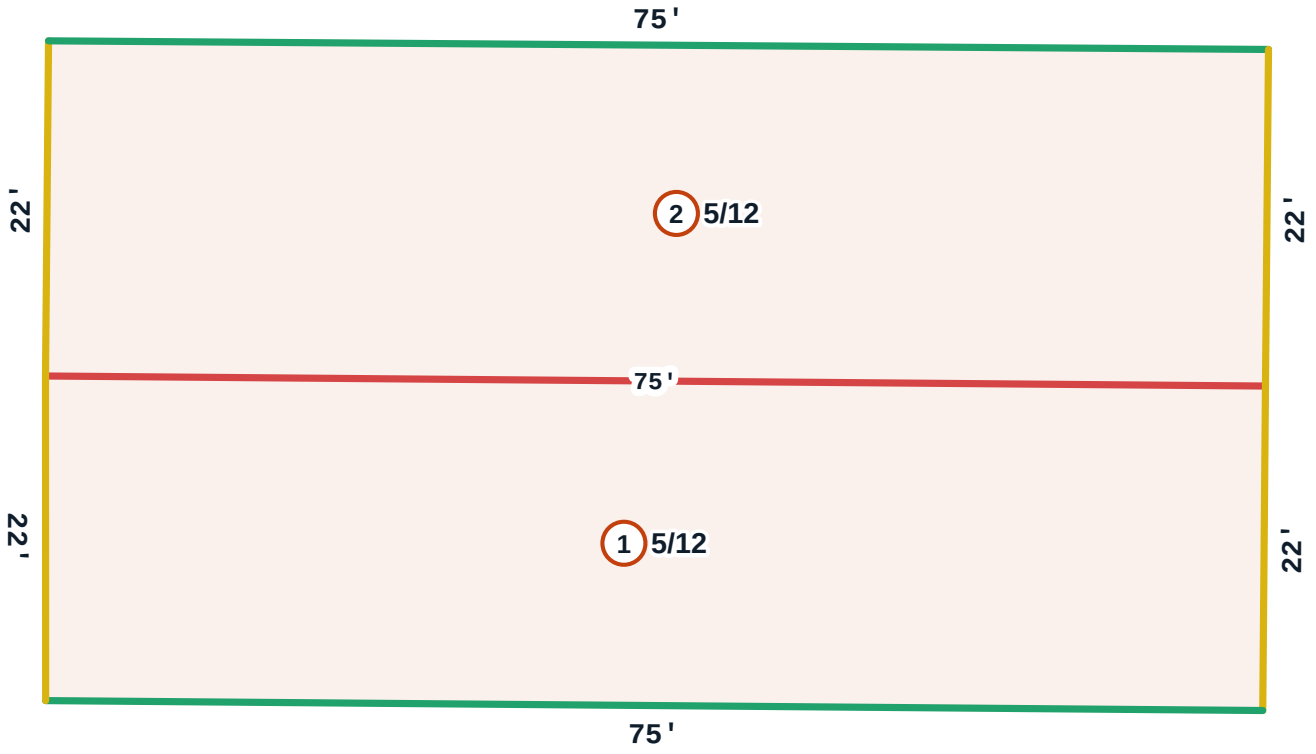
Sample house, Oldsmar, FL

Sample · Roof report, 10/24/2026

3,321 sq ft	33.2	36.5	4.9/12	2
Total roof area	Squares	Squares with 10% waste	Main pitch	Slopes

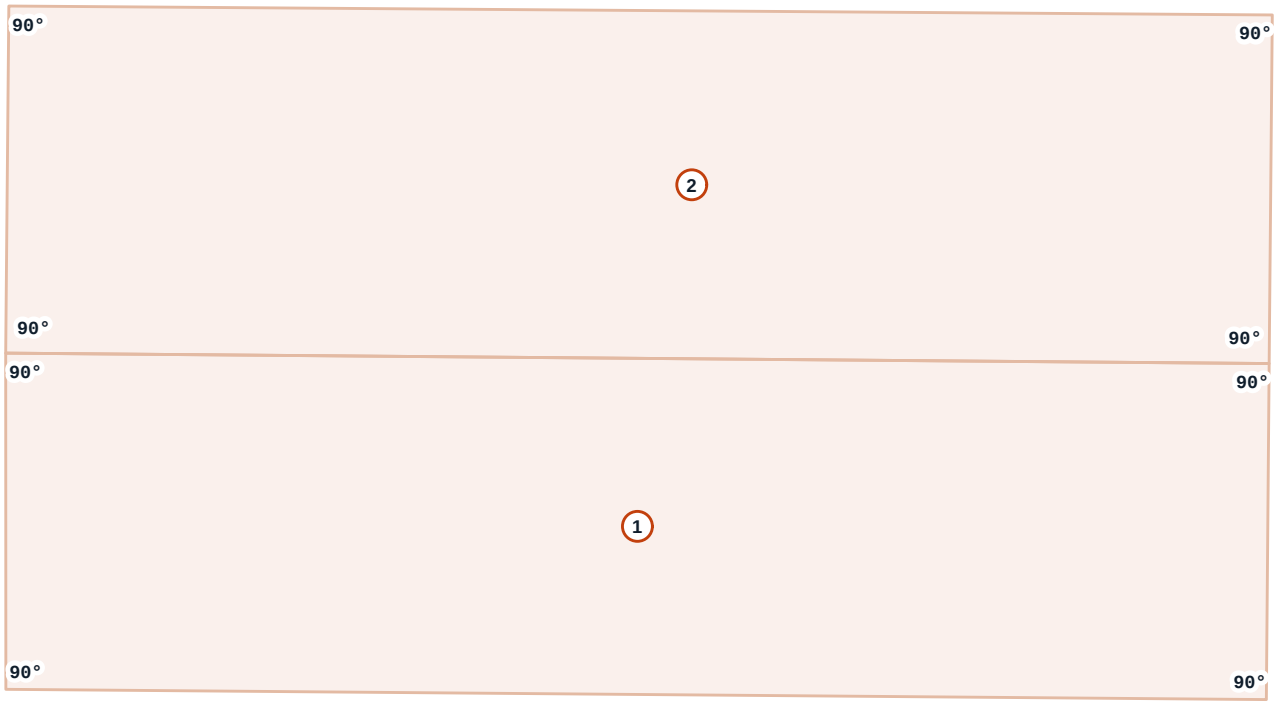


Lengths are along the slope, in feet. North is up.

The roof from above

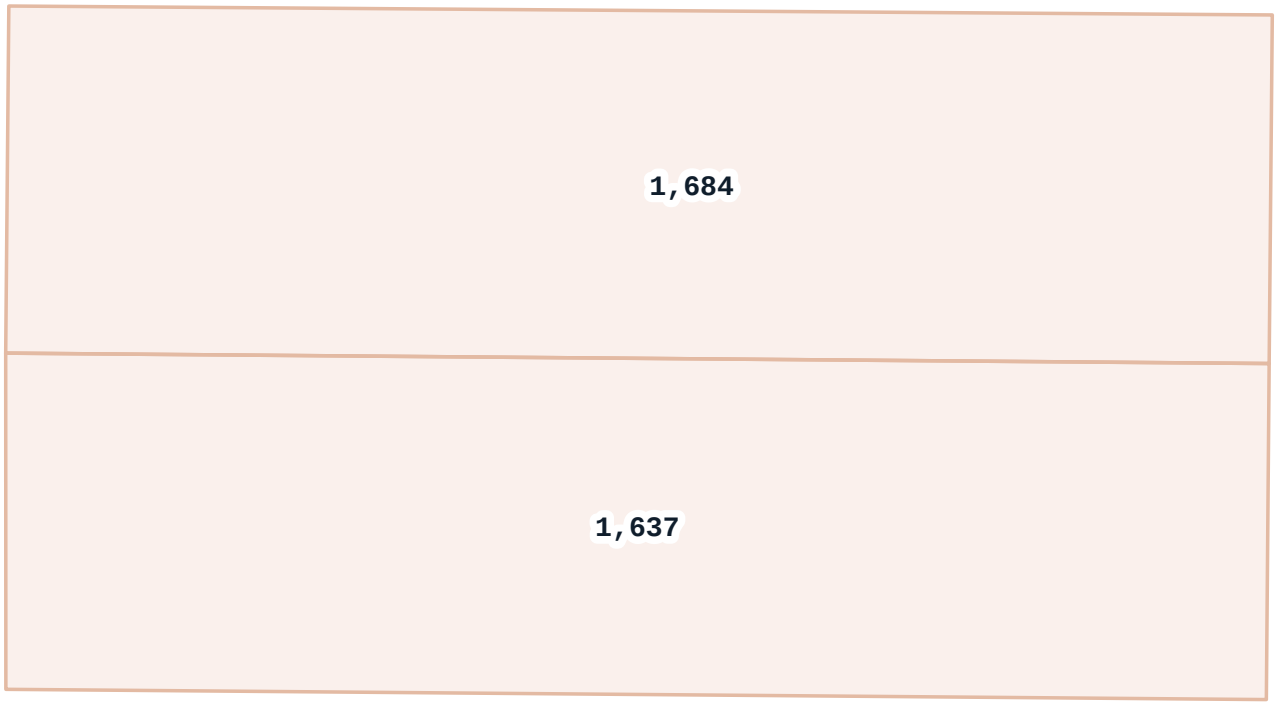


Corner angles



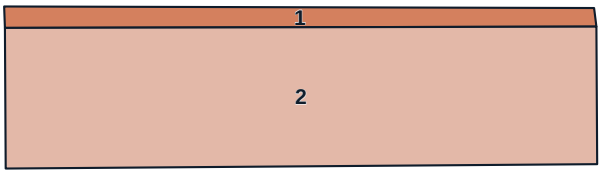
Corner angles, measured on each slope, so a corner on a steep slope can read differently from how it looks from above. Numbers match the slope table.

Slope areas

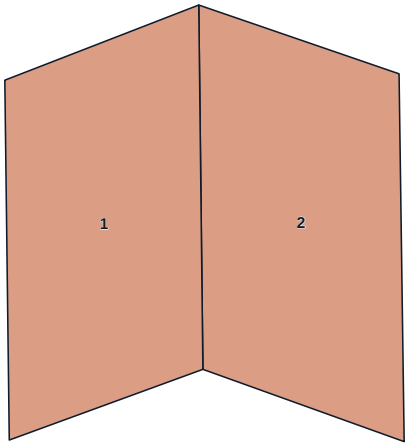


Each slope's roof area in square feet, measured along the slope.

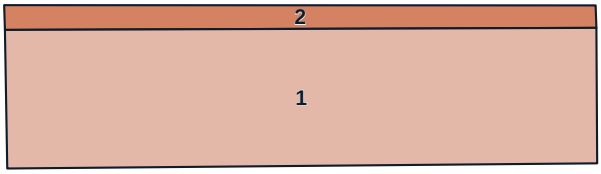
The roof from each side



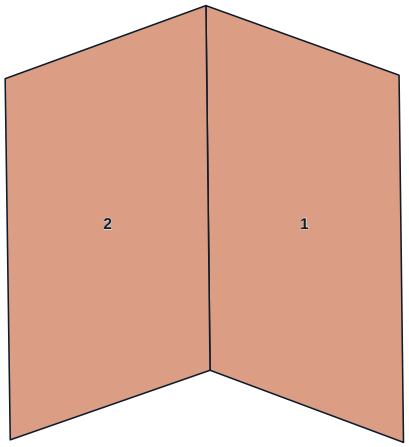
From the north, 30° up



From the east, 30° up



From the south, 30° up



From the west, 30° up

Measurements

Slopes

#	Plane	Pitch	Faces	Flat area	Roof area
1	Plane 1	5.2/12 (23°)	south	1,504 sq ft	1,637 sq ft
2	Plane 2	4.9/12 (22°)	north	1,559 sq ft	1,684 sq ft

Roof area by pitch

By pitch	Roof area	Share
5/12	3,321 sq ft	100%

Edges

Edge	Length
Ridge	75 ft
Eave	150 ft
Rake	88 ft

Squares with waste

Waste	Squares
0%	33.2
5%	34.9
10% (suggested)	36.5
12%	37.2
15%	38.2
17%	38.9
20%	39.9

Attic ventilation

Net free vent area	1/300	1/150
Attic floor (estimated)		3,063 sq ft
Total	1,470 sq in	2,940 sq in
Exhaust (high)	735 sq in	1,470 sq in
Intake (low)	735 sq in	1,470 sq in

Ventilation products at 1/300

At 1/300	Needed	On this roof
Ridge vent	41 ft	75 ft of ridge
or box vents	15	
Soffit vent	82 ft	150 ft of eave

Waste and ventilation figures are guidance; check them on site and against the products you install. Edge types were set from each slope's measured fall and may have been corrected by hand.

Materials

Bundles to order	GAF Timberline HDZ	Owens Corning Duration	CertainTeed Landmark
Shingle bundles, 0% waste	100	102	102
Shingle bundles, 5% waste	105	107	107
Shingle bundles, 10% waste (suggested)	110	112	112
Shingle bundles, 12% waste	112	114	114
Shingle bundles, 15% waste	115	117	117
Shingle bundles, 17% waste	117	119	119
Shingle bundles, 20% waste	120	122	122
Starter, 238 ft of eaves and rakes	2 Pro-Start	3 Starter Strip Plus	3 SwiftStart
Hip and ridge cap, 75 ft	4 Seal-A-Ridge	3 ProEdge	3 Shadow Ridge

Item	Quantity	Covers
Synthetic underlayment, 10-square rolls	4	roof area plus 5% for cuts, at 940 sq ft a roll after laps
or self-adhered membrane over the whole deck, 2-square rolls	20	the same area at 180 sq ft a roll
Drip edge, 10 ft	25	238 ft of eaves and rakes
Ridge vent, 4 ft	11	41 ft, from the attic ventilation below
or box vents instead	15	the attic's exhaust at 50 sq in each

Gutters, if wanted	Quantity	Covers
Gutter, by the foot	151 ft	every eave, in 2 runs
End caps	4	where a run stops
Downspouts, 3 × 4 in	6	one per 30 ft of gutter, at least one a run

Bundles are counted from each maker's published coverage; a line's other products, or a colour packed differently, can differ, so check the bundle label. Florida's code (R905.1.1.1) allows self-adhered membrane over the whole deck, or underlayment with the deck's joints sealed; the roofer and the permit decide which. Nails, underlayment fasteners and sealant aren't counted, and decking that needs replacing can't be seen from the air. Gutter runs and corners follow the eaves as measured; for Florida's downpours, guidance goes as tight as one downspout per 20 ft.

Roof condition

Fair	Can't tell	Check first	1
Overall condition	Covering's remaining life	Re-roof before solar	Thing to know

Covering: asphalt shingle (light grey). Your light grey asphalt shingle roof looks fair to good overall: the shingles lie flat and even, and we saw no missing shingles, bare patches or moss. The top of the chimney and its cap on the south slope look rusty, so have someone check the cap and the metal seal around the chimney's base before it causes leaks. On the north slope there are faint streaks below several pipes and vents, so it's worth checking that the rubber seals around them aren't cracked. Before adding solar, have a roofer confirm how old the shingles are and deal with the chimney first.

Re-roof before solar: The shingles look even and flat with nothing missing, but the drone photos can't show how old they are or how much life they have left. Solar panels would most likely go on the south-facing slope, which has the chimney with the rusty cap. Before installing, have a roofer confirm the shingles' age and check the chimney cap and the metal seal around the chimney's base.



Watch Vents, pipes and skylights · slope 1

The top of the chimney and its cap look rusty brown. Have someone check the cap and the metal seal around the base of the chimney, because rust there can lead to leaks over time.

A visual inspection from drone photos, made with AI and reviewed by our pilot. It shows what's visible from the air; it can't see under the covering, into the attic or around corners the photos missed, so it isn't a substitute for an on-site inspection before a purchase or a claim.

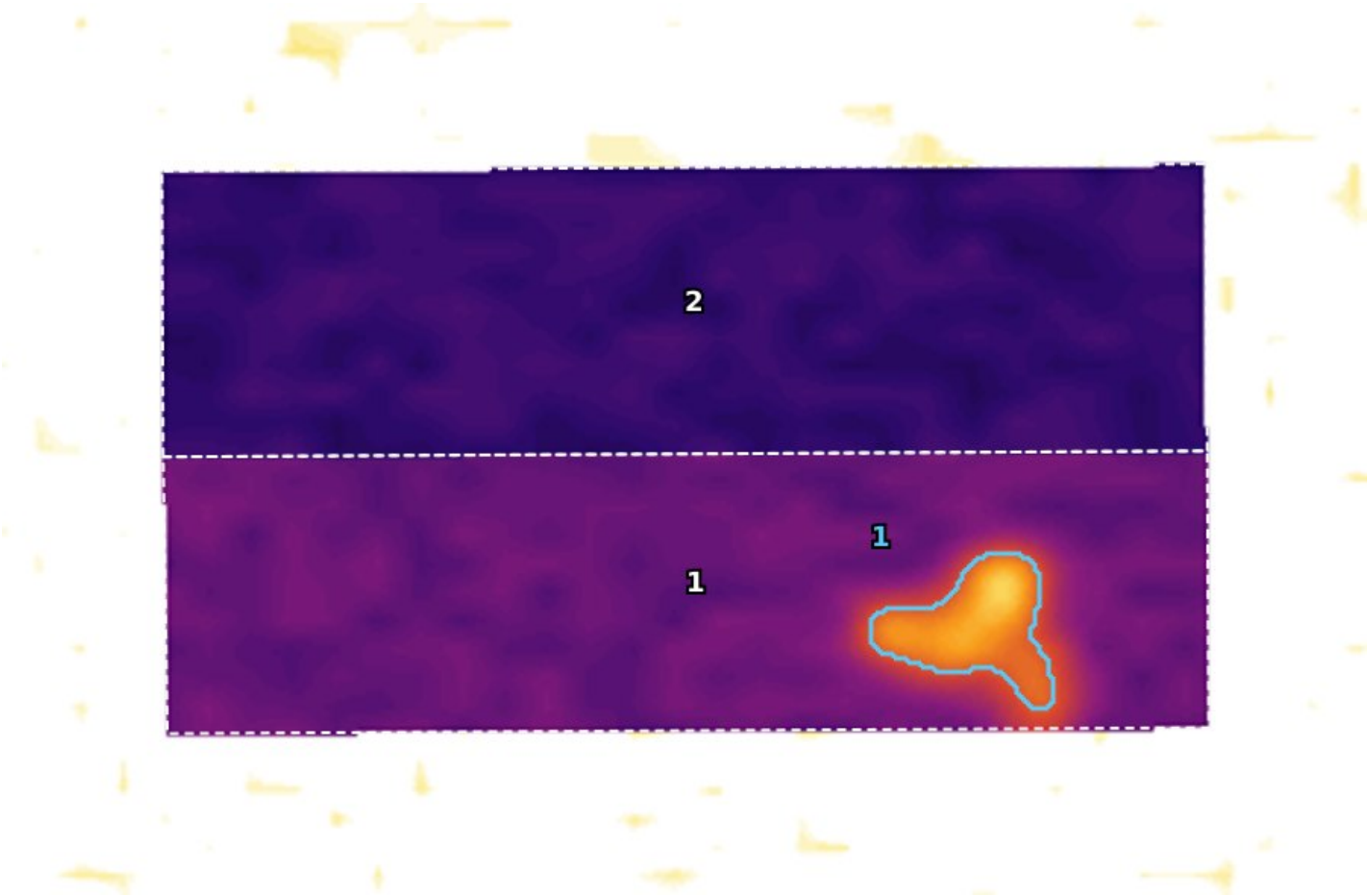
Moisture survey (thermal): illustration

Illustration only. No thermal flight was made over this roof: this page shows what a moisture survey looks like, using a typical finding on a shingle roof. Water getting in at the chimney's flashing spreads under the shingles and down toward the eave, and after sunset that wet patch stays warmer than the dry roof around it.

1
Warm area

86 sq ft
Warm roof in all

>= 3.6 °F
Warmer than its slope



#	Slope	Area	Warmer than its slope	At most
1	1 · Plane 1	86 sq ft	+4.7 °F	+6.5 °F

Slope	Typical temperature	Seen by the thermal map	Warm area
1 · Plane 1	66.4 °F	100%	86 sq ft
2 · Plane 2	65.1 °F	100%	7 sq ft

A warm area is a sign of possible moisture, not proof: a skylight curb, a vent, a patch of different material or the sun's warmth on one slope can look the same. We recommend checking each area with a moisture meter or a core sample before any repair. DJI rates its thermal cameras at ±2 °C (±3.6 °F) or ±2%, whichever is larger; the survey compares each area with the rest of its own slope, which is less affected by that.

Solar estimate

Re-roof before solar: worth checking first. The shingles look even and flat with nothing missing, but the drone photos can't show how old they are or how much life they have left. Solar panels would most likely go on the south-facing slope, which has the chimney with the rusty cap. Before installing, have a roofer confirm the shingles' age and check the chimney cap and the metal seal around the chimney's base. (from the roof inspection)

23
Panels to cover the home's use (420 W)

9.7 kW
System size

15,213
kWh a year, 101% of the home's use

$2,766
Worth a year

Sized to the home's 15,000 kWh a year, best-facing slope first: on the south slope (1) a panel makes about 661 kWh a year where it's placed (1,589 kWh per kW at this tilt and direction, less 0.9% to shade, × 420 W). So 23 panels make 15,213 kWh; 22 would make about 14,552, short of it.

What it's worth a year

	kWh a year	Per kWh	A year
Off the electricity bill	15,000	$0.184	$2,760
Surplus sold to the utility	213	$0.030	$6
Total saved	15,213		$2,766
Bill without solar	15,000	$0.184	$2,760
Bill with solar			$6 credit

Sized to the home's yearly use of 15,000 kWh. Power up to that takes kWh off the bill; anything more is surplus, which the utility buys once a year at its much lower avoided-cost rate. Bills are energy charges only: the utility's fixed monthly charge stays. Filling the roof instead (55 panels, drawn faintly) would make 36,055 kWh, worth $3,392 a year: $625 more for 32 more panels, since all of the extra is surplus.

Cost and payback

Installed price	9.7 kW at $2.50 a watt	$24,150
Saved in the first year		$2,766
Pays for itself in		7.9 years
Saved over 25 years		$95,364
Ahead after 25 years	savings less the price	$71,214

Florida installs cost about $2.10–$2.70 a watt in 2026, before incentives (EnergySage and SolarReviews averages). A system the homeowner buys gets no federal tax credit if it's installed after 2025: the 30% credit ended on December 31, 2025 (leases and power purchase agreements work differently). Assumes power prices rise 3% a year and panels lose 0.5% of their output a year; an inverter replacement or repairs aren't counted.

Hurricane backup

Pick what has to keep running and for how long; the battery is sized for it, with and without these panels.

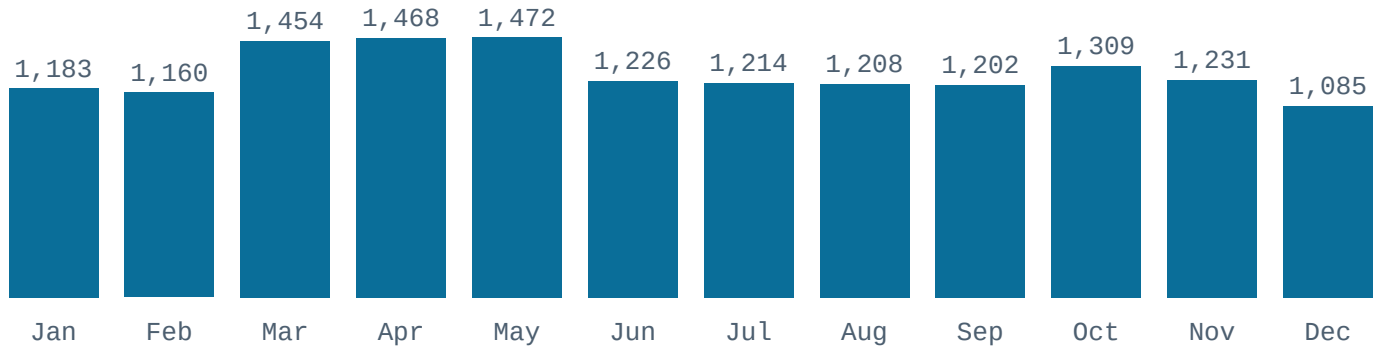
3.4 kWh
Battery for 3 days, with the solar panels above recharging it each day: 1 Tesla Powerwall 3 or 1 Enphase IQ Battery 5P

10.2 kWh
Battery alone, with no solar: 1 Tesla Powerwall 3 or 3 Enphase IQ Battery 5P

For 3.4 kWh a day (Refrigerator, Internet and phone charging, LED lights in the evening, Three ceiling fans); the panels make about 40.4 kWh on an average August to October day. The storm day is counted with no sun; cloudy days after a storm make less. The battery must start full and run with the grid down, and well pumps and AC need its surge rating checked.



The dark haze on the roof is shade: the darker it is, the more of the year's direct sun that spot loses to trees, neighbouring buildings and chimneys. Spots losing 20% or more get no panel, and panels go on the sunniest part of each slope. Panels keep clear of chimneys, vents, skylights and dishes marked on the roof, and of anything we found standing above a slope, such as a chimney, a dormer or a branch. Solid panels are the system; the faint dashed ones show the rest of the room, for later or a bigger system.



#	Plane	Faces	Shade	Each panel, a year (vs best slope)	Panels	kW	kWh / year
1	Plane 1	south (181°)	0.9% lost for the 23 panels shown, 1.7% across the slope	656 kWh (100%)	23 of 55	9.7	15,213

#	Plane	Faces	Shade	Each panel, a year (vs best slope)	Panels	kW	kWh / year
2	Plane 2 Left out: makes under 75% of the best plane	north (0°)	0.4% lost	475 kWh (72%)	57	0.0	–

Which way a roof faces, here

Faces	kWh / year per kW	Compared with south
south	1,589	100%
south-east	1,543	97%
south-west	1,511	95%
east	1,400	88%
west	1,356	85%
north-east	1,222	77%
north-west	1,189	75%
north	1,117	70%

For a roof at 23° (about 5/12), this roof's typical pitch, with this site's typical-year weather. The midday sun is to the south, so south faces make the most; east and west faces catch the morning or afternoon sun, and do best in summer, when it rises and sets furthest north. The flatter the roof, the less the direction matters. A plane that makes under 75% of this roof's best plane (the percentage beside each slope's output per panel, above) is left out of the estimate.

An estimate for a first conversation, not a design. Output is from PVWatts v8 (National Laboratory of the Rockies) with typical-year weather for this site and 14% system losses. Panels are 420 W, 1.722 × 1.134 m (54-cell, most home panels today), kept 18 in from every roof edge. Shade from trees, buildings and the roof's own chimneys within 60 m is worked out from our drone survey of Apr 29, 2018 and USGS lidar flown in 2019 beyond it, for every daylight hour of a typical year. The picture shows shade as a dark haze, and spots losing more than 20% of the year get no panel. Local fire codes may need wider clearances. Savings use the rates above and ignore the utility's fixed monthly charges.