

HISTORIC SIMULATION REPORT

Off-grid option 32kWh battery + 10kW solar array

Workspace

Site location

home (51.89, -2.19) · UTC

Battery

Generic 32kWh (32 kWh)

Inverter

Alpha 5 (5/5 kW)

Solar Arrays

Southx20 (DMEG 495, 20 panels, 9.9 kW)

Load profile

household load 2800 (2,800 kWh/yr)

Tariff

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

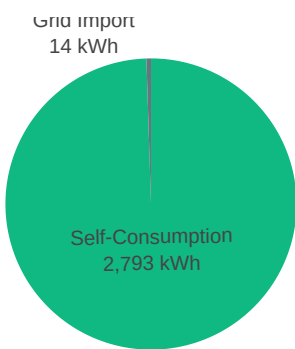
Summary		
☀️ Solar Generated	9,620 kWh	
📈 Load Consumed	2,808 kWh	786 GBP (cost without solar)
🔌 Grid Import	14 kWh	4 GBP
🔌 Grid Export	6,321 kWh	758 GBP
💰 Total benefit from solar & battery	1,541 GBP	
💰 New electricity bill	-535 GBP (4 (import) - 758 (export) + 220 (standing))	

Self-Consumption

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

99.5%

Spring: 100.0% Summer: 100.0%
Autumn: 100.0% Winter: 98.0%



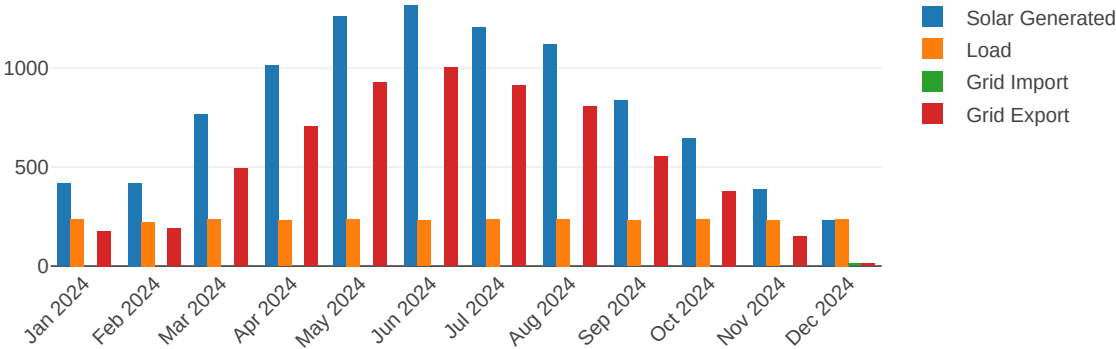
Grid import
14 kWh

Self-Consumption
2,793 kWh

Yearly Summary

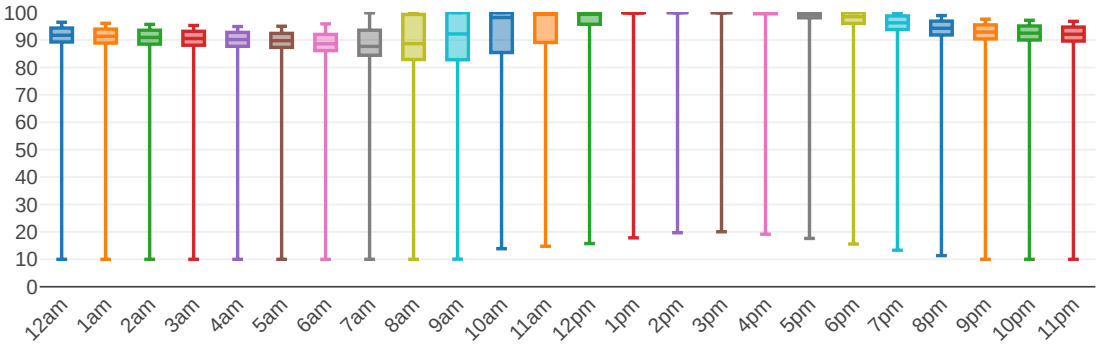
Monthly Energy Totals

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



SOC Distribution by Hour

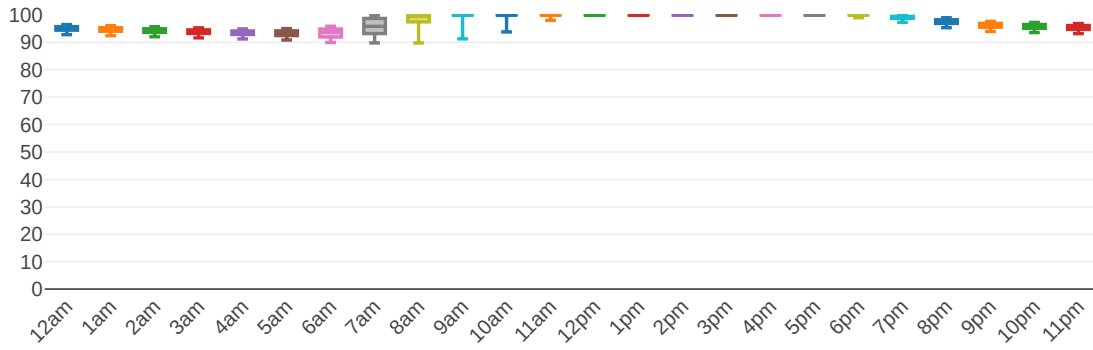
Spread of battery charge levels by hour (box plot).



Summer Monthly Summary

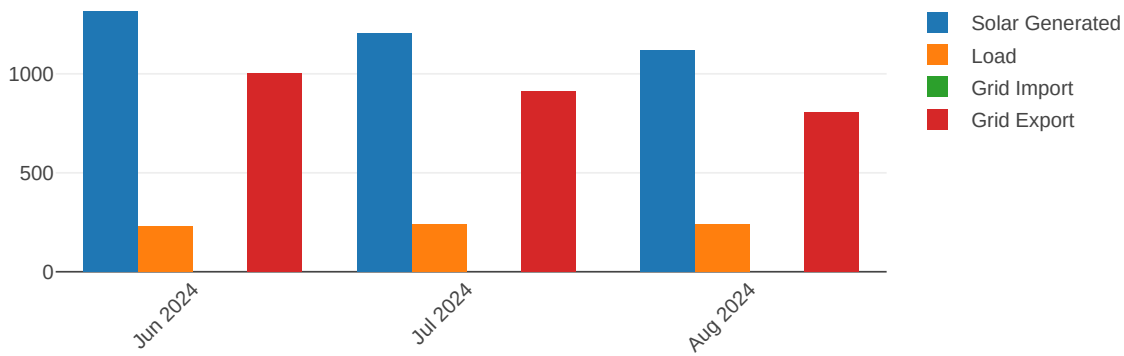
Summer SOC Distribution by Hour

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



Summer Energy Totals by Month

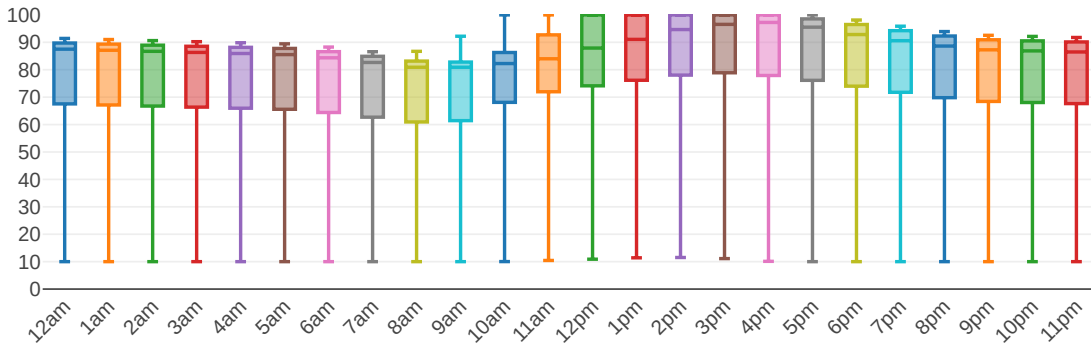
Energy flows for June, July, August: solar, load, grid import, grid export.



Winter Monthly Summary

Winter SOC Distribution by Hour

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



Winter Energy Totals by Month

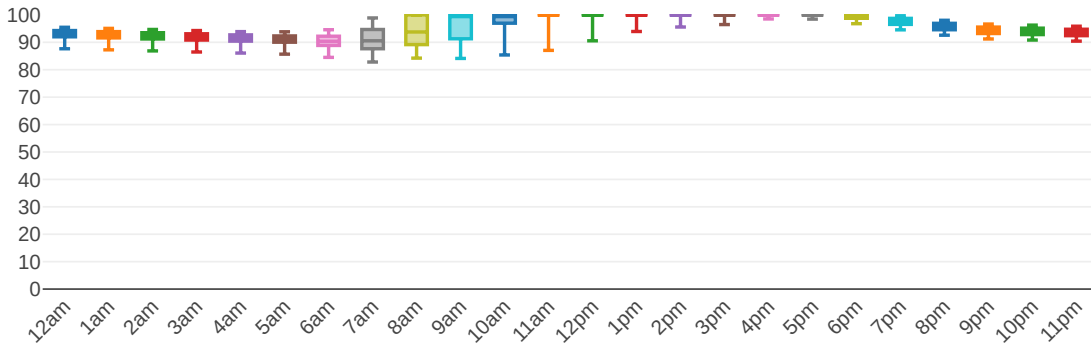
Energy flows for December, January, February: solar, load, grid import, grid export.



Spring Monthly Summary

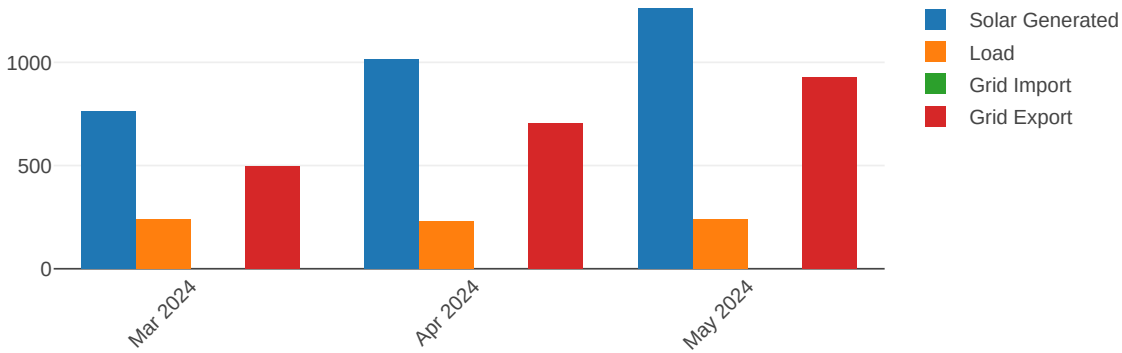
Spring SOC Distribution by Hour

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



Spring Energy Totals by Month

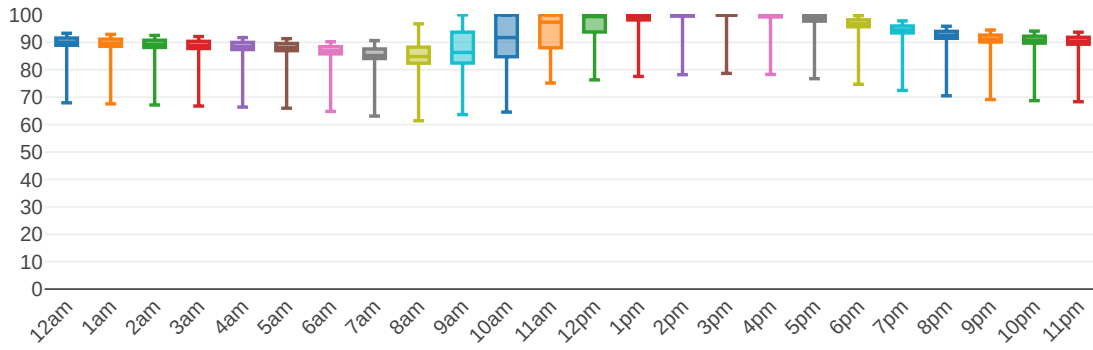
Energy flows for March, April, May: solar, load, grid import, grid export.



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.

