

Octopus Agile Tariff 15kWh battery

Workspace

**Site location**

UK-Gloucester (51.89, -2.19) · UTC

**Battery**

15kWh (15 kWh)

**Inverter**

Fox ESS H1-5.0-E (5 kW)

setpoints: Auto-optimize battery setpoints

**Solar Arrays**

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

east (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**

Import: Octopus Agile Import (UK)

Export: Octopus Agile Export (UK)

daily standing: 0.60

|                                       |                                                        |                                               |
|---------------------------------------|--------------------------------------------------------|-----------------------------------------------|
| Summary                               |                                                        |                                               |
| ☀ Solar Generated                     | 5,408 kWh                                              | (5,408 (utilised) + 0 (clipped))              |
| ⚡ Load Consumed                       | 7,423 kWh                                              | 1,581 GBP (cost without solar)                |
| 🔥 Space heating electric (heat pump)  | 3,216 kWh                                              | (thermal generated 13,931)                    |
| 🔥 Hot water electric (heat pump)      | 707 kWh                                                | (thermal generated 2,190)                     |
| 🔌 Grid Import                         | 5,255 kWh                                              | 846 GBP (0.16 (average import price GBP/kWh)) |
| 🔌 Grid Export                         | 2,852 kWh                                              | 406 GBP (0.14 (average export price GBP/kWh)) |
| \$ Total benefit from solar & battery | 1,141 GBP                                              |                                               |
| \$ New electricity bill               | 659 GBP (846 (import) - 406 (export) + 219 (standing)) |                                               |

**Self-Consumption**

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

29.2%

Spring: 48.2% Summer: 73.4%  
Autumn: 10.2% Winter: 10.0%

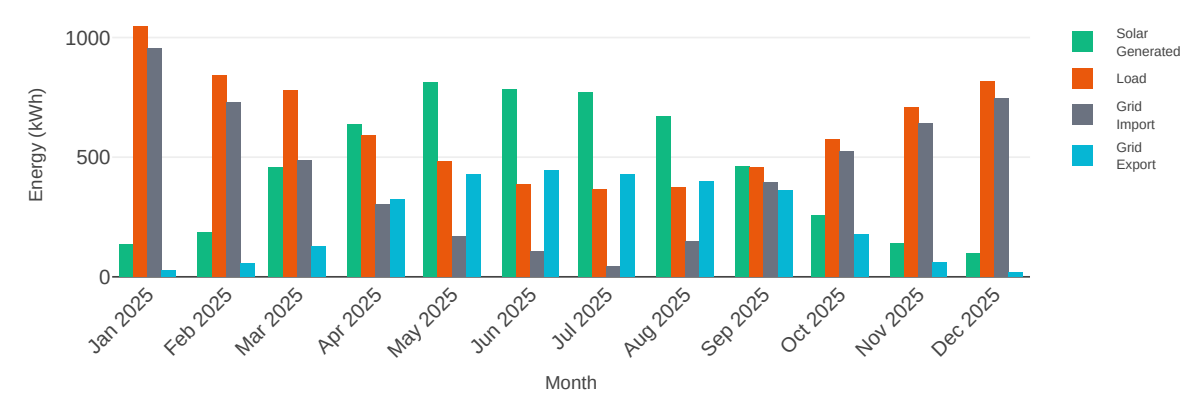
Self-Consumption  
2,169 kWh

Grid Import  
5,255 kWh

## Yearly Summary

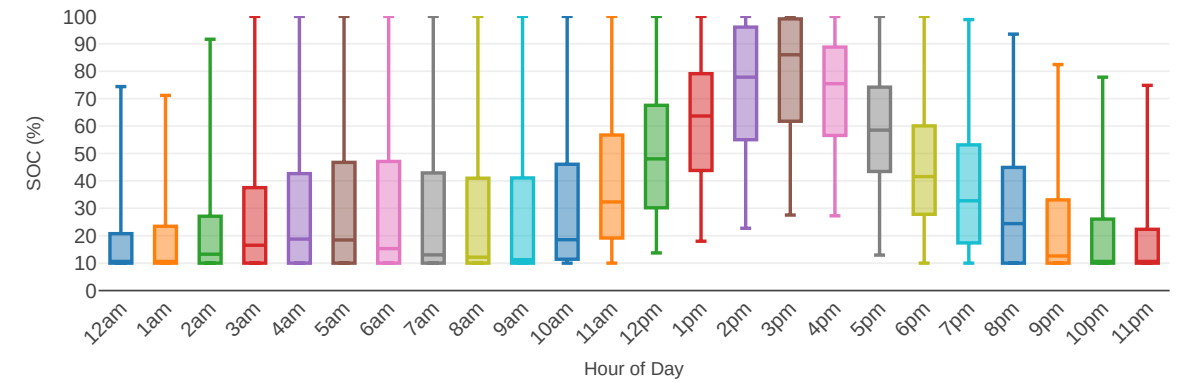
### Monthly Energy Totals

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



### SOC Distribution by Hour

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



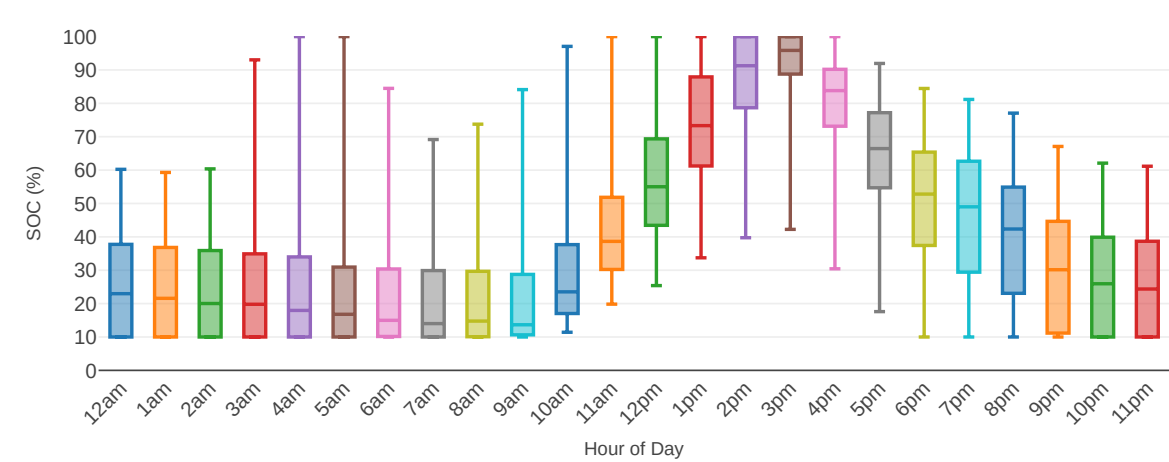
## Monthly Summary

|                          | Jan       | Feb       | Mar      | Apr      | May      | Jun      | Jul      | Aug      | Sep      | Oct      | Nov      | Dec       |
|--------------------------|-----------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| Solar Generated kWh      | 137       | 187       | 456      | 639      | 812      | 784      | 769      | 669      | 461      | 257      | 139      | 99        |
| Load kWh                 | 1,048     | 840       | 778      | 590      | 484      | 387      | 364      | 376      | 457      | 574      | 709      | 817       |
| Average SOC %            | 42        | 47        | 36       | 34       | 46       | 47       | 46       | 32       | 32       | 32       | 33       | 30        |
| Grid Import kWh/GBP      | 957 / 207 | 731 / 153 | 486 / 84 | 303 / 46 | 169 / 17 | 107 / 7  | 45 / 6   | 148 / 16 | 397 / 40 | 524 / 60 | 642 / 96 | 746 / 113 |
| Grid Export kWh/GBP      | 27 / 10   | 57 / 9    | 127 / 21 | 324 / 48 | 428 / 56 | 447 / 55 | 429 / 58 | 397 / 56 | 361 / 52 | 178 / 28 | 59 / 9   | 17 / 3    |
| Net electricity cost GBP | 197       | 145       | 63       | -2       | -39      | -48      | -52      | -40      | -12      | 32       | 87       | 111       |

# Summer Monthly Summary

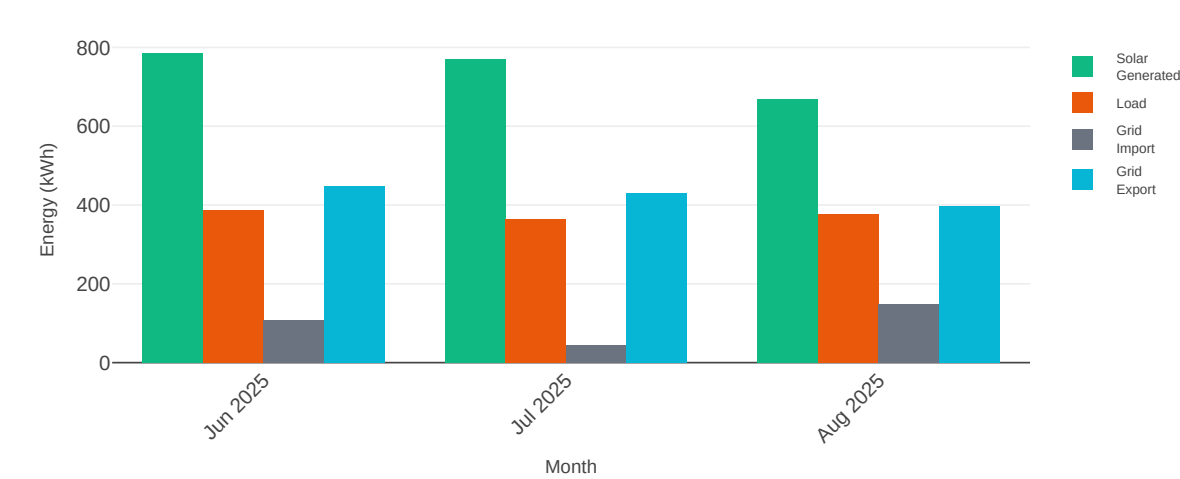
## Summer SOC Distribution by Hour

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



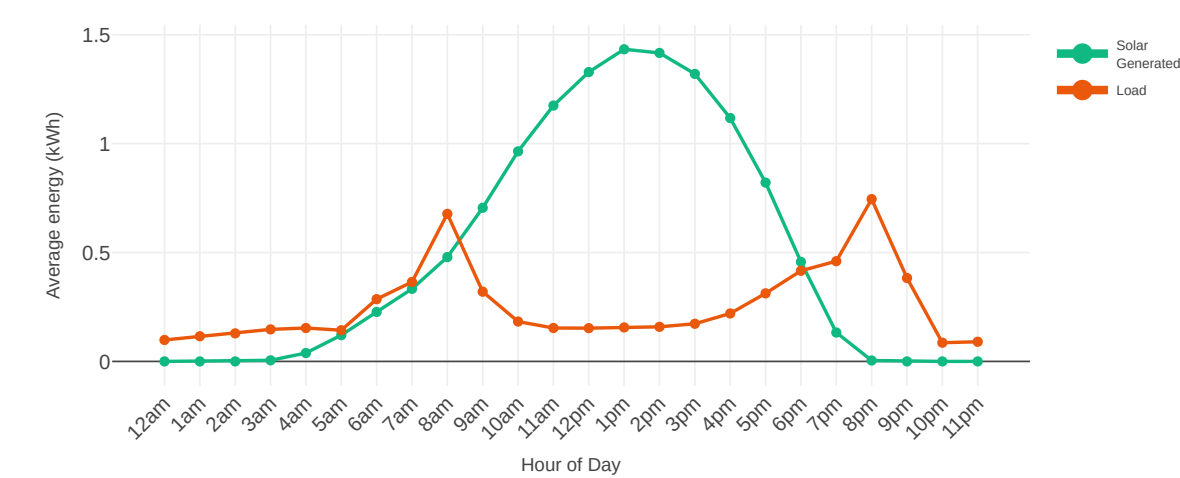
## Summer Energy Totals by Month

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



## Summer Hourly Average Energy

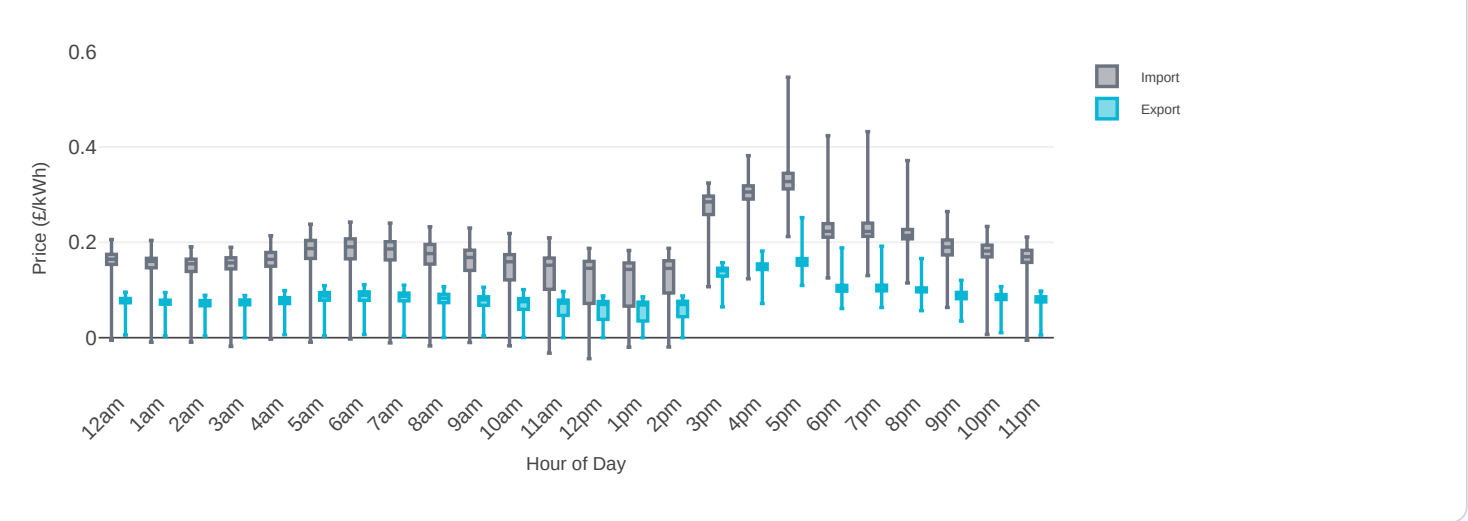
Average hourly solar generation vs load for that season's months.



# Summer Prices and Power

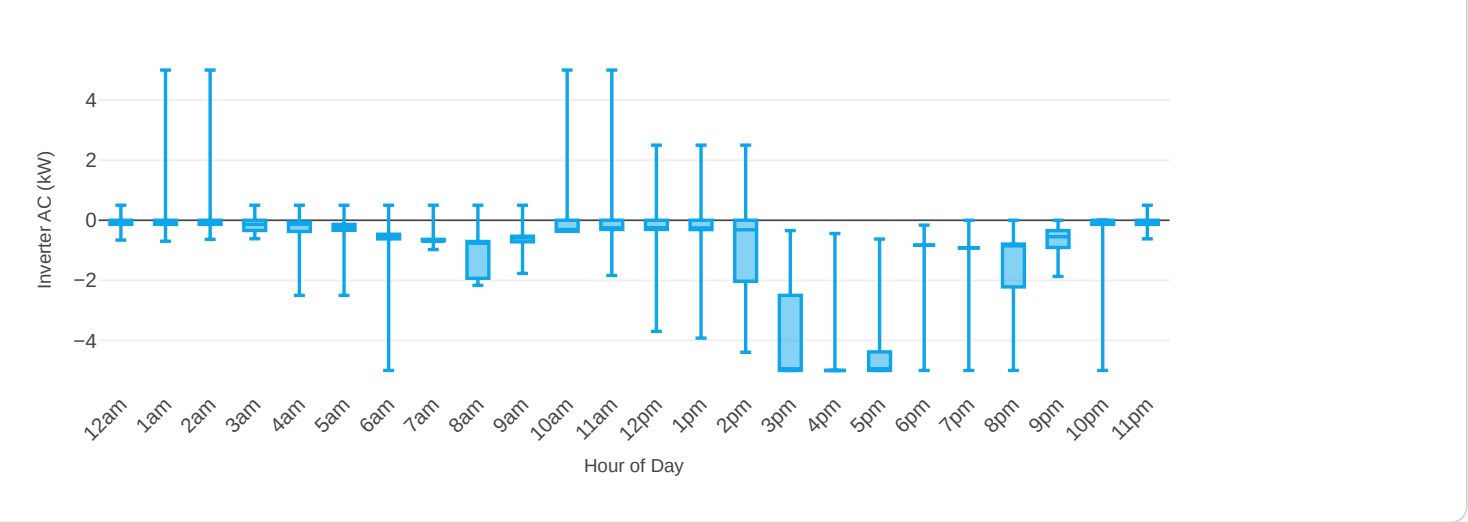
## Summer Import & Export Price Distribution by Hour

Spread of import and export tariff rates by hour for June, July, August.



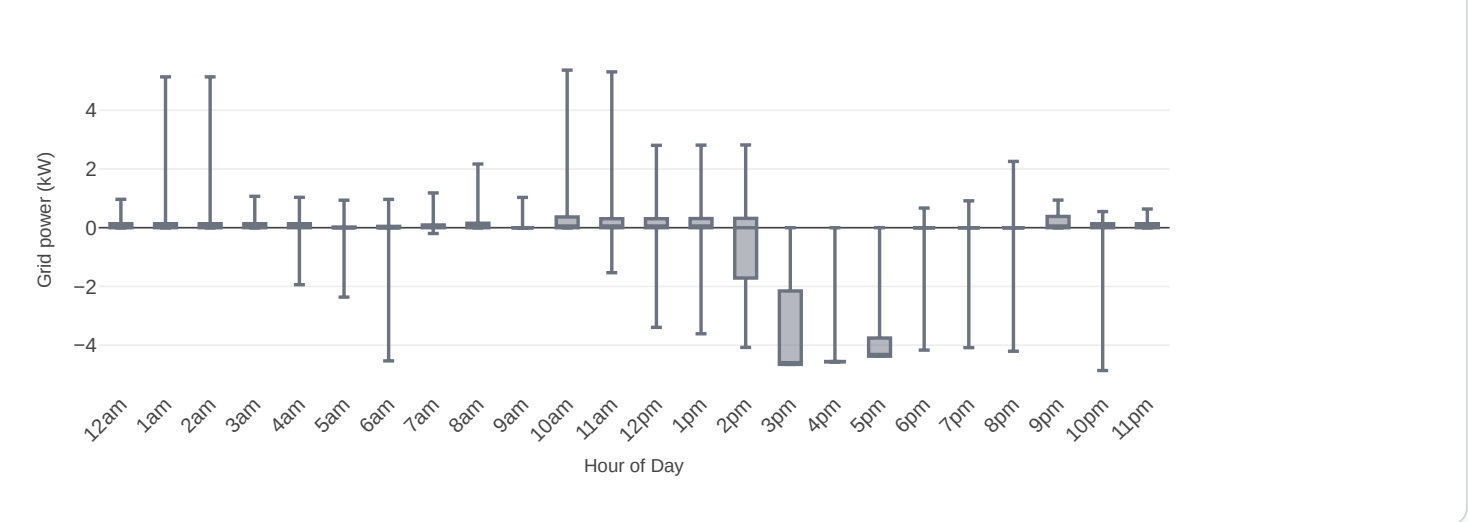
## Summer Inverter AC Power Distribution by Hour (inverter charge is positive)

Spread of inverter AC power flows by hour for June, July, August.



## Summer Grid Power Distribution by Hour (import is positive)

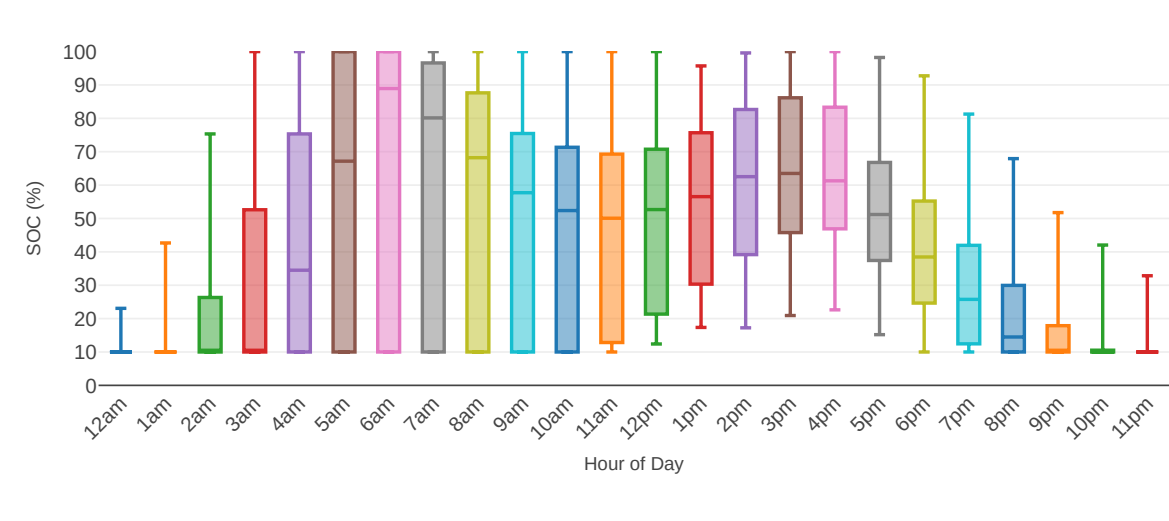
Spread of net grid power by hour for June, July, August.



# Winter Monthly Summary

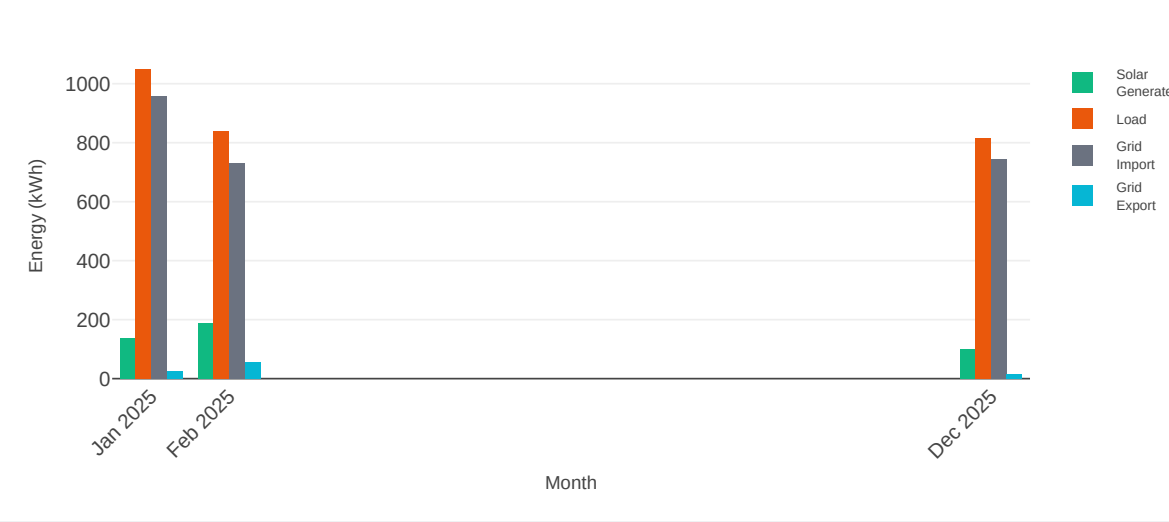
## Winter SOC Distribution by Hour

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



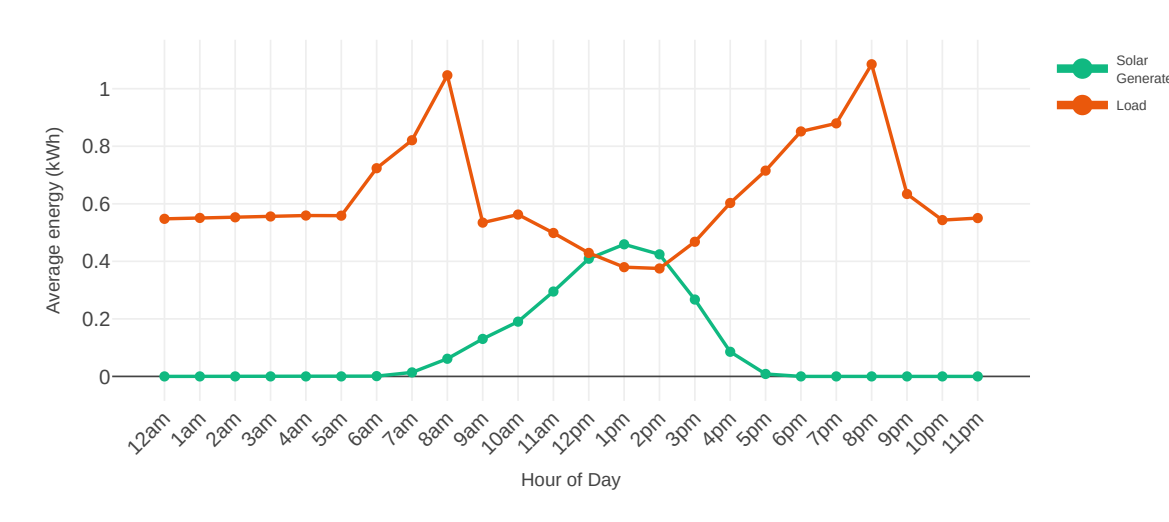
## Winter Energy Totals by Month

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



## Winter Hourly Average Energy

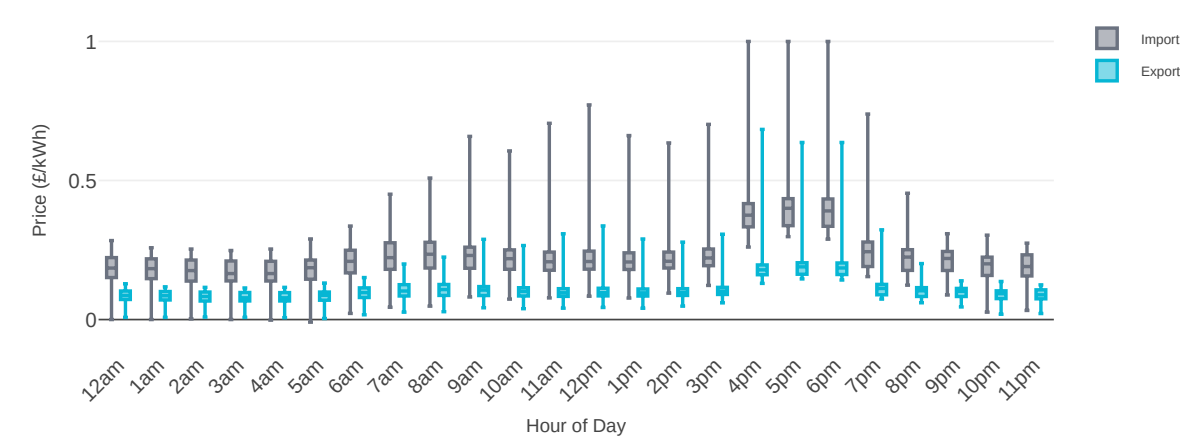
Average hourly solar generation vs load for that season's months.



# Winter Prices and Power

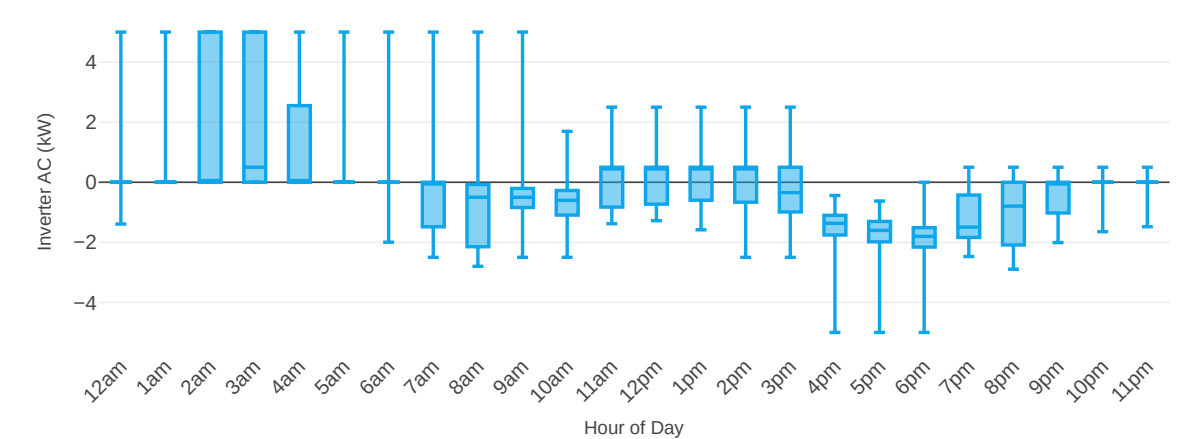
## Winter Import & Export Price Distribution by Hour

Spread of import and export tariff rates by hour for December, January, February.



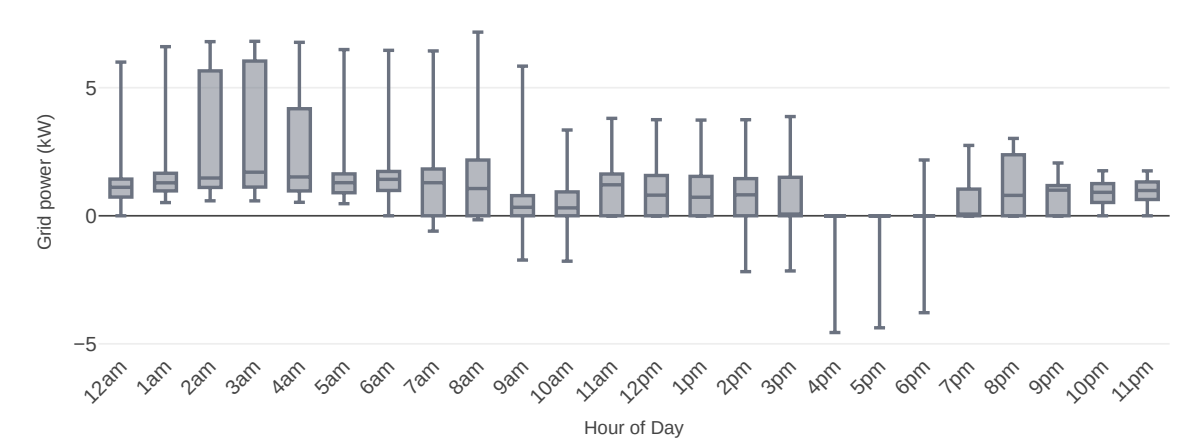
## Winter Inverter AC Power Distribution by Hour (inverter charge is positive)

Spread of inverter AC power flows by hour for December, January, February.



## Winter Grid Power Distribution by Hour (import is positive)

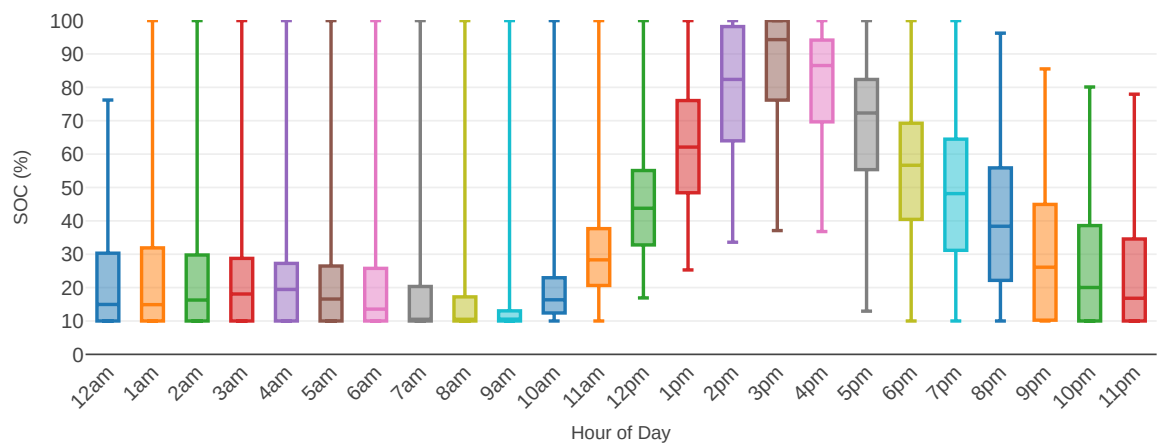
Spread of net grid power by hour for December, January, February.



# Spring Monthly Summary

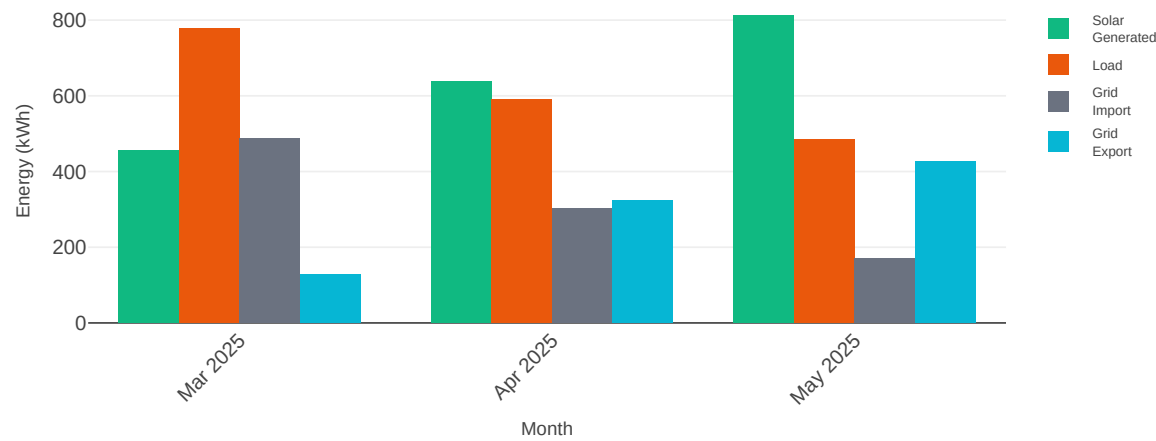
## Spring SOC Distribution by Hour

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



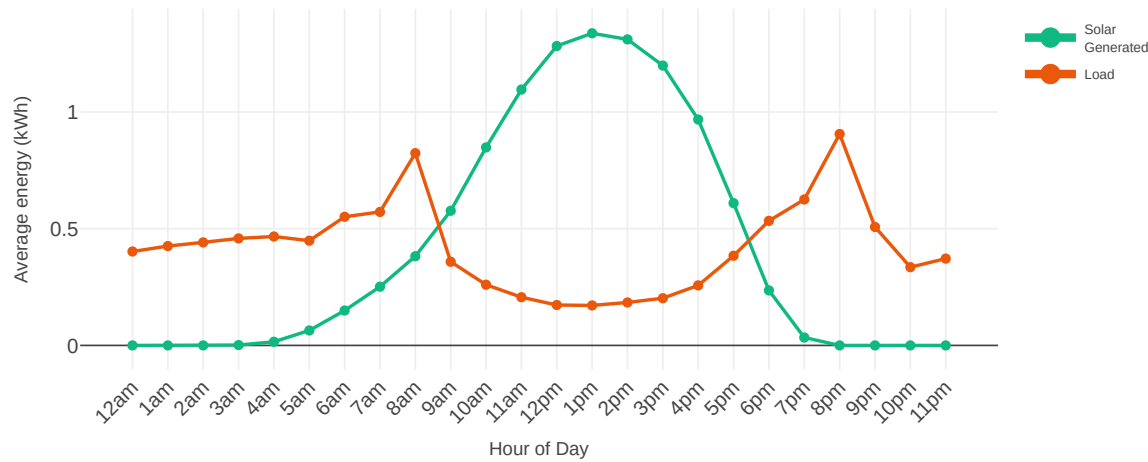
## Spring Energy Totals by Month

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



## Spring Hourly Average Energy

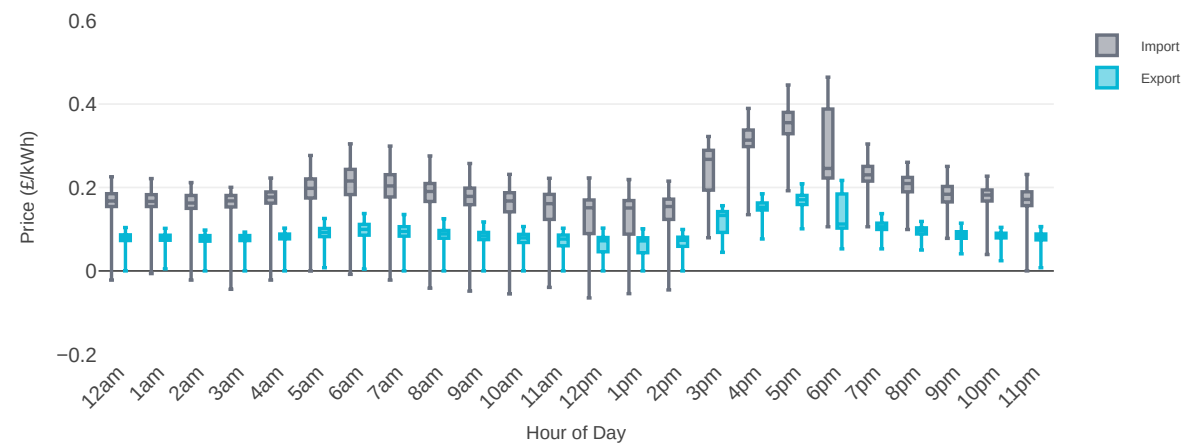
Average hourly solar generation vs load for that season's months.



# Spring Prices and Power

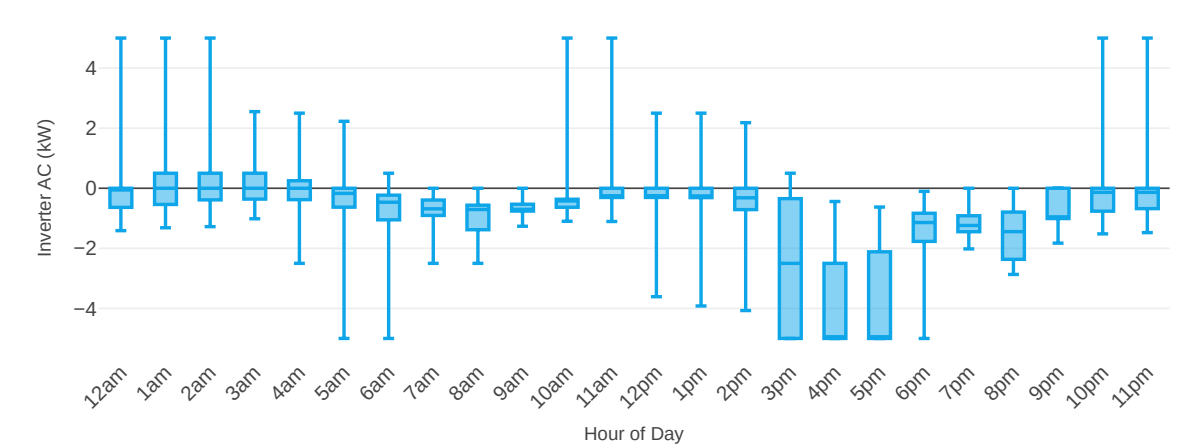
## Spring Import & Export Price Distribution by Hour

Spread of import and export tariff rates by hour for March, April, May.



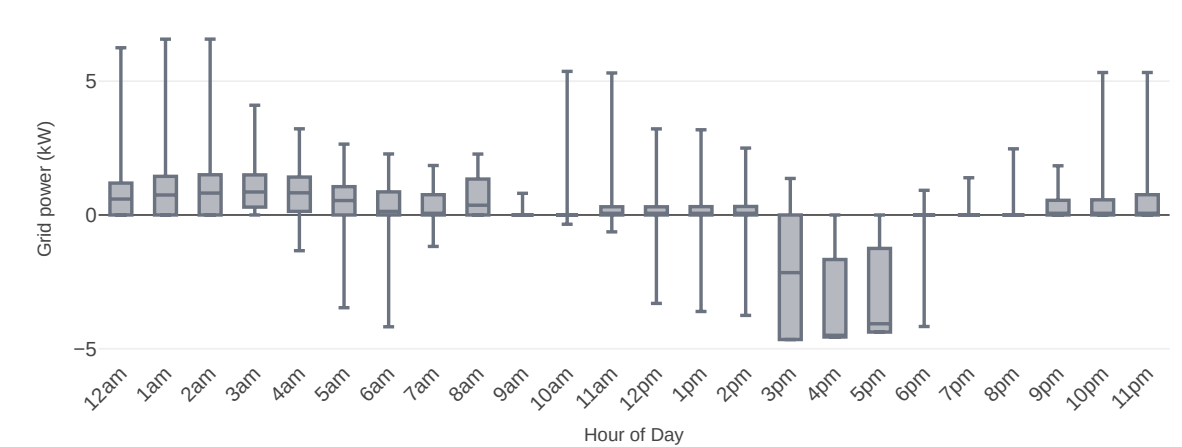
## Spring Inverter AC Power Distribution by Hour (inverter charge is positive)

Spread of inverter AC power flows by hour for March, April, May.



## Spring Grid Power Distribution by Hour (import is positive)

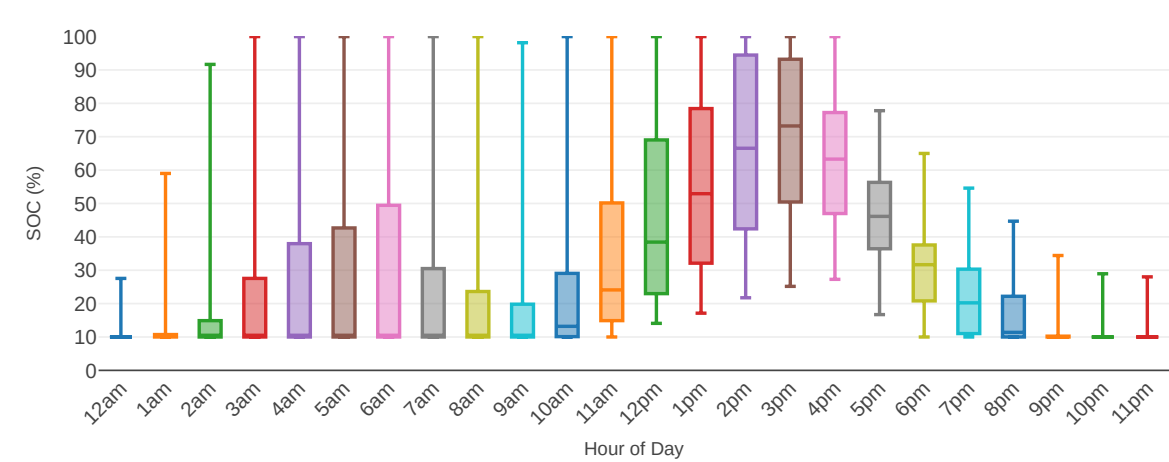
Spread of net grid power by hour for March, April, May.



# Autumn Monthly Summary

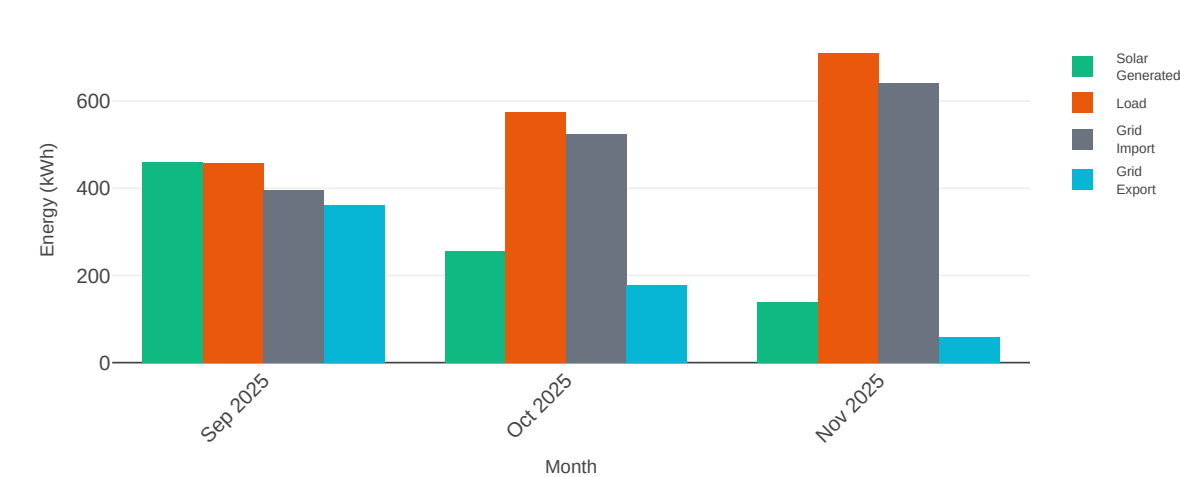
## Autumn SOC Distribution by Hour

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



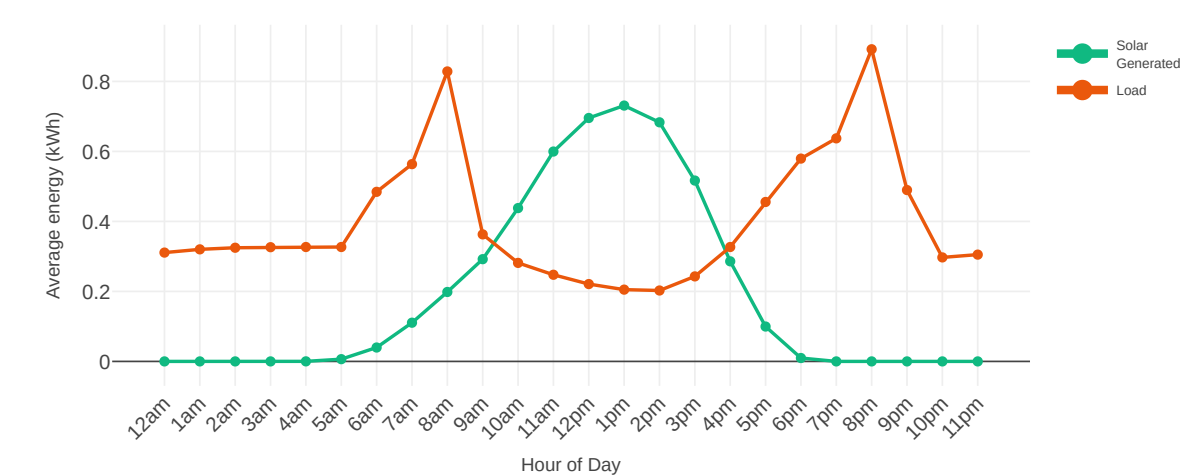
## Autumn Energy Totals by Month

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



## Autumn Hourly Average Energy

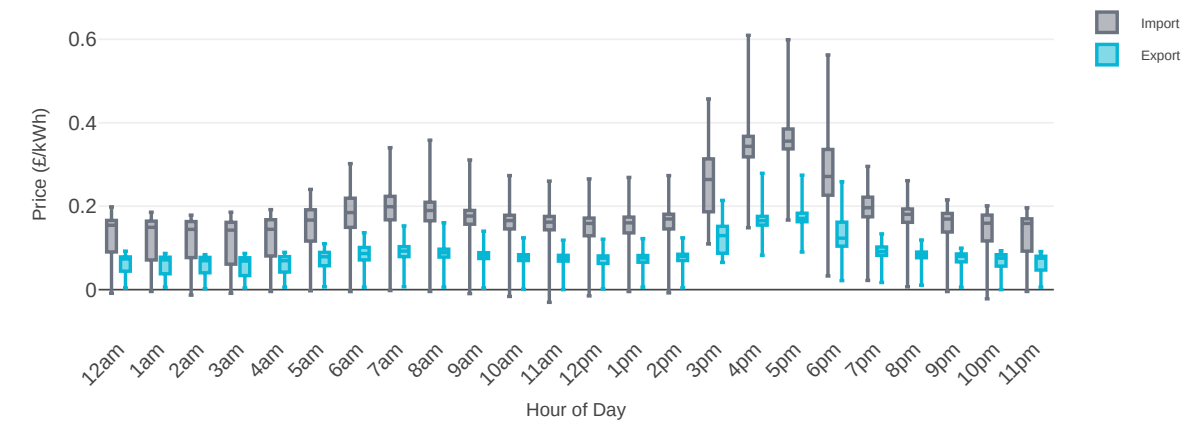
Average hourly solar generation vs load for that season's months.



# Autumn Prices and Power

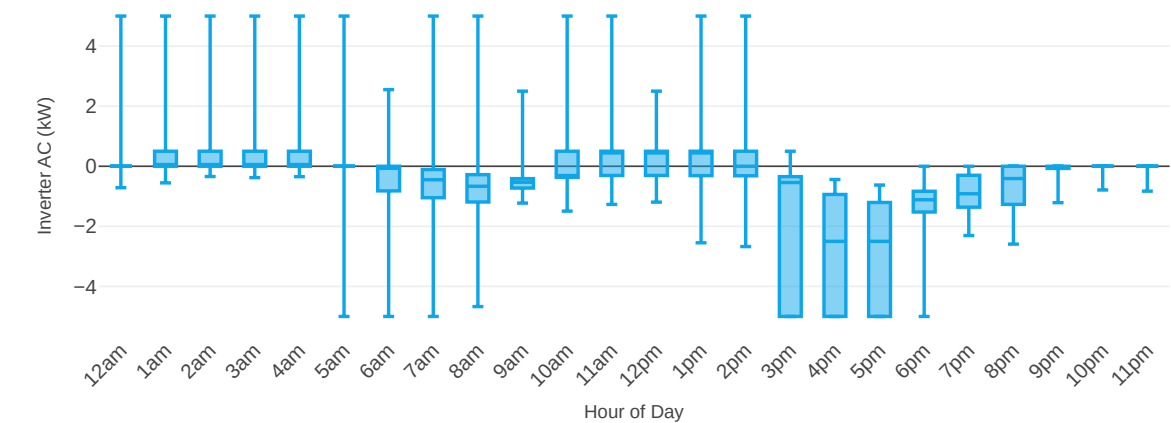
## Autumn Import & Export Price Distribution by Hour

Spread of import and export tariff rates by hour for September, October, November.



## Autumn Inverter AC Power Distribution by Hour (inverter charge is positive)

Spread of inverter AC power flows by hour for September, October, November.



## Autumn Grid Power Distribution by Hour (import is positive)

Spread of net grid power by hour for September, October, November.

