current amount and whether your chosen battery qualifies.
- **Sales tax** on Quote A (Texas generally exempts solar equipment).
- **Quote B's installer:** confirm their certification and active license (two checks we couldn't fully verify).
- **Main panel:** confirm your service can carry whole-home backup without an upgrade.

Important disclosures

This is a **preliminary, consumer-side planning analysis**, not an engineering design, and not legal, tax, or investment advice. All production, savings, cost, and financing figures are **modeled estimates, given as ranges where possible, and are not guarantees**. Figures use Austin Energy's Value-of-Solar tariff as we understand it (buy-all/sell-all at ~12.9¢/kWh, effective Oct 2026) and assume it holds for 25 years; confirm the current rate, its term, and all rebates at application. Federal credit 0% (expired 12/31/2025). Final design and all structural, electrical, and code verification are the installer's responsibility. Your quotes are referenced anonymously; we are not a party to any installation contract. Battery results use a deterministic dispatch heuristic and are not guaranteed-optimal.

Reproducible from the SIA Solar Design Studio using your coordinates and your 12-month usage · October 8, 2026

Appendix — recreate this analysis yourself

Prepared for a homeowner · Austin, Texas (Austin Energy)
Prepared October 8, 2026 · SIA Solar Design Studio

Every number here comes from our public tool, the **SIA Solar Design Studio** at **siapolicy.ai** — free, no login needed for the design and economics. If you want to test your own "what-ifs," here's how to rebuild this exact study and then change anything you like.

Step by step

1. **Enter your location.** Type your address (or coordinates **30.297465, -97.7318681**). The map pulls your roof and Google's sun data; it finds Austin Energy as your utility.
2. **Set how you're paid.** In the export-mode control choose **Value of Solar (buy-all / sell-all)**, not net metering. This is what makes the economics match Austin's real rules.
3. **Place the panels.** Put **15 panels on the S1 (SE) face** using the panel slider / roof layer. The studio sizes it to **6.0 kW** and reads S1's sun access (~94%).
4. **Enter your real usage.** Open **Load modeling** and type your 12 monthly kWh from the table at right, then apply. This replaces the generic profile with your actual 7,860 kWh/yr.
5. **Set the money inputs.** Cost per watt **$2.25** (then try $2.75 and $3.15), rebate **$4,000**, federal credit **0%**.
6. **Read your results.** The studio shows production, bill offset, payback, 25-year net, and IRR — the same figures on pages 5–7.
7. **Add the battery (optional).** Toggle storage on and pick a **Powerwall 3 (13.5 kWh)** to see the solar-plus-battery case from page 6.

Change one thing at a time

- **Price sensitivity (p.6):** leave everything fixed and step cost-per-watt through $2.25 / $2.75 / $3.15.
- **Size sensitivity (p.5):** leave price at $2.25 and slide the panel count from **10 to 18**.
- **Backup (p.9):** compare one vs. two batteries and watch the days-of-autonomy change.
- **Rate risk:** if Austin changes the Value of Solar, edit the VoS rate and re-read — that's the single biggest lever over 25 years.

The tool is deterministic: the same inputs always return the same numbers, so anything here is yours to verify or challenge. If your results differ from ours, it's an input difference — usually the export mode or the usage profile.

Inputs we used

Utility	**Austin Energy**
Export mode	**Value of Solar**
VoS rate	**12.9¢/kWh**
Roof face	**S1 (SE, 26°)**
Panels	**15 × 400 W**
System	**6.0 kW DC**
Rebate / ITC	**$4,000 / 0%**
Your monthly usage	
Jan	**592 kWh**
Feb	**626 kWh**
Mar	**372 kWh**
Apr	**507 kWh**

May	**525 kWh**
Jun	**609 kWh**
Jul	**845 kWh**
Aug	**944 kWh**
Sep	**946 kWh**
Oct	**795 kWh**
Nov	**642 kWh**
Dec	**457 kWh**
Annual	**7,860 kWh**