EES

SAMPLE REPORT

Electricity consumption report

How and when this home uses power, and what it costs on the current plan.

Prepared for [redacted]

Supply address [redacted]

NMI [redacted] · **Retailer** Origin Energy · **Plan** Origin Go Variable

Data 22 Aug 2024 to 22 Aug 2026 (731 days)

Client name, address and meter identifiers redacted for privacy. Every number is from a real Geelong-region home.

Prepared by Environmental Energy Services · eeservices.io · REC 33223

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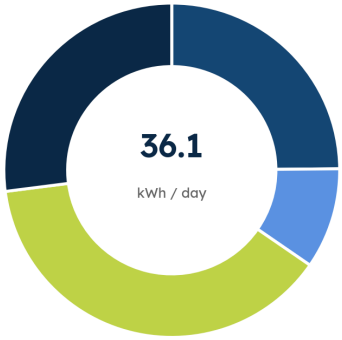
At a glance

Over 731 days this home averaged **36.1 kWh a day**, about **13,192 kWh a year**, with almost no seasonal swing: summer runs 38.1 kWh a day and winter 36.0. That is a home with a large, steady base of consumption running around the clock, not a heating-driven one. On the Origin Go Variable time-of-use plan it costs roughly **$321 a month**, or $3,846 a year including supply charges. The bill's own daily figure for autumn (34.3 kWh) matches the meter data for the same months, so the two sources agree.

36.1 kWh per day , average	**$321** average monthly bill (modelled)	**$3,846** per year on this plan	**25.7c** weighted average usage rate per kWh
27% of use between 17:00 and 23:00	**38%** of use between 09:00 and 17:00	**7.6 kW** highest single hour	**0.45 kW** overnight baseload (01:00–06:00)



Where the day's energy goes

Window	kWh/day	Share	$ / year
Overnight 23:00–07:00	9.0	25%	$698
Morning 07:00–09:00	3.5	10%	$274
Daytime 09:00–17:00	13.9	38%	$1,272
Evening 17:00–23:00	9.8	27%	$1,152

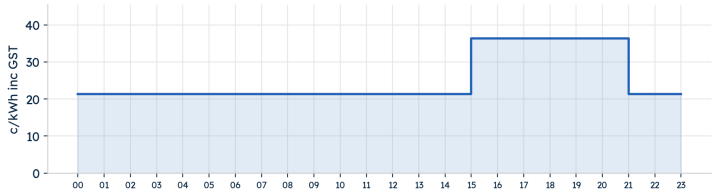
10.7 kWh a day (30%) falls in 15:00–21:00, the window most Victorian time-of-use plans price as peak. Supply charges are 12% of the annual bill.

How to read this report. Powercor 30-minute meter readings summed into clock hours, so each hourly figure is energy in that hour and average kW equals kWh. Dollar figures apply the rates on the Origin Energy bill to every hour in the data, so they show what this usage costs on the current plan, not what past bills were.

The tariff, and what the usage costs

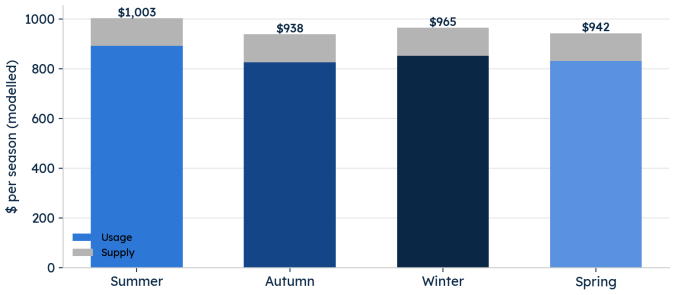
Origin Energy, plan **Origin Go Variable**. Time-of-use pricing: Peak (15:00–21:00) 36.4 c/kWh; all other times 21.3 c/kWh. Supply charge 123.2 c a day. All rates inc GST as printed.

Rate	Window	c/kWh
Peak	15:00–21:00	36.35
All other times	all other times	21.29
Supply charge	per day	123.16



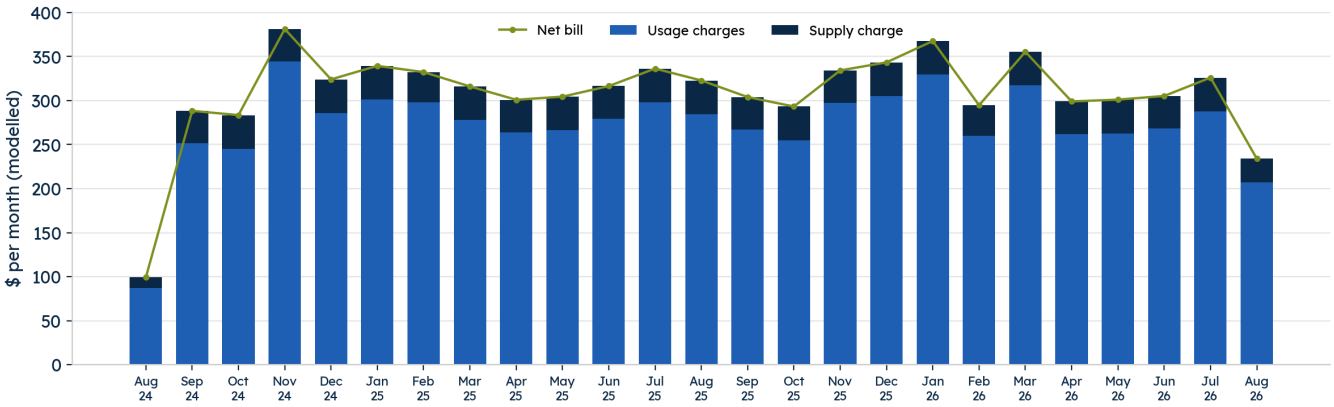
Average bill by season

Season	kWh/day	$/day	$/month	$/season
Summer	38.1	$11.12	$338	$1,003
Autumn	34.8	$10.20	$310	$938
Winter	36.0	$10.49	$319	$965
Spring	35.7	$10.35	$315	$942
Year	36.1	$10.54	$321	$3,846



Usage $3,397 + supply $450 = $3,846 a year. Monthly figures use 30.44 days.

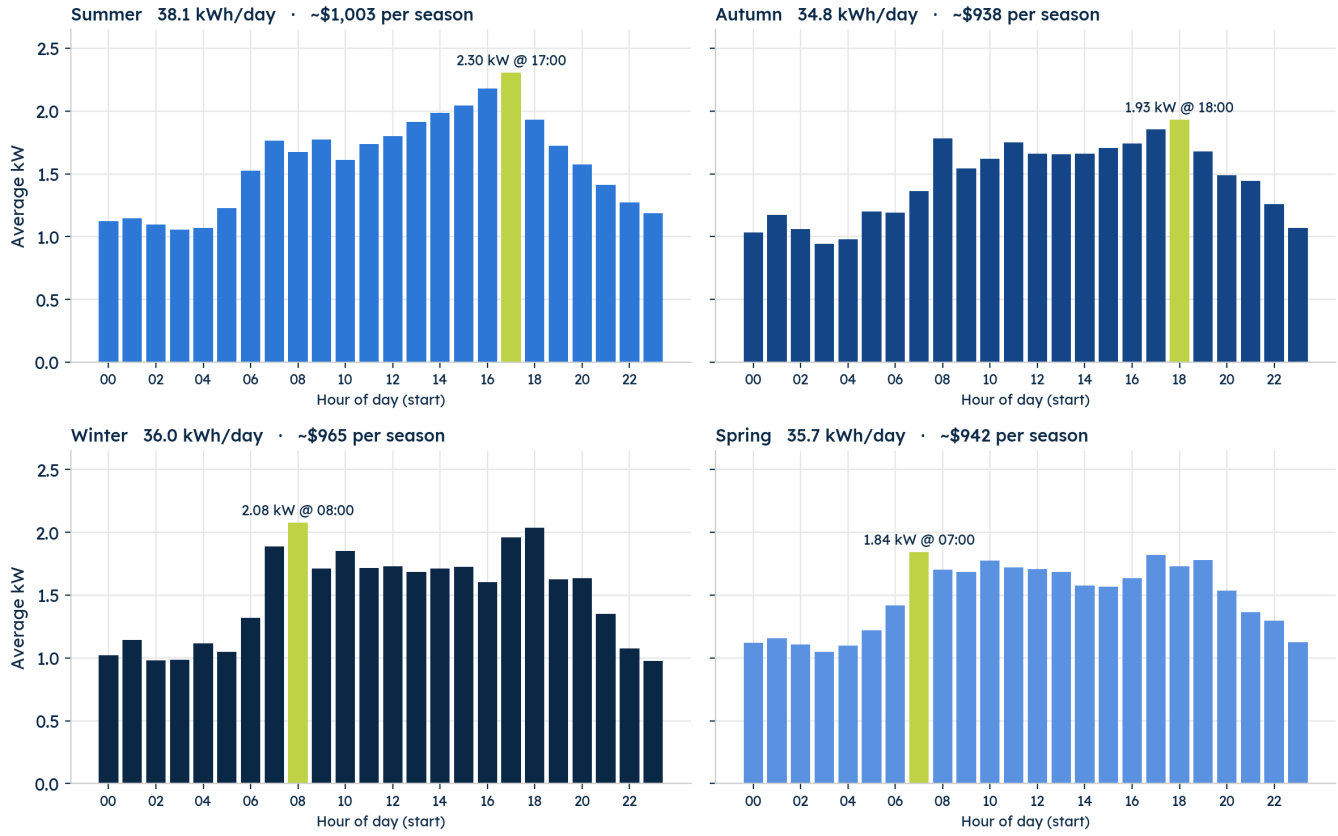
Month by month



Modelled from the interval data at the current rates. Partial months at each end of the data are lower simply because they have fewer days.

Average 24-hour profile, by season

Each bar is the average load in that clock hour across every day of the season. Green marks the busiest hour.



What stands out

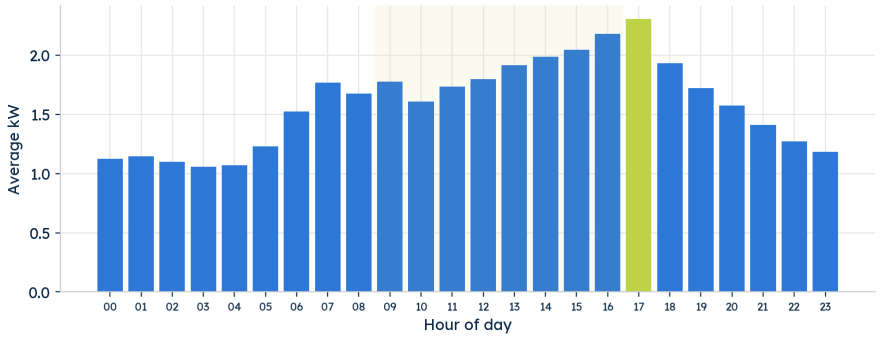
The four seasons are within 3.4 kWh a day of each other, which is rare. Summer is actually the heaviest at 38.1 kWh a day (about $1,003 for the season), pointing at cooling and a pool or similar running through the warm months. The peak hour moves with the seasons, 17:00 in summer, 08:00 in winter, but it is a gentle peak: the profile is a plateau from 07:00 to 21:00 at 1.5 to 2.3 kW rather than a spike. Overnight the home never drops below about 1 kW, roughly double a typical house, which is around 8 to 9 kWh every night before anyone wakes up.

Season	kWh/day	Peak kW	$/season
Summer	38.1	2.30 @ 17:00	$1,003
Autumn	34.8	1.93 @ 18:00	$938
Winter	36.0	2.08 @ 08:00	$965
Spring	35.7	1.84 @ 07:00	$942

Season by season

Shaded band is 09:00–17:00, the window where a solar system generates most of its energy.

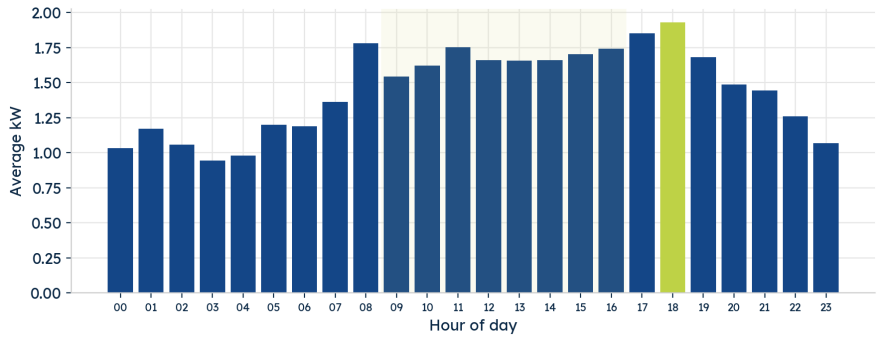
Summer



38.1	2.30 kW	15.0	10.2	$1,003	180
kWh/day	peak, 17:00	kWh 09:00–17:00	kWh 17:00–23:00	per season	days

38.1 kWh a day on average, costing about $11.12 a day or $1,003 for the season. Daytime (09:00–17:00) carries 15.0 kWh of that and the evening 10.2 kWh. Busiest hour 17:00 at 2.30 kW; heaviest single day 77.3 kWh.

Autumn

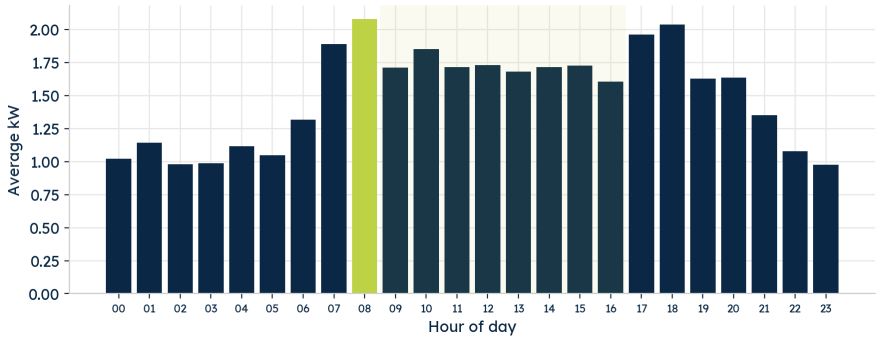


34.8	1.93 kW	13.3	9.7	$938	184
kWh/day	peak, 18:00	kWh 09:00–17:00	kWh 17:00–23:00	per season	days

34.8 kWh a day on average, costing about $10.20 a day or $938 for the season. Daytime (09:00–17:00) carries 13.3 kWh of that and the evening 9.7 kWh. Busiest hour 18:00 at 1.93 kW; heaviest single day 78.2 kWh.

Season by season (continued)

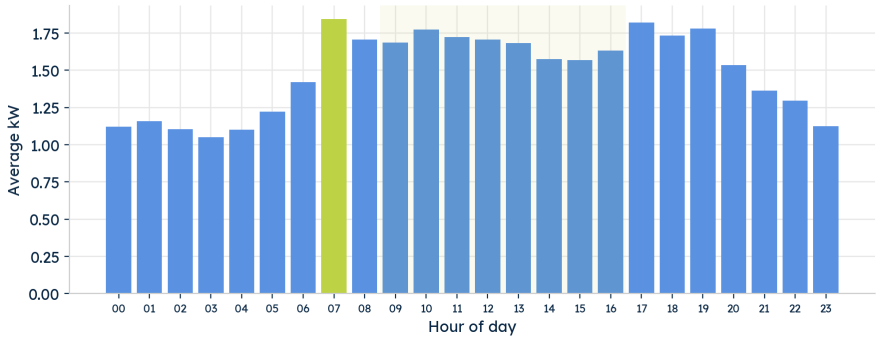
Winter



36.0	2.08 kW	13.7	9.7	$965	185
kWh/day	peak, 08:00	kWh 09:00–17:00	kWh 17:00–23:00	per season	days

36.0 kWh a day on average, costing about $10.49 a day or $965 for the season. Daytime (09:00–17:00) carries 13.7 kWh of that and the evening 9.7 kWh. Busiest hour 08:00 at 2.08 kW; heaviest single day 58.9 kWh.

Spring

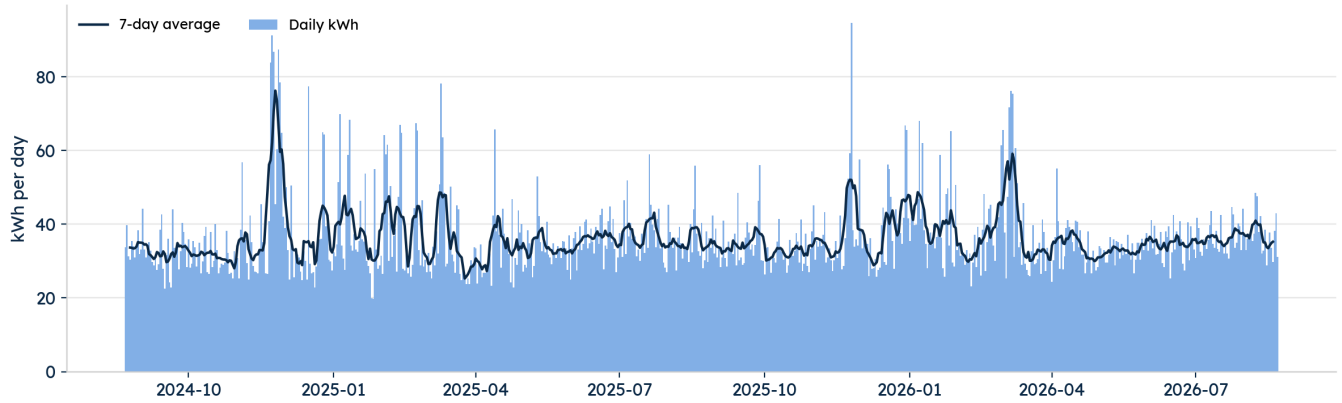


35.7	1.84 kW	13.4	9.5	$942	182
kWh/day	peak, 07:00	kWh 09:00–17:00	kWh 17:00–23:00	per season	days

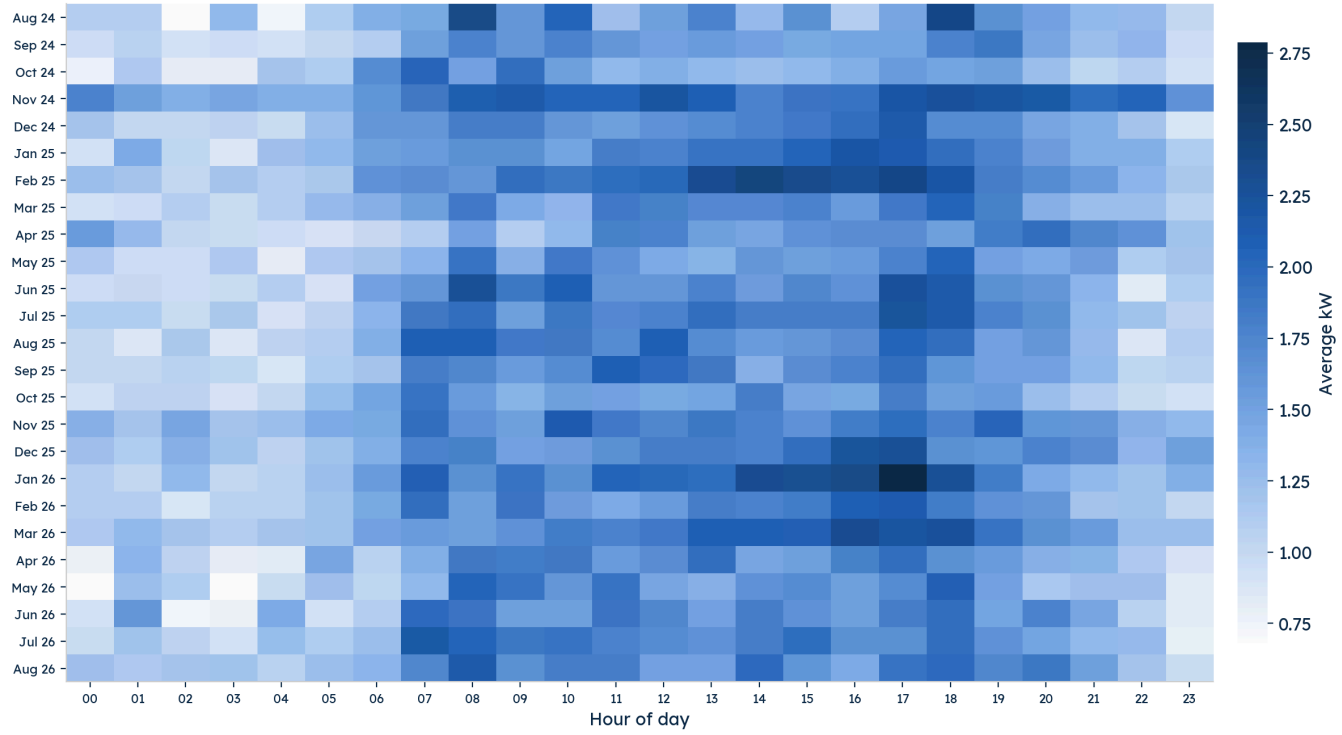
35.7 kWh a day on average, costing about $10.35 a day or $942 for the season. Daytime (09:00–17:00) carries 13.4 kWh of that and the evening 9.5 kWh. Busiest hour 07:00 at 1.84 kW; heaviest single day 94.6 kWh.

Patterns over the period

Day by day

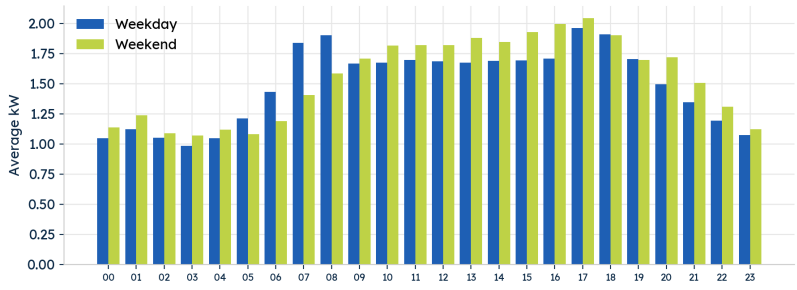


Month by hour



Darker is more load. Read across a row for the daily shape in that month; read down a column for how one hour changes through the year.

Weekday vs weekend



Highest days

Date	Use	Cost
Tue 25 Nov 2025	94.6 kWh	$26
Sat 23 Nov 2024	91.3 kWh	$24
Wed 27 Nov 2024	87.3 kWh	$24
Sun 24 Nov 2024	86.8 kWh	$23
Fri 22 Nov 2024	83.9 kWh	$22

What this means for solar and storage

Daytime: 13.9 kWh a day between 09:00 and 17:00

38% of this home's energy is used while the sun is up, worth about $1,272 a year at the current rates. That is an unusually solar-friendly shape: a 10.8 kW array covers this directly on most days with a large surplus left for storage.

Evening and overnight: 22.2 kWh a day outside that window

This is the block a battery is sized against. It costs about $2,124 a year, and 10.7 kWh a day (30% of all use) sits inside the 15:00 to 21:00 peak window, priced at 36.4 c/kWh on the current plan.

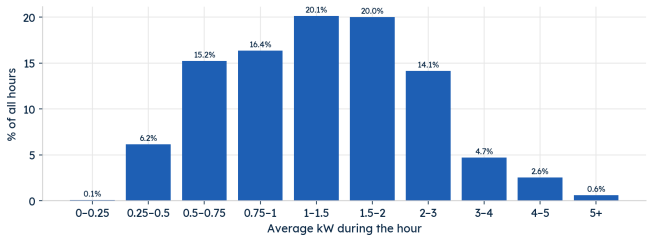
Peak demand

The 95th-percentile hour is 3.6 kW and the highest on record 7.6 kW, comfortably inside a 10 kW hybrid inverter's discharge rating. Energy capacity, not power, is the sizing question here.

The overnight kilowatt

A steady 1 kW floor all night, every season, is worth chasing regardless of what gets installed: at 21.3 c/kWh off-peak it is roughly $700 a year on its own.

How hard the home draws



In numbers

71% of all hours average under 2 kW and the 95th-percentile hour is 3.6 kW; the single highest hour was 7.6 kW at 17:00 on 20 Jan 2026. The heaviest days cluster in late November (94.6 kWh on 25 Nov 2025), which looks like cooling plus something extra running flat out. Weekends (37.0 kWh) barely differ from weekdays (35.8), consistent with loads that run regardless of occupancy. Usage is up 0.6% year on year, so this pattern is stable, not a one-off.

Next step. Pair this load profile with the roof's generation estimate and the current tariff to size a system against the actual usage above rather than a rule of thumb. We model savings per household because they depend on tariff, generation and habits after install.

Data notes

- Interval data: 731 days, 22 Aug 2024 to 22 Aug 2026, NMI [redacted]. 288 half-hour intervals carry the provider's substitution flag and are included as supplied.
- Tariff: Origin Energy bill 07 Mar 2026 to 06 Jun 2026, 3154.979 kWh, $927.58 due. Rates as printed, inc GST. Costs exclude concessions, one-off credits and the Energy Bill Relief rebate.
- Seasons use the Australian calendar. Hours are clock hours by interval start. Savings depend on tariff, habits and weather; figures are indicative.

Conclusion: 10.8 kW solar, 10 kW inverter, 36 kWh Sigenergy battery

We modelled the proposed system against every one of the 731 days of actual meter data: a half-sine solar day scaled to typical Geelong monthly yield, capped at the 10 kW inverter, charging the 36 kWh battery, with the battery carrying the house whenever the sun is not. Two operating modes are shown: solar-only charging, and the battery force-charged to full from the grid in the middle of the day.

36.1
kWh/day from grid today (all of it)

5.7
kWh/day from grid with the system, solar-only charging

84%
self-sufficient, solar-only charging

406
grid-free days out of 731, solar-only

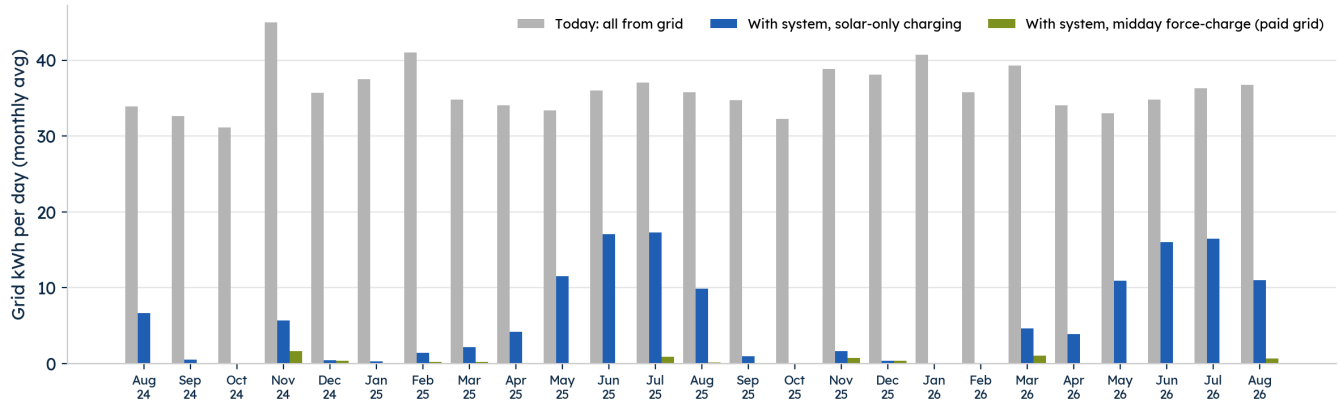
22
kWh/day typical winter solar from 10.8 kW

14.4
kWh/day winter grid draw, solar-only charging

$2,768
indicative saving per year at current Origin rates

7.0
kWh/day exported on average

Monthly averages, today versus with the system

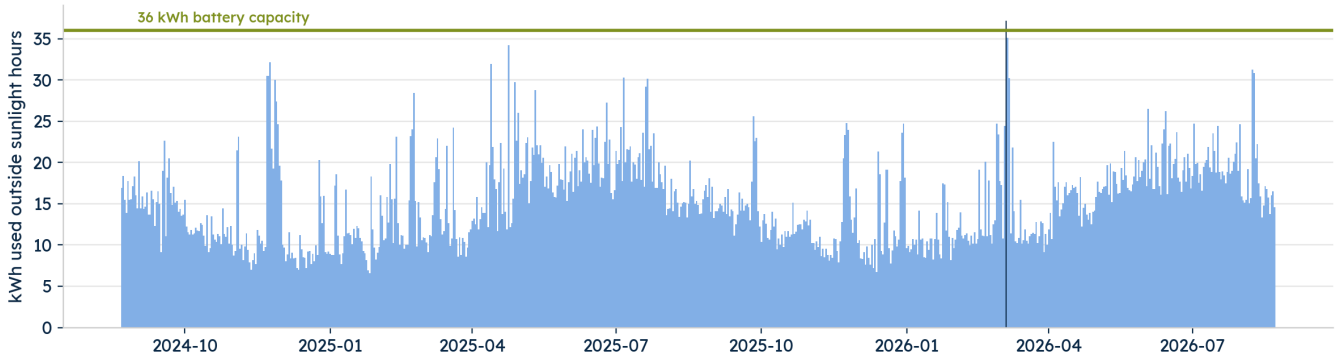


Summer and spring are effectively solved by solar alone: 0.4 kWh a day of grid draw in summer against 38 kWh of use. The gap is winter. The house keeps using 36 kWh a day but a 10.8 kW array only produces around 22 kWh, so with solar-only charging the battery cannot refill and 14.4 kWh a day still comes from the grid across June and July. That is where the charging strategy matters.

Assumptions. Typical Geelong yield per kW by month (1.8 kWh/kW/day in June to 5.4 in December), 90% battery round-trip efficiency, 36 kWh treated as usable, no shading. Real output moves with roof orientation, weather and any Powercor export limit at this address. Savings are valued at the current Origin rates and exclude feed-in earnings, so they are conservative on the credit side.

Night use, the 36 kWh battery, and the GloBird ZEROHERO strategy

Does the battery cover the nights?



Each bar is one day's usage outside sunlight hours, the load that leans entirely on the battery once the sun is down. It averages 15.2 kWh, rises to 18.9 kWh across winter, and the biggest winter night in two years was **31.2 kWh, inside the 36 kWh capacity**. Only 1 night in 731 exceeded 36 kWh, and it was not in winter. So a fully charged 36 kWh battery covers effectively every night this home has had. The margin is the caveat: 4 winter nights ran past 30 kWh, leaving under 6 kWh spare, cloudy-day daytime draw eats into the same store, and a new load like an overnight EV charger would push past capacity, with the balance bought at the overnight rate. The battery only covers a night it starts full, which is what the tariff strategy below is for.

The ZEROHERO force-charge strategy

GloBird's ZEROHERO plan prices grid usage at $0.00 in a daily midday window (currently 12:00 to 15:00, fair-use limit applies) and pays a $1 a day credit when the home draws effectively zero grid power through the evening peak, plus time-varying feed-in with a bonus on evening exports. The strategy is to schedule the Sigenergy to force-charge from the grid inside the free window so the battery hits 100% every afternoon, no matter the season or the weather. Solar does the work for most of the year; the free window quietly tops up whatever winter and cloud leave behind.

Modelled on this home's actual usage, force-charging changes winter completely: paid grid draw falls to **0.3 kWh a day in winter** (181 of 185 winter days at effectively zero paid import), with about 16 kWh a day drawn in the free window instead. Across the whole period the home is 99% free of paid grid energy, and most evenings would qualify for the $1 peak credit. The residual bill becomes little more than the daily supply charge.

> **Read this with both feet on the ground.** The free window carries a fair-use limit, and winter's ~16 kWh of top-up plus midday house load must fit inside it; a 36 kWh Sigenergy charging at up to 10 kW fits a three-hour window easily, but the limit terms belong on the current Powercor-zone fact sheet before the plan is recommended. ZEROHERO's rates differ from the Origin plan modelled in this report and change over time; the $1 evening credit needs near-zero grid draw (about 0.03 kWh an hour), which a healthy battery achieves. Daily force-charging cycles the battery harder, a warranty conversation, and Sigenergy scheduling makes the whole strategy set-and-forget.

What we would do

The load shape earns the system on its own: 38% of use in daylight, flat seasons, every night inside 36 kWh. Solar-only operation removes about 84% of grid purchases, roughly $2,768 a year at today's rates, and the force-charge strategy closes most of the winter gap that remains. Before quoting: confirm roof fit, the Powercor export limit for this address, and the current ZEROHERO fact sheet.