

HISTORIC SIMULATION REPORT

UK

Workspace

Site location

UK-Gloucester (51.89, -2.19) · UTC

Battery

10 (10 kWh)

Inverter

Fox ESS H1-5.0-E (5 kW)

Solar Arrays

solar10 (Jinko Tiger Neo 54HL4R 445W, 10 panels, 4.5 kW)

Load profile

household load 2800 (2,800 kWh/yr)

Heat pump

Valiant (space 3,445 kWh · hot water 770 kWh)

Tariff

fixed
import: 0.28 · export: 0.12 · daily standing: 0.60

Summary

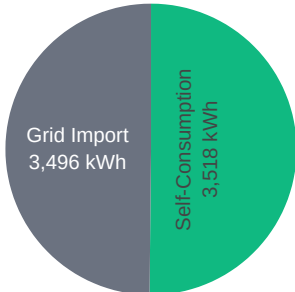
☀️ Solar Generated	4,990 kWh	(4,990 (utilised) + 0 (clipped))
📈 Load Consumed	7,014 kWh	1,964 GBP (cost without solar)
🔧 Space heating (heat pump)	3,445 kWh	
🔧 Hot water (heat pump)	770 kWh	
🔌 Grid Import	3,496 kWh	979 GBP
🔌 Grid Export	1,407 kWh	169 GBP
\$ Total benefit from solar & battery	1,154 GBP	
\$ New electricity bill	1,029 GBP	(979 (import) - 169 (export) + 219 (standing))

Self-Consumption

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

50.2%

Spring: 69.3% Summer: 99.8%
Autumn: 50.8% Winter: 19.9%



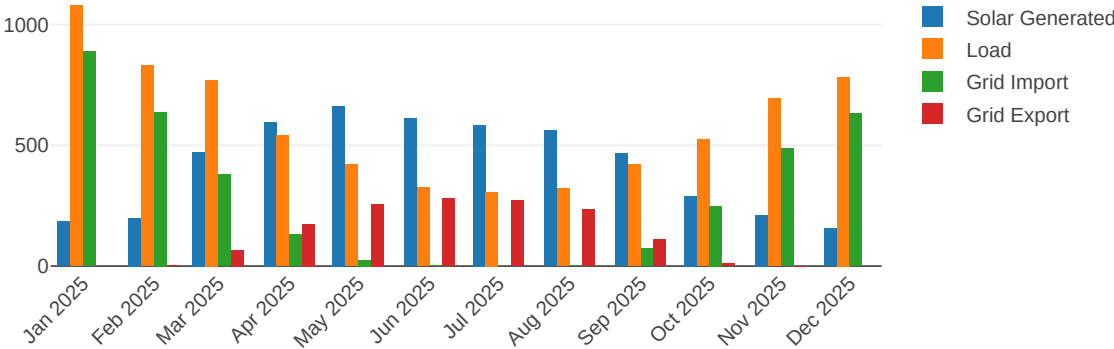
Grid Import 3,496 kWh

Self-Consumption 3,518 kWh

Yearly Summary

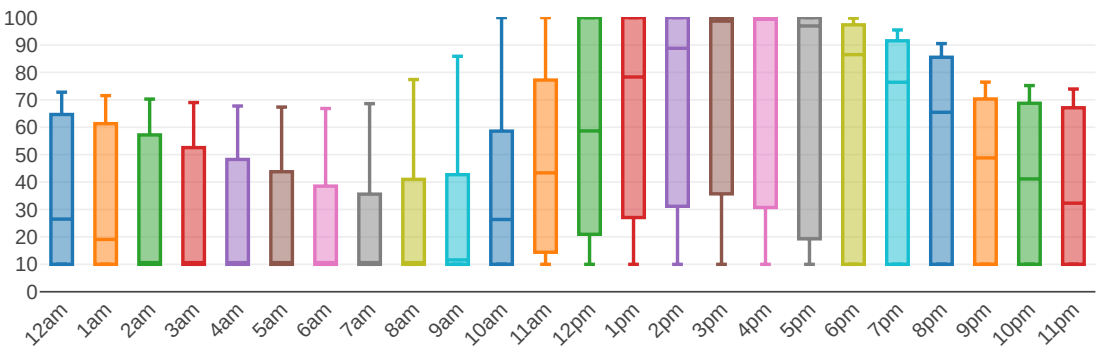
Monthly Energy Totals

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



SOC Distribution by Hour

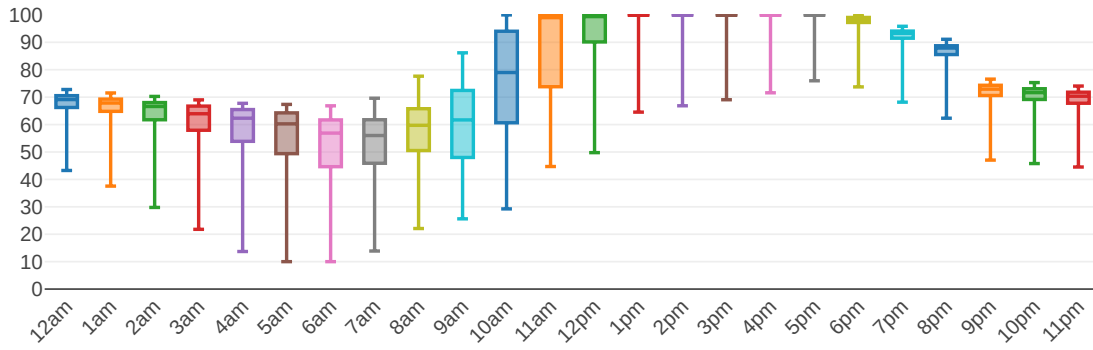
Spread of battery charge levels by hour (box plot).



Summer Monthly Summary

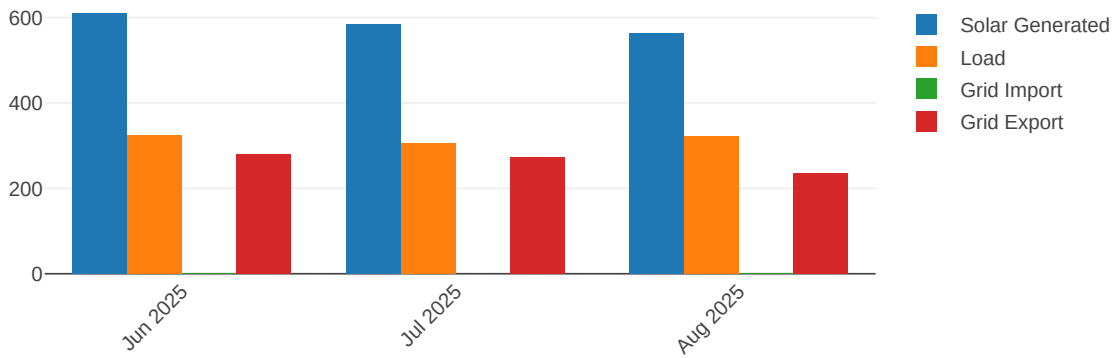
Summer SOC Distribution by Hour

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



Summer Energy Totals by Month

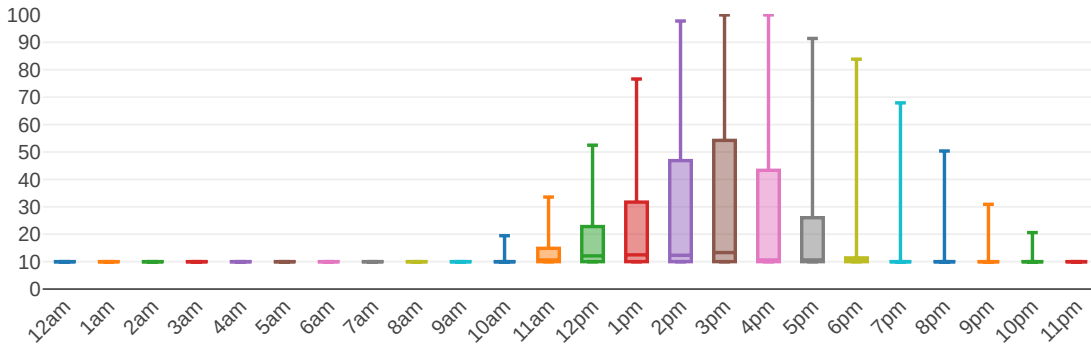
Energy flows for June, July, August: solar, load, grid import, grid export.



Winter Monthly Summary

Winter SOC Distribution by Hour

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



Winter Energy Totals by Month

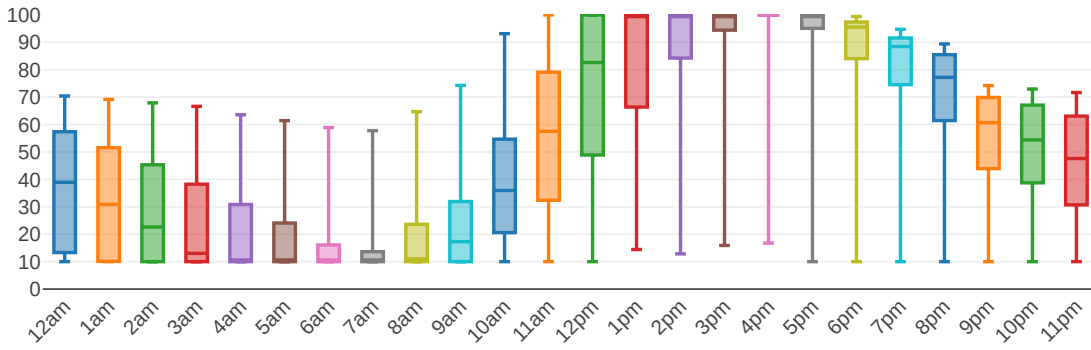
Energy flows for December, January, February: solar, load, grid import, grid export.



Spring Monthly Summary

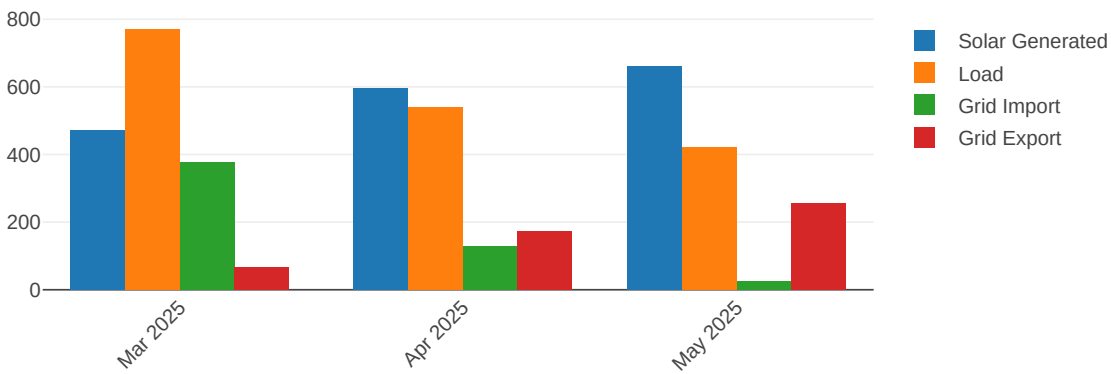
Spring SOC Distribution by Hour

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



Spring Energy Totals by Month

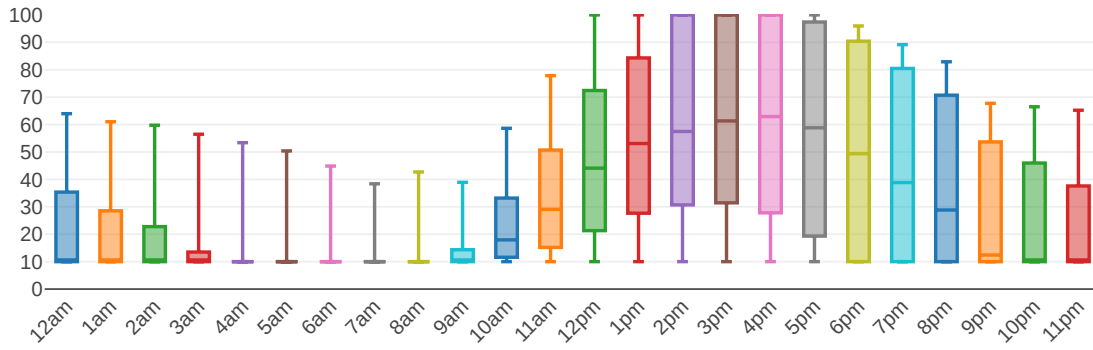
Energy flows for March, April, May: solar, load, grid import, grid export.



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.

