

Octopus Flux Tariff 15kWh Battery

Workspace

**Site location**

home (51.67, -1.92) · UTC

**Battery**

generic 15 (15 kWh)

**Inverter**

Fox ESS H1-5.0-E (5 kW)

setpoints: Auto-optimize battery setpoints

**Solar Arrays**

easat (Jinko Tiger Neo 54HL4R 445W, 7 panels, 3.1 kW)

west (Jinko Tiger Neo 54HL4R 445W, 7 panels, 3.1 kW)

**Load profile**

house load (3,500 kWh/yr)

**Heat pump**

heat pump (rated 5,000 W · design house 21 °C · design flow 45 °C)

**Tariff**

Octopus Flux example (UK)  
import: 0.15, 0.26, 0.36 · export: 0.05, 0.10, 0.29 · daily standing: 0.48

|                                    |                                                            |                                                 |
|------------------------------------|------------------------------------------------------------|-------------------------------------------------|
| Summary                            |                                                            |                                                 |
| Solar Generated                    | 5,322 kWh                                                  | (5,322 (utilised) + 0 (clipped))                |
| Load Consumed                      | 7,341 kWh                                                  | 1,899 GBP (cost without solar)                  |
| Space heating electric (heat pump) | 3,152 kWh                                                  | (thermal generated 13,636)                      |
| Hot water electric (heat pump)     | 689 kWh                                                    | (thermal generated 2,173)                       |
| Grid Import                        | 6,858 kWh                                                  | 1,366 GBP (0.20 (average import price GBP/kWh)) |
| Grid Export                        | 4,607 kWh                                                  | 1,218 GBP (0.26 (average export price GBP/kWh)) |
| Total benefit from solar & battery | 1,751 GBP                                                  |                                                 |
| New electricity bill               | 322 GBP (1,366 (import) - 1,218 (export) + 174 (standing)) |                                                 |

**Self-Consumption**

Share of load met from PV and batteries vs grid import.

6.6%

Spring: 27.3% Summer: 51.7%  
Autumn: -13.0% Winter: -13.9%

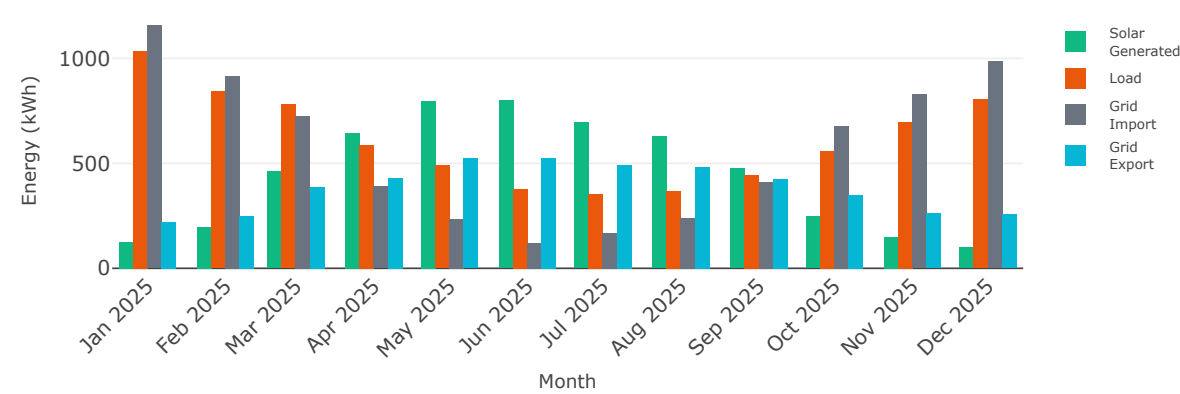
Self-Consumption  
482 kWh

Grid Import  
6,858 kWh

# Yearly Summary

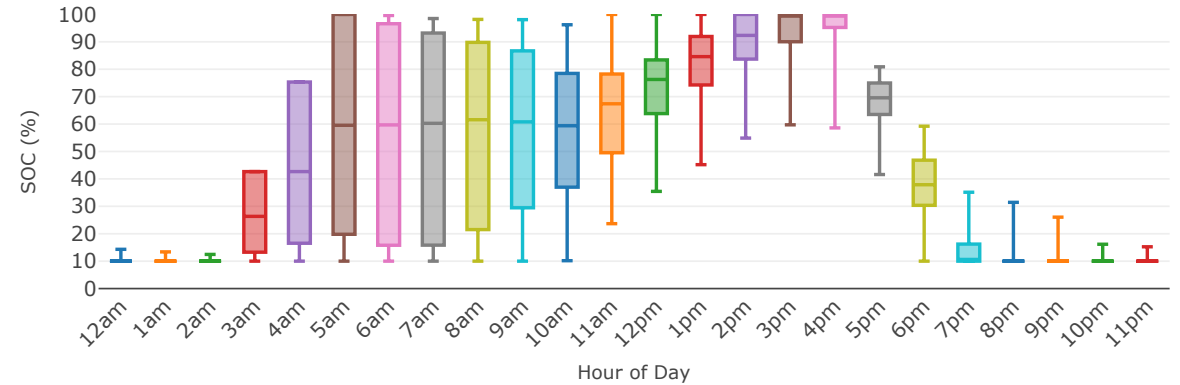
## Monthly Energy Totals

Energy flows by month: solar, load, grid import, grid export.



## SOC Distribution by Hour

Spread of battery charge levels by hour (box plot).



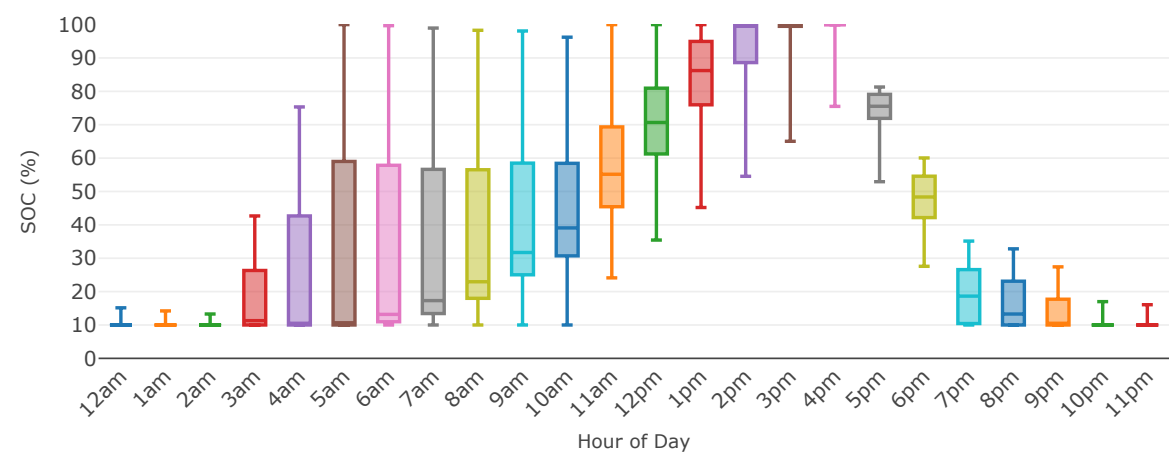
## Monthly Summary

|                          | Jan         | Feb       | Mar       | Apr       | May       | Jun       | Jul       | Aug       | Sep       | Oct       | Nov       | Dec       |
|--------------------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Solar Generated kWh      | 124         | 197       | 461       | 646       | 798       | 800       | 694       | 628       | 476       | 248       | 150       | 100       |
| Load kWh                 | 1,036       | 843       | 781       | 588       | 490       | 378       | 355       | 367       | 444       | 558       | 696       | 805       |
| Average SOC %            | 54          | 55        | 49        | 37        | 38        | 39        | 40        | 41        | 45        | 55        | 55        | 55        |
| Grid Import kWh/GBP      | 1,156 / 241 | 915 / 185 | 727 / 140 | 390 / 80  | 234 / 48  | 122 / 24  | 169 / 33  | 240 / 46  | 411 / 78  | 679 / 127 | 829 / 163 | 986 / 200 |
| Grid Export kWh/GBP      | 220 / 64    | 248 / 70  | 386 / 103 | 430 / 115 | 524 / 129 | 527 / 127 | 492 / 125 | 484 / 125 | 426 / 113 | 349 / 96  | 262 / 75  | 257 / 75  |
| Net electricity cost GBP | 177         | 114       | 37        | -35       | -81       | -103      | -92       | -79       | -35       | 31        | 88        | 126       |

# Summer Monthly Summary

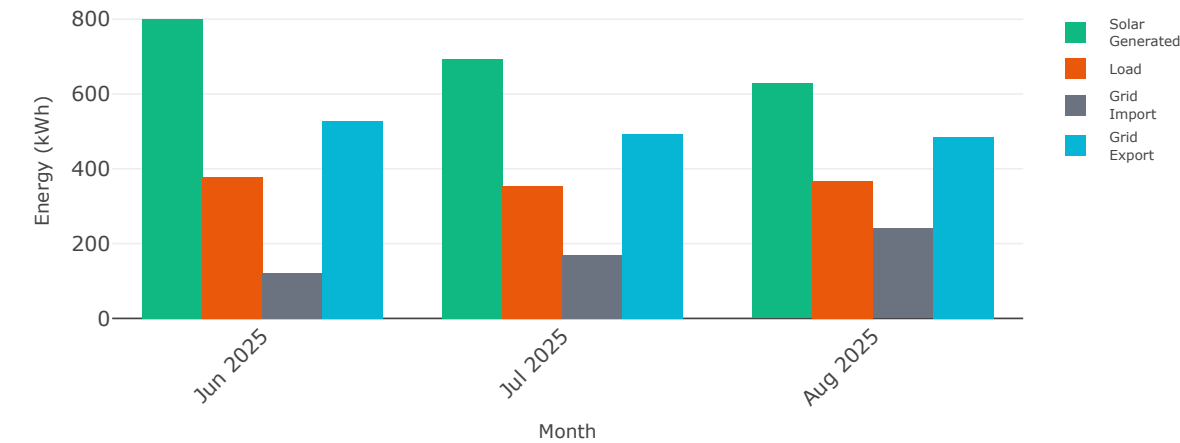
## Summer SOC Distribution by Hour

Spread of battery charge levels by hour for June, July, August.



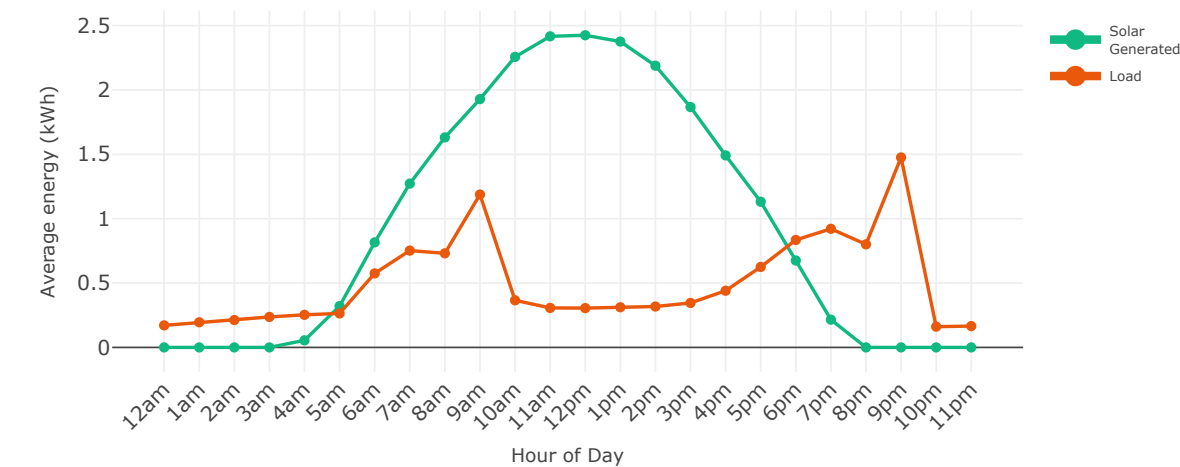
## Summer Energy Totals by Month

Energy flows for June, July, August: solar, load, grid import, grid export.



## Summer Hourly Average Energy

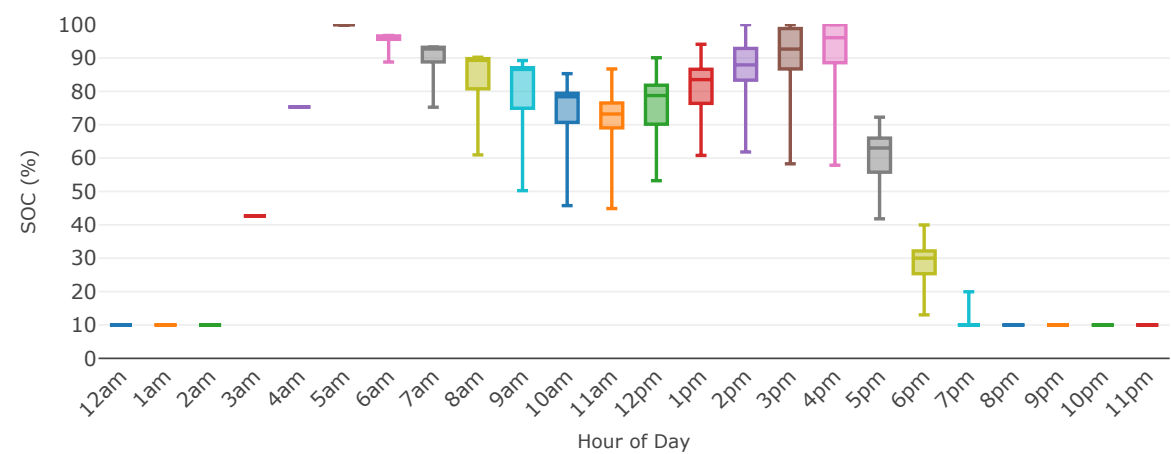
Average hourly solar generation vs load for that season's months.



# Winter Monthly Summary

## Winter SOC Distribution by Hour

Spread of battery charge levels by hour for December, January, February.



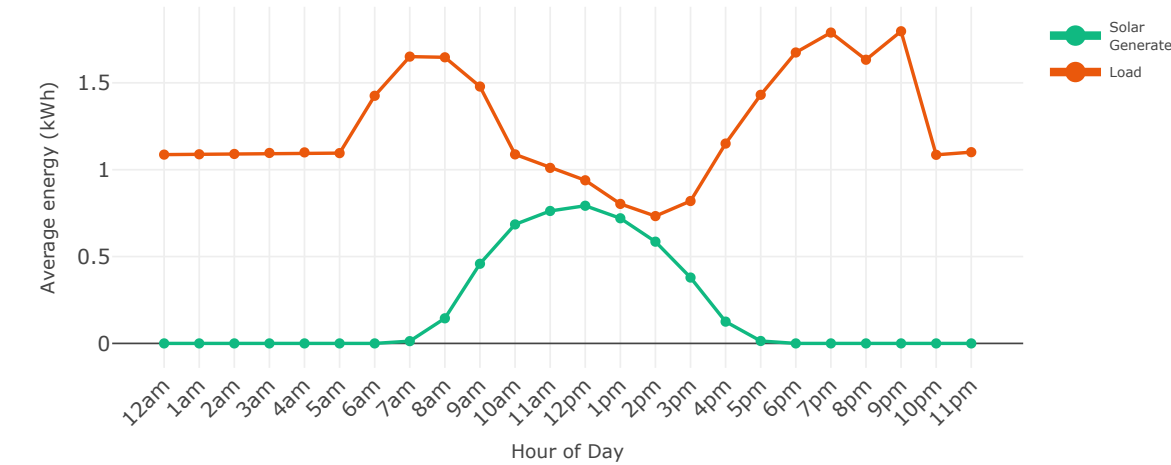
## Winter Energy Totals by Month

Energy flows for December, January, February: solar, load, grid import, grid export.



## Winter Hourly Average Energy

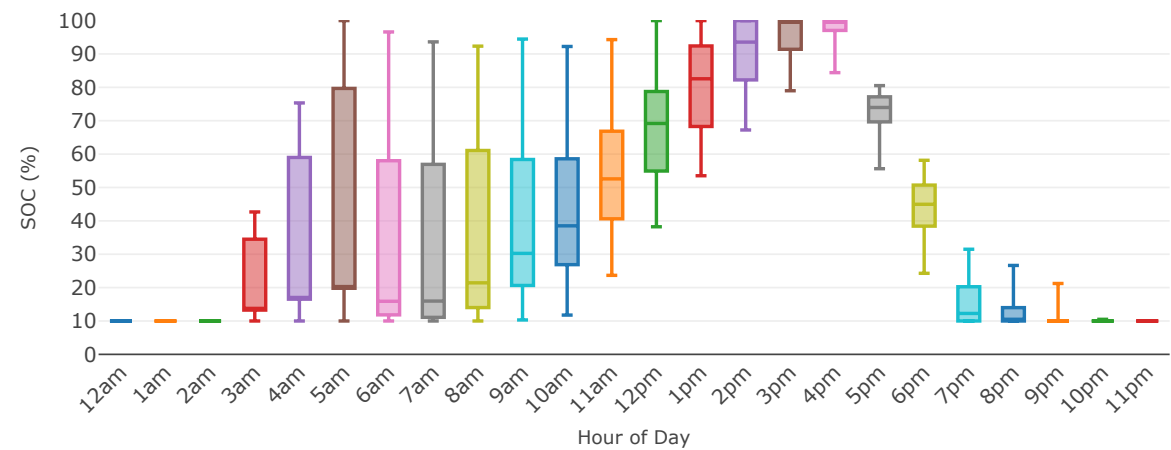
Average hourly solar generation vs load for that season's months.



# Spring Monthly Summary

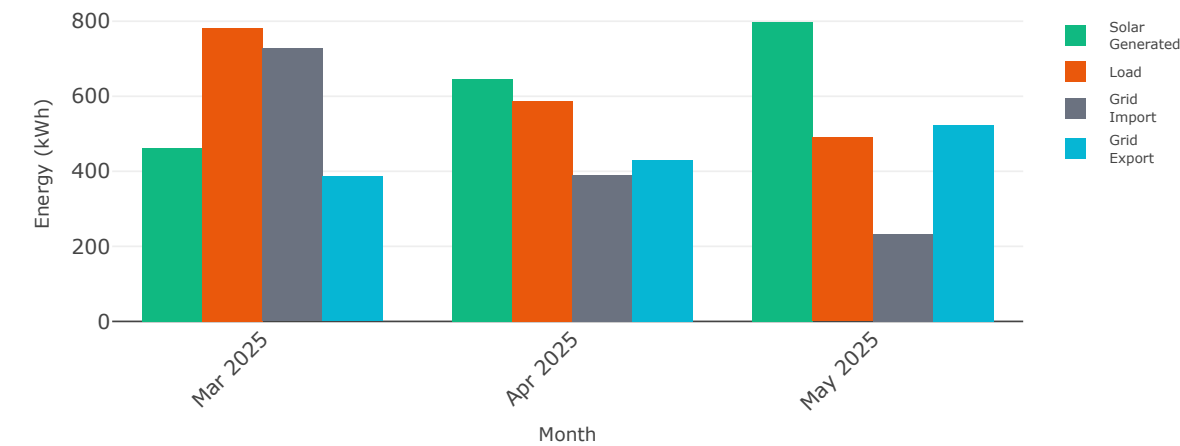
## Spring SOC Distribution by Hour

Spread of battery charge levels by hour for March, April, May.



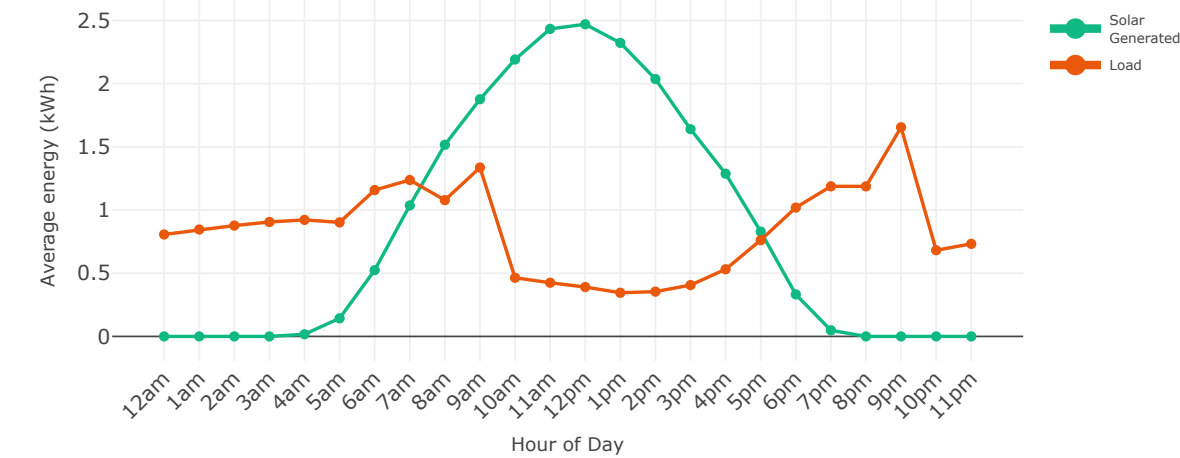
## Spring Energy Totals by Month

Energy flows for March, April, May: solar, load, grid import, grid export.



## Spring Hourly Average Energy

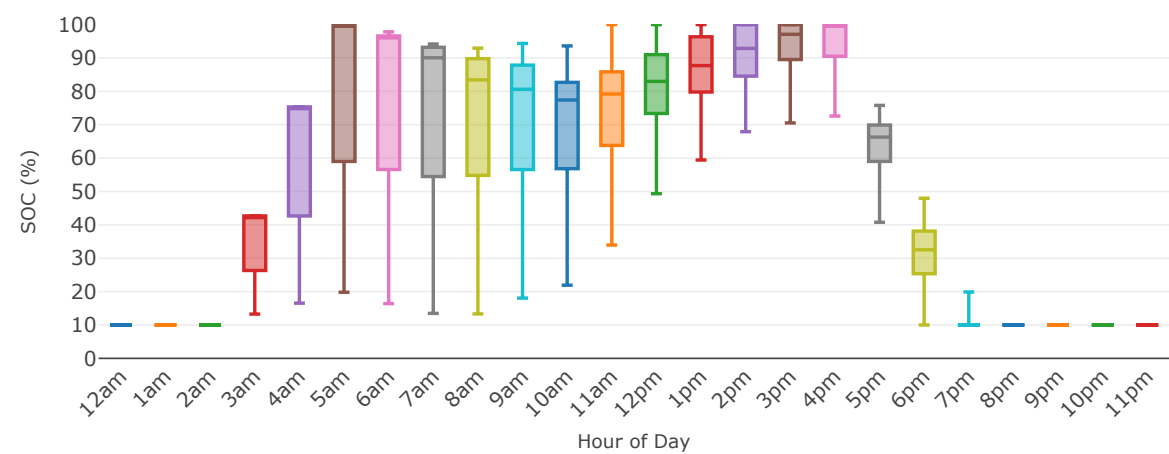
Average hourly solar generation vs load for that season's months.



# Autumn Monthly Summary

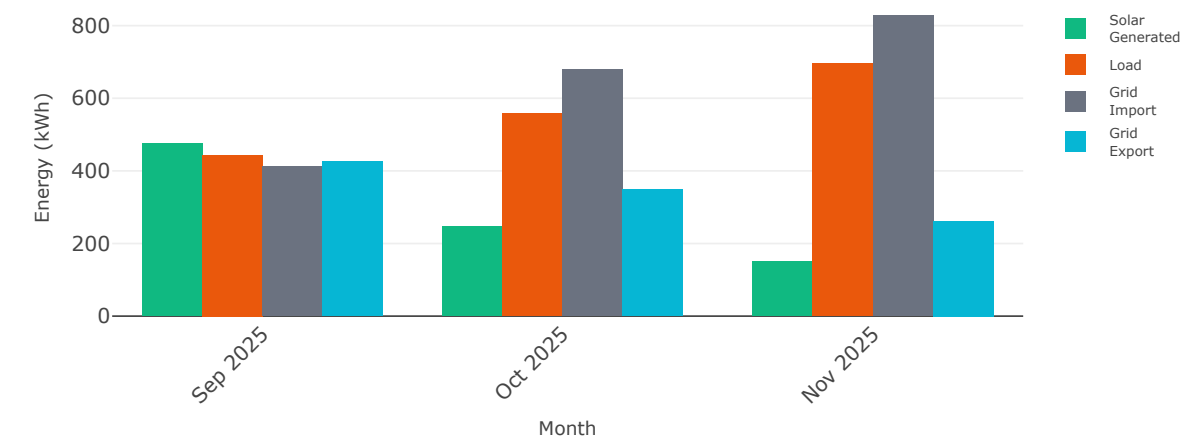
## Autumn SOC Distribution by Hour

Spread of battery charge levels by hour for September, October, November.



## Autumn Energy Totals by Month

Energy flows for September, October, November: solar, load, grid import, grid export.



## Autumn Hourly Average Energy

Average hourly solar generation vs load for that season's months.

