

How to Electrify Your Life, Save Loads of Money, and Save the Planet

ENERGY PERFORMANCE: 2025 FINAL REPORT

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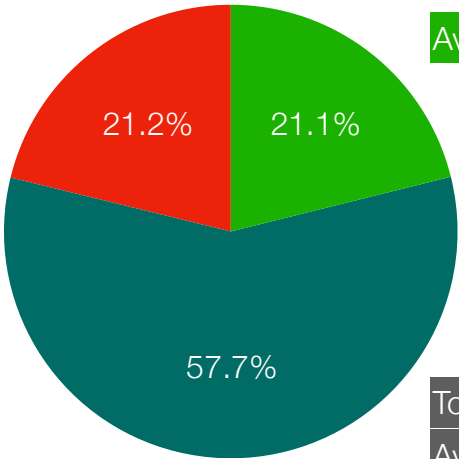
Savings versus cost of heating oil and petrol use the typical £/litre of those fuels in each monthly period (petrol price from Tesla app).

Grid electricity: Intelligent Octopus Go Faster tariff (varies by quarter; Q1 rates shown).
6 hours off-peak @ 7.00p/kWh incl VAT
18 hours peak @ 25.10p/kWh incl VAT
Standing Charge @ 70.05p/day incl VAT
100% renewable supply; REGO guaranteed.

Cash savings vs standard rate electricity use OFGEM Price Cap per kWh (varies quarterly).

CO₂ savings vs standard electricity use 2024 UK Grid Emissions Factor of 0.2249 kg/kWh

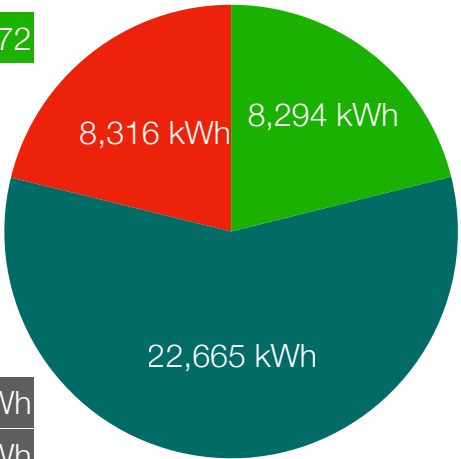
Peak Grid	£2,066.00
Off Peak Grid	£1,511.09
Solar	£0.00
Total Energy Cost	£3,577.09
Standing Charge	£211.70
VAT @ 5%	£189.44
Total Energy Bill (gross)	£3,978.23
Avg Cost per kWh (gross)	10.13p
Avg Cost per day (gross)	£10.90
Total Incentives received	£2,811.81
Net Energy Cost (net of incentives)	£1,166.42
Avg cost per kWh (net)	2.97p
Avg cost per day (net)	£3.20



Avg solar per day (kWh) 22.72

- Solar
- Off Peak Grid
- Peak Grid

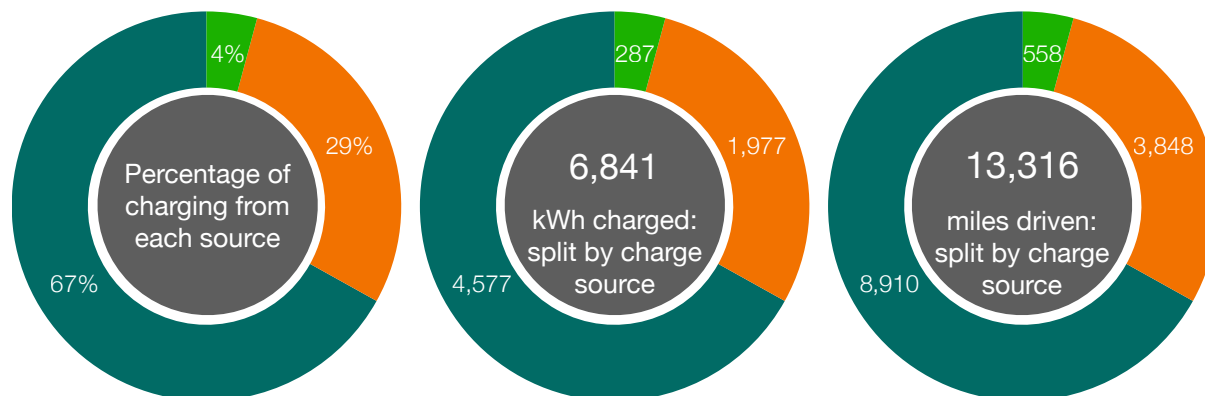
Total: Solar + Grid 39,274 kWh
Average per day 108 kWh



EV cost & carbon savings

Tesla Model X: mileage, cost & carbon summary

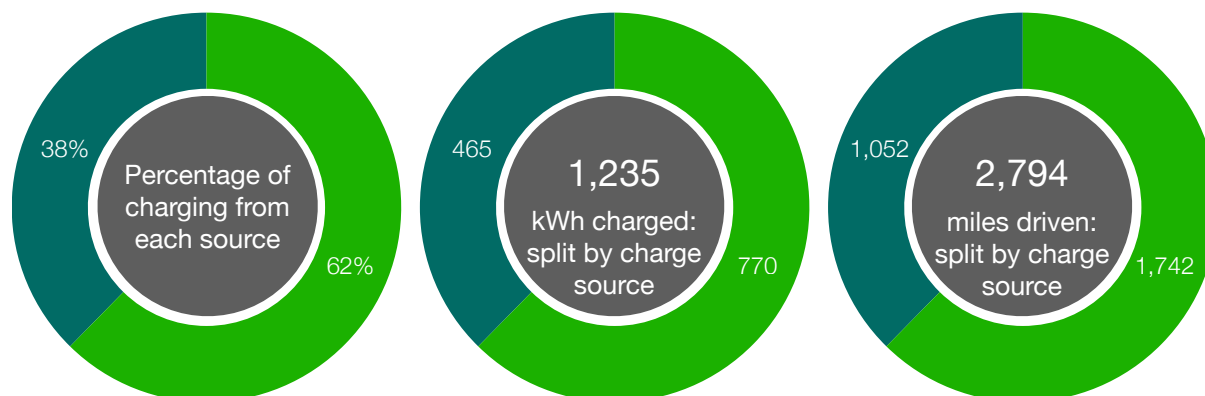
Miles driven in period	13,316
Total cost, using charging mix shown	£305.17
Electricity charging cost, pence per mile	2.29p
Cost saved vs 22mpg car petrol	£3,539.36
CO2 saved vs UK ICE avg @ 124.1g/km	2,644 kg



● Solar and Free Other
 ● Free Tesla Supercharging
 ● Off-Peak Grid At Home
 ● Peak Grid At Home

Nissan Leaf: mileage, cost & carbon summary

Miles driven in period	2,794
Total cost, using charging mix shown	£31.00
Electricity charging cost, pence per mile	1.11p
Cost saved vs 42mpg car petrol	£389.28
CO2 saved vs UK ICE avg @ 124.1g/km	555 kg



● Free Solar At Home
 ● Free Public Charging
 ● Off-Peak Grid At Home
 ● Peak Grid At Home
 ● Free Other Charging

Both cars: total mileage, cost & carbon

Miles driven in period	16,110
Total cost, using charging mix shown	£336.18
Fuel cost, pence per mile	2.09p
Cost saved vs ICE cars @ £1.72/litre	£3,928.63
CO2 saved vs ICE, total for both cars	3,199 kg

ASHP cost & carbon savings

Air Source Heat Pump

kWh electricity input in period	18,455 kWh
kWh heat output in period	48,628 kWh
COP efficiency (heat ÷ electricity)	2.63
Average electricity cost per kWh, pence	10.13p
Total ASHP electricity cost in period	£1,869.40
Heating oil for same output @ 9.8 kWh/l	4,962 litres
Cost of heating oil not purchased	£3,107.59

Cost saved ASHP vs oil boiler	£1,238.19
CO2 saved vs oil boiler @ 2.96 kg/litre	14,688 kg

Whole system cost & carbon savings

Smart energy savings

kWh electricity consumed in period	39,274
kWh generated by on-site solar	8,294
kWh imported from grid	30,981
Total grid electricity cost	£3,577.09

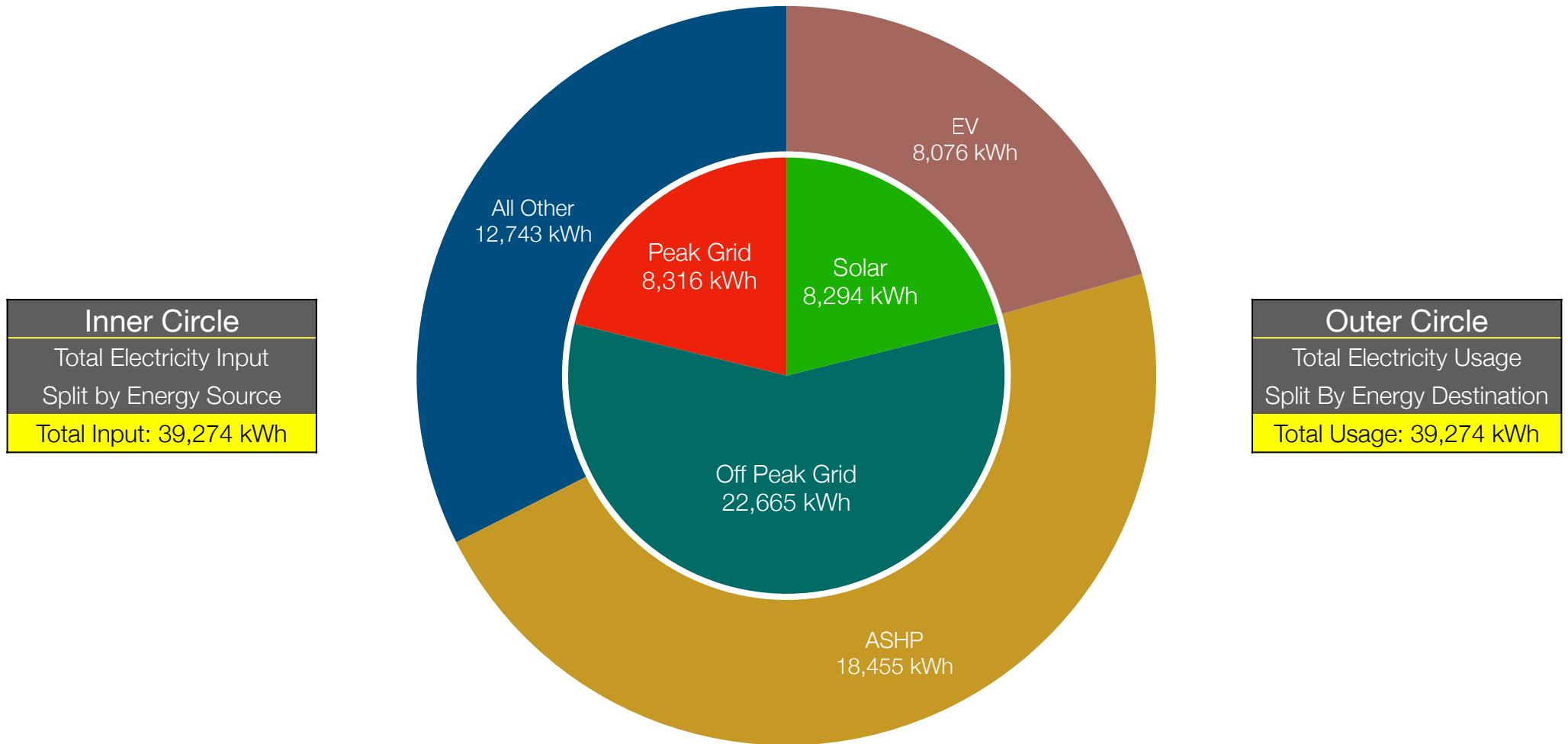
Electricity @ price cap rate	£10,230.79
CO2:@ HMRC GFactor: 0.22499 kg/kWh	8,836 kg

Cost saved vs standard rate electricity	£6,653.70
CO2 saved by 100% renewable electricity	8,836 kg

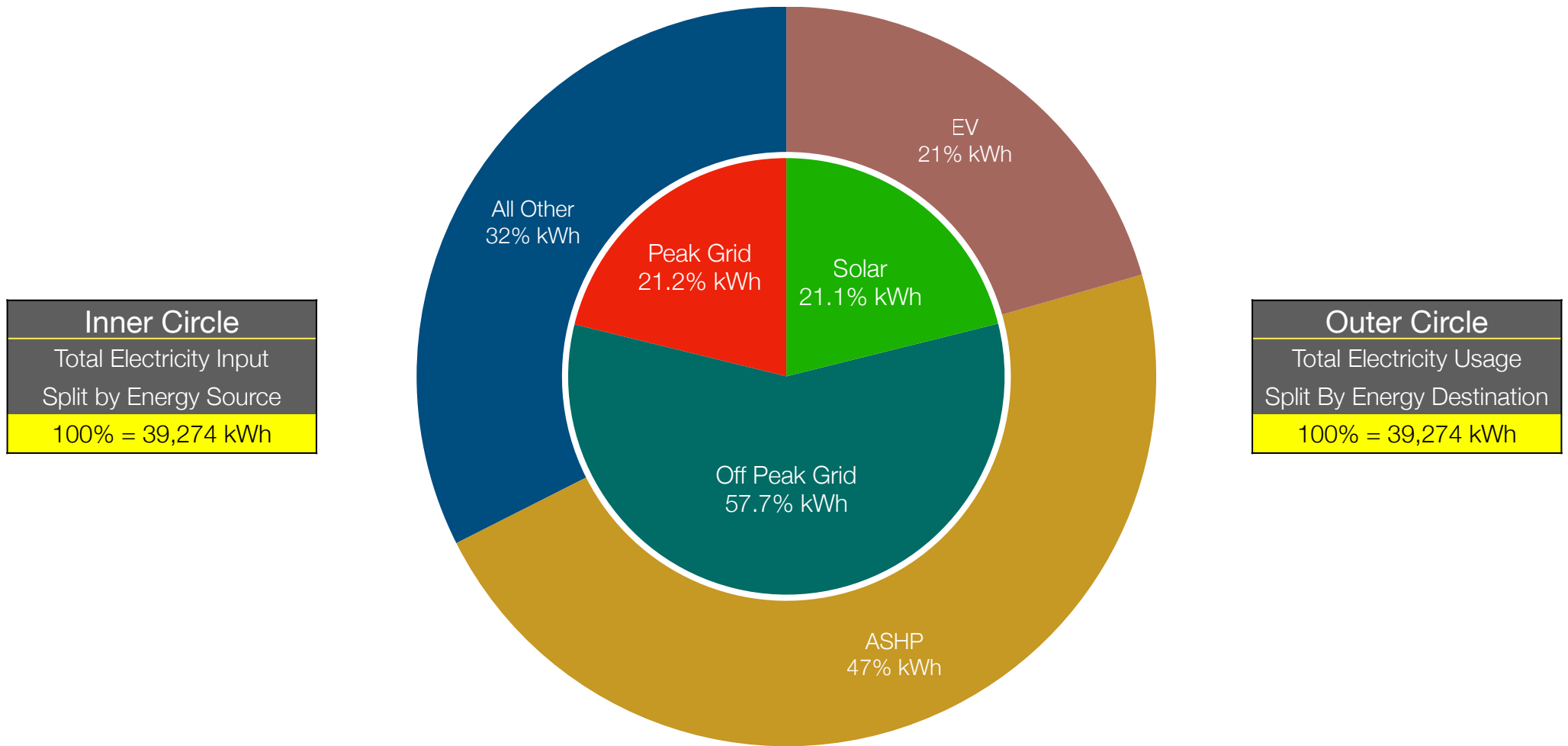
Summary overview savings, incentives, and carbon reduction in period

Total energy cost in period for all uses, including electricity standing charge & VAT	£3,978.23
Cost Avoided: standard rate electricity not purchased	£10,230.79
Cost Avoided: boiler heating oil for same heat output not purchased	£3,107.59
Cost Avoided: petrol/diesel for same mileage in ICE cars not purchased	£4,264.81
Total energy purchase costs avoided	£17,603.19
Incentive: £380.47 Feed In Tariff for Solar Generation + £55.55 DRS Grid Payments	£436.02
Incentive: Renewable Heat Initiative (RHI) Payments for Air Source Heat Pump	£2,375.79
Total incentives	£2,811.81
Combined Costs Avoided and Incentives	£20,415.00
MINUS total energy cost in period for all uses, including electricity standing charge & VAT	-£3,978.23
Overall net benefit = {(Combined Costs Avoided + Incentives) – (Energy Cost)}	£16,436.77
Total CO2 saved: {(100% renewable electricity vs UK grid avg) + (EVs vs ICE) + (ASHP vs oil boiler)}	26.723 tonnes

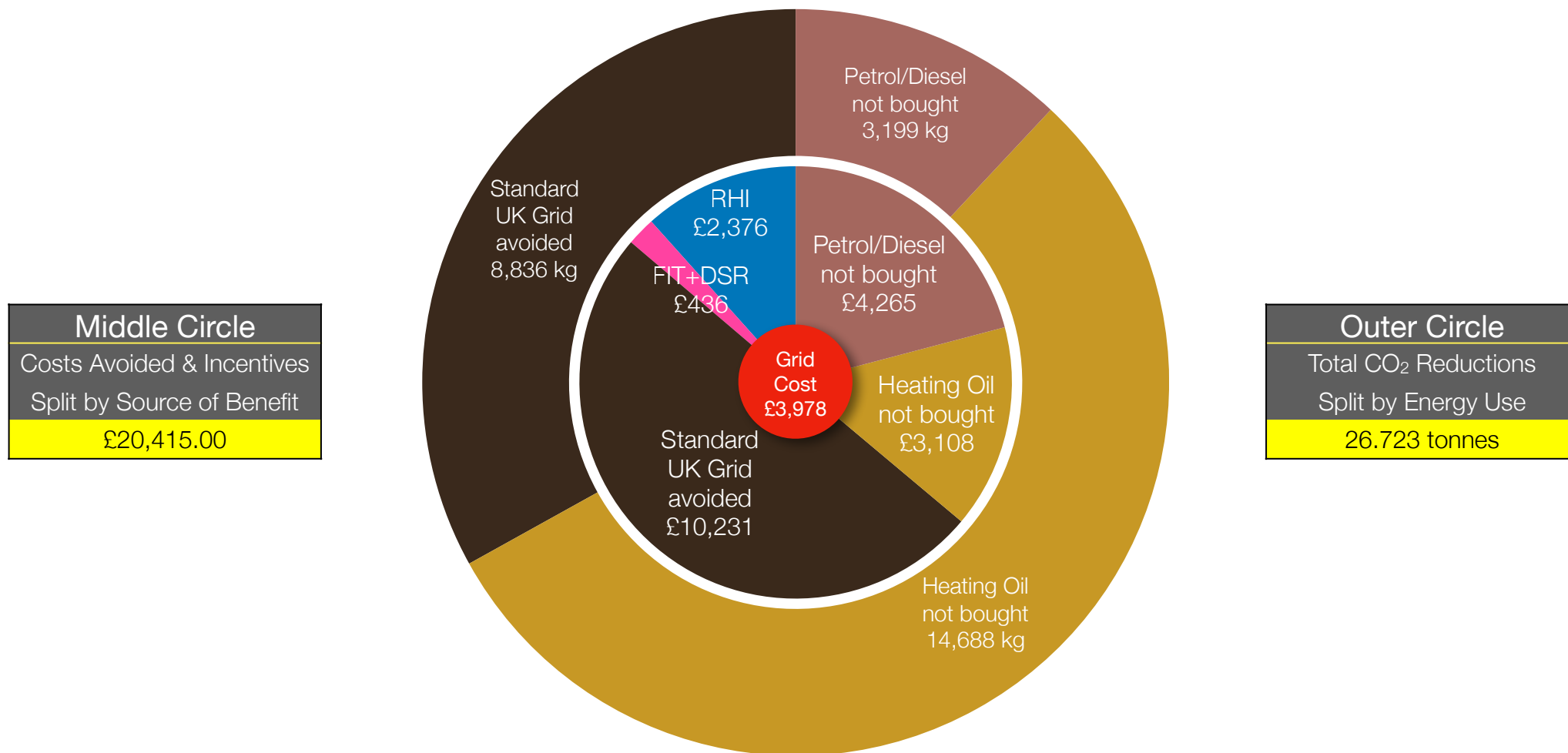
Energy Sources & Energy Destinations : Overview



Energy Sources & Energy Destinations : Overview %

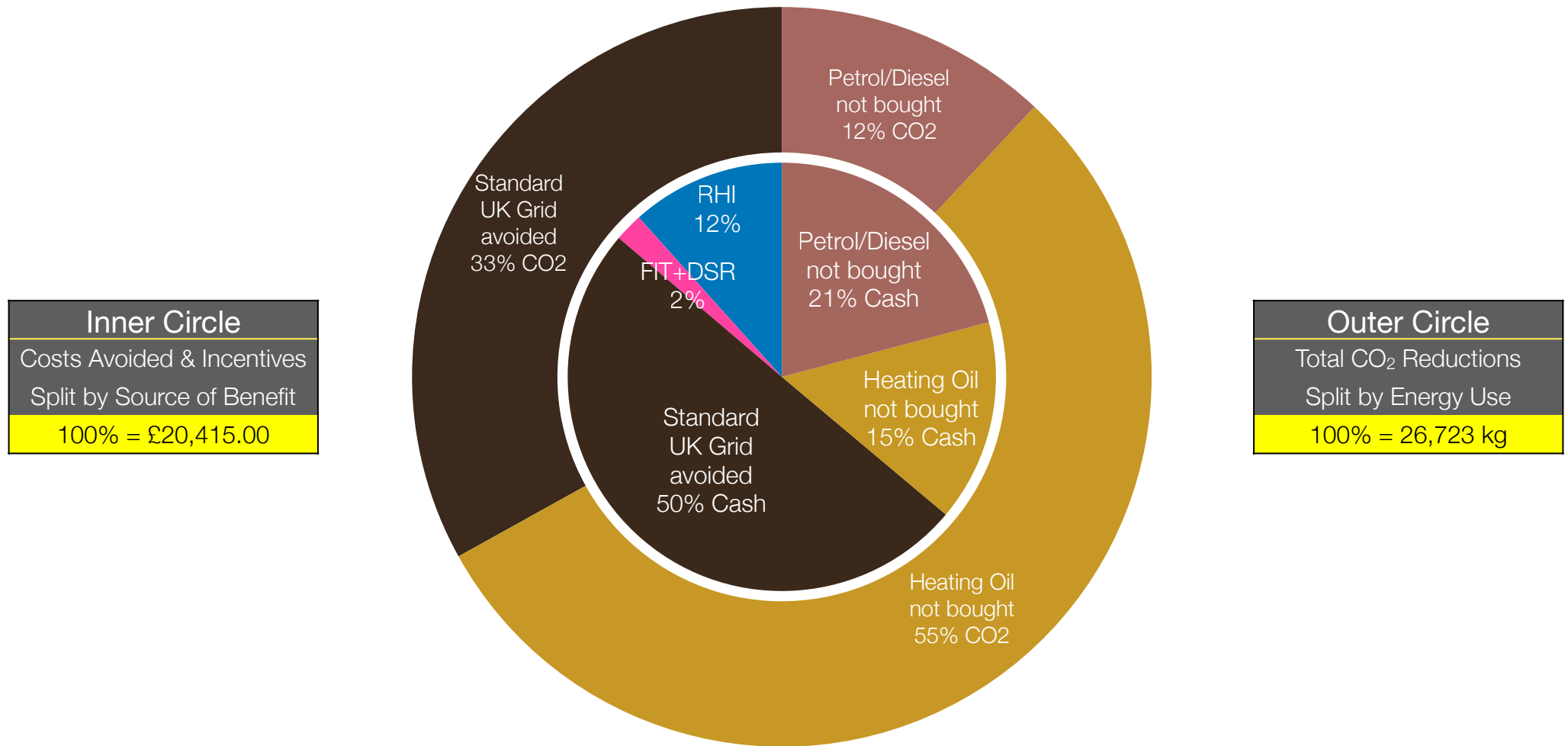


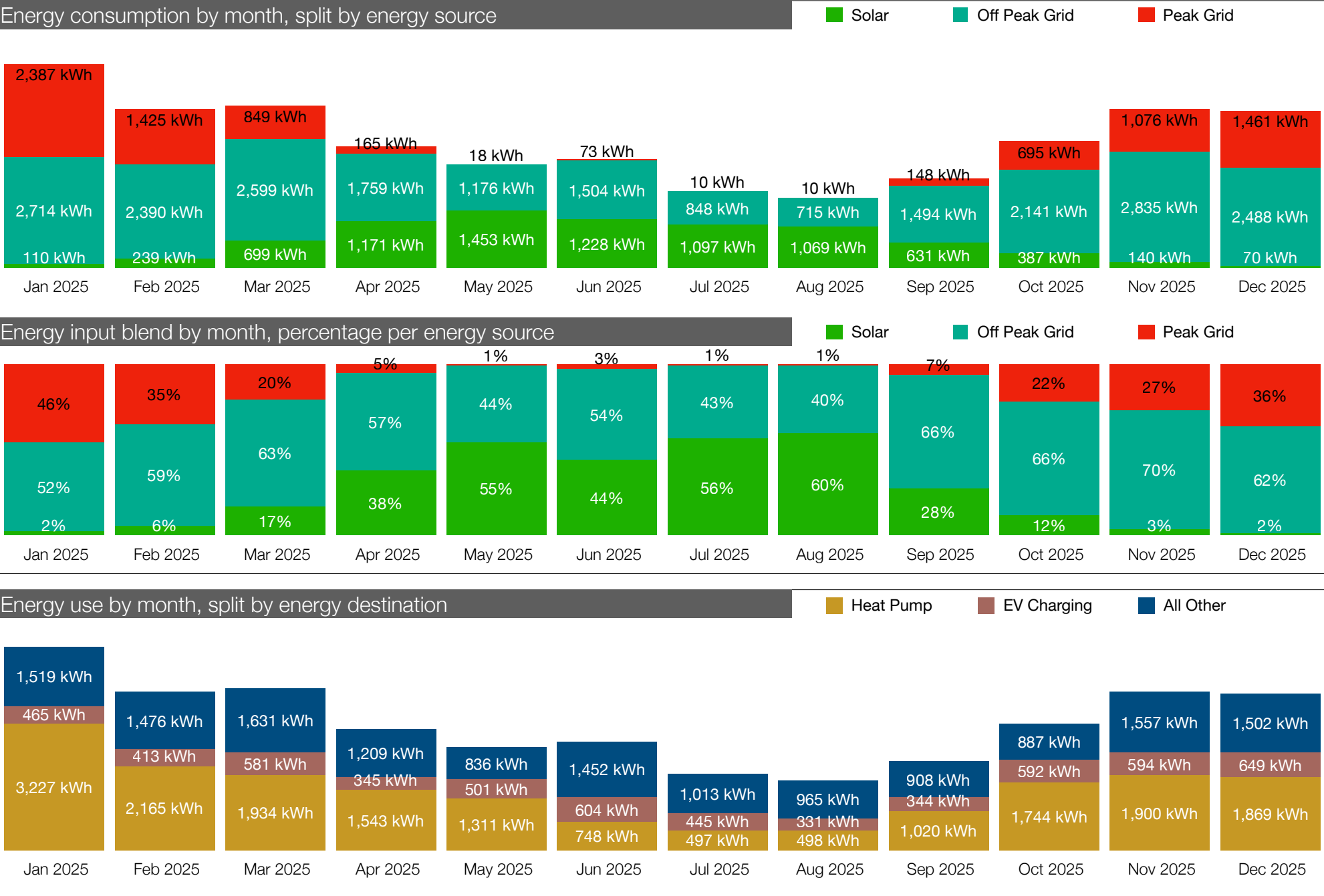
Total CO₂ Emissions Reductions and Total Financial Benefit In Year & Payback Period

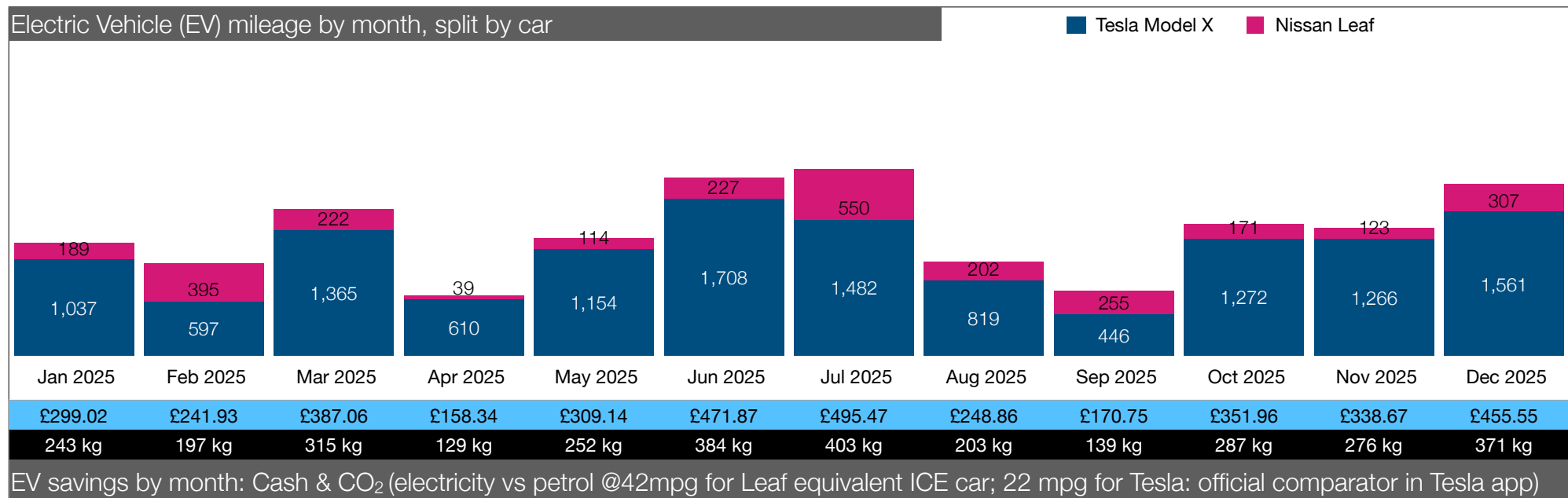
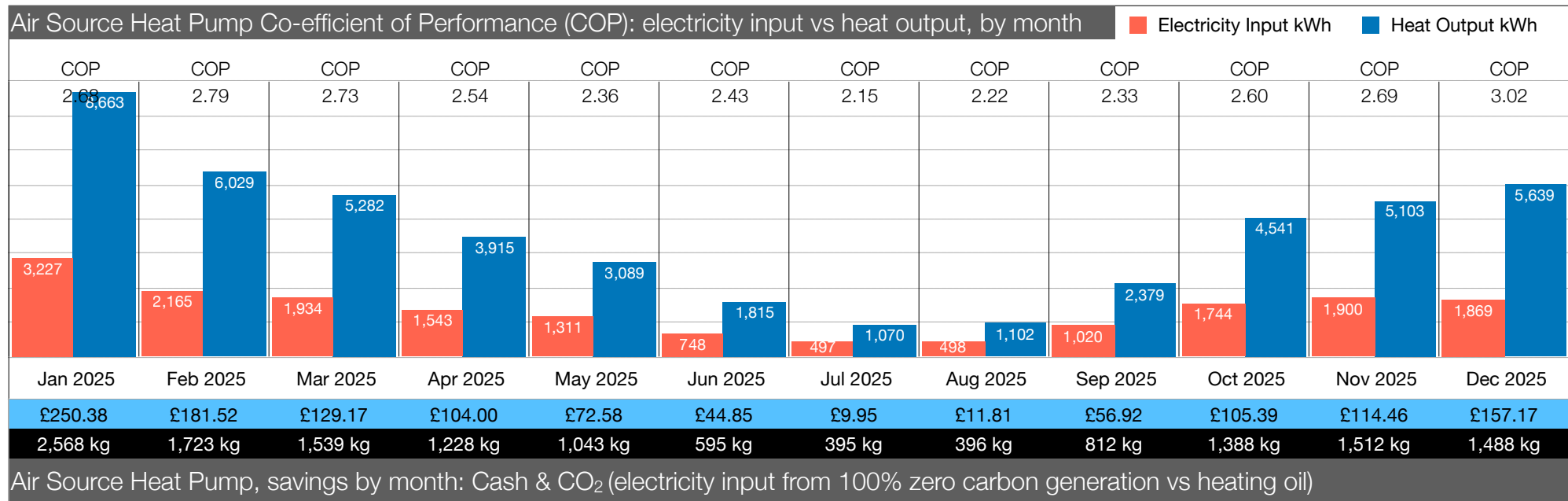


Total Capital Investment	Net Financial Benefit <i>Definition</i>	Net Financial Benefit <i>Result</i>	Payback Period
£145,981	Total Middle Circle Benefits	NFB in Year £16,436.77	8.88
incl 2 EV cars & all fixed equipment	Minus Grid Cost Bullseye	NFB per Day £45.03	Years

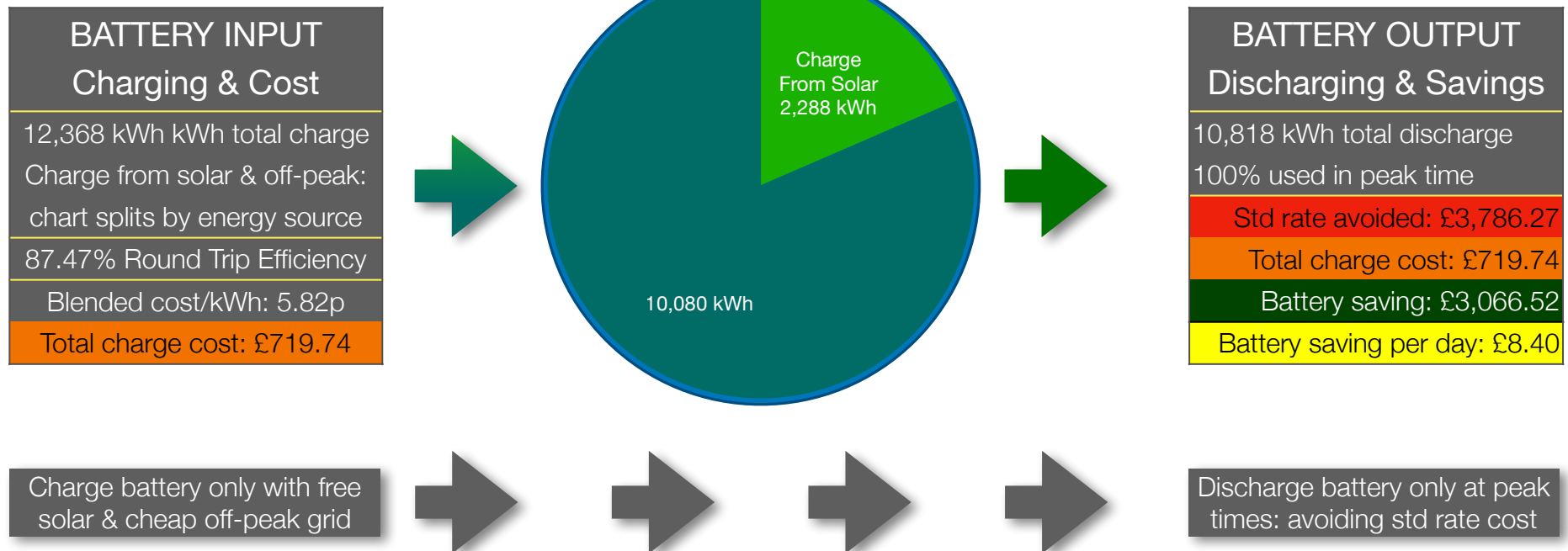
CO₂ Emissions Reductions & Cash Savings/Incentives %



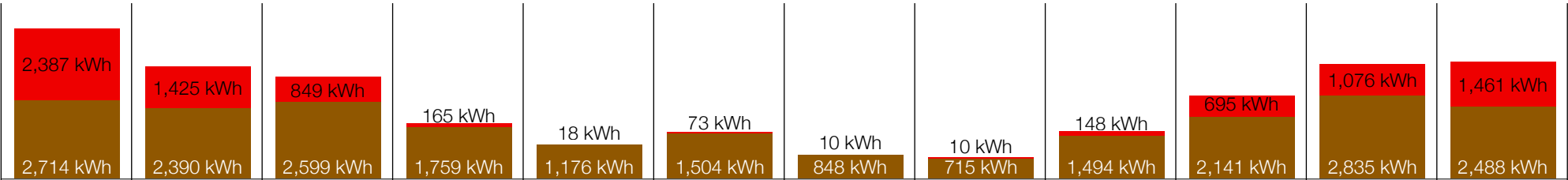
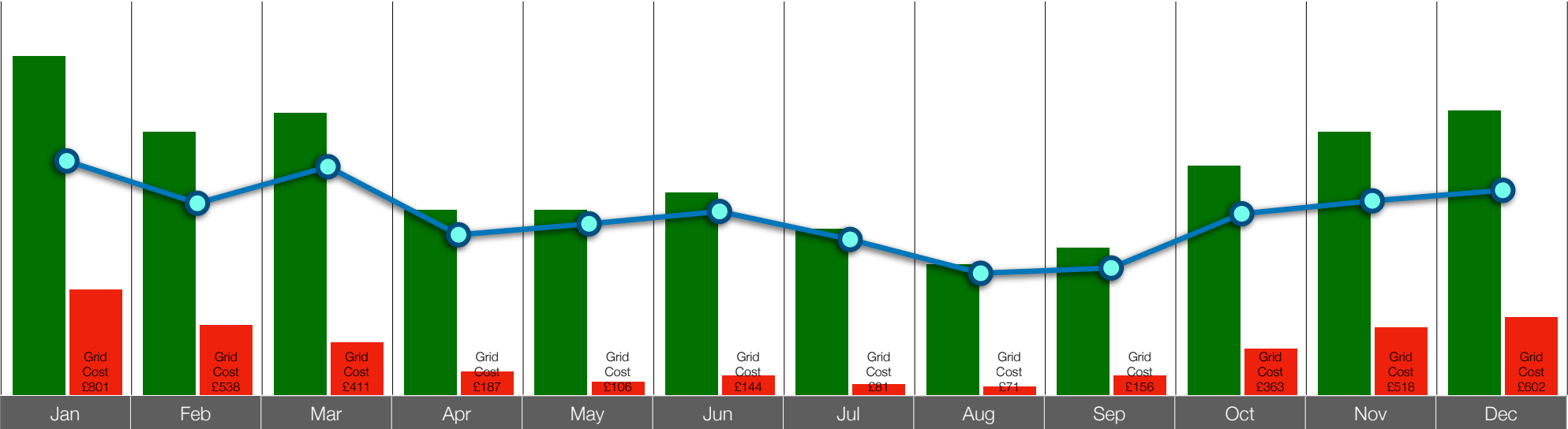




Savings from battery by time-shifting consumption



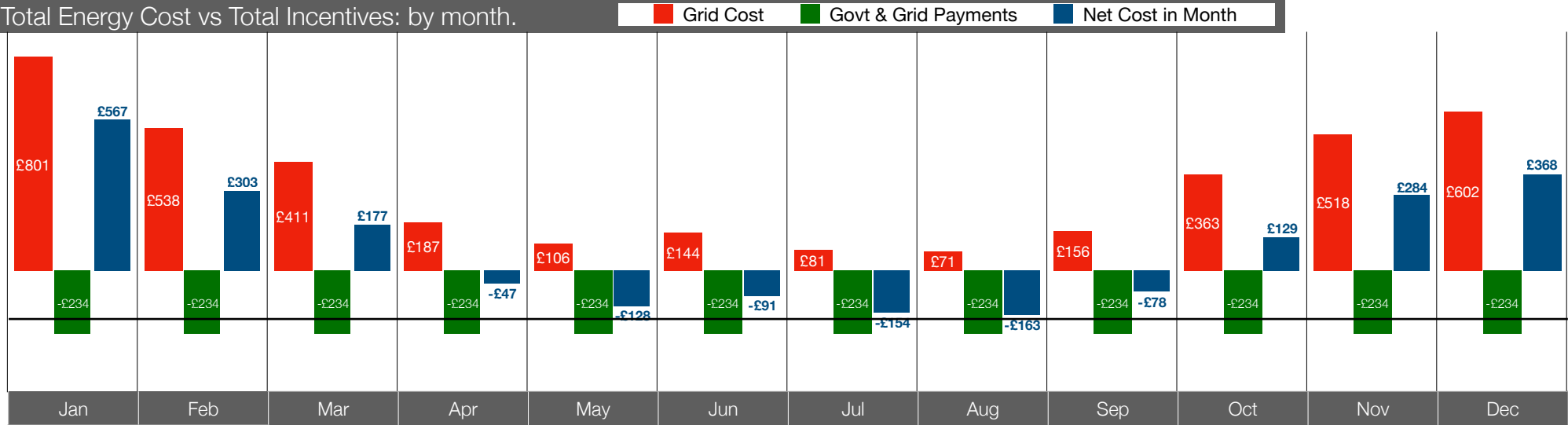
Savings & Benefits *minus* Energy Cost = Net Benefit: by month.



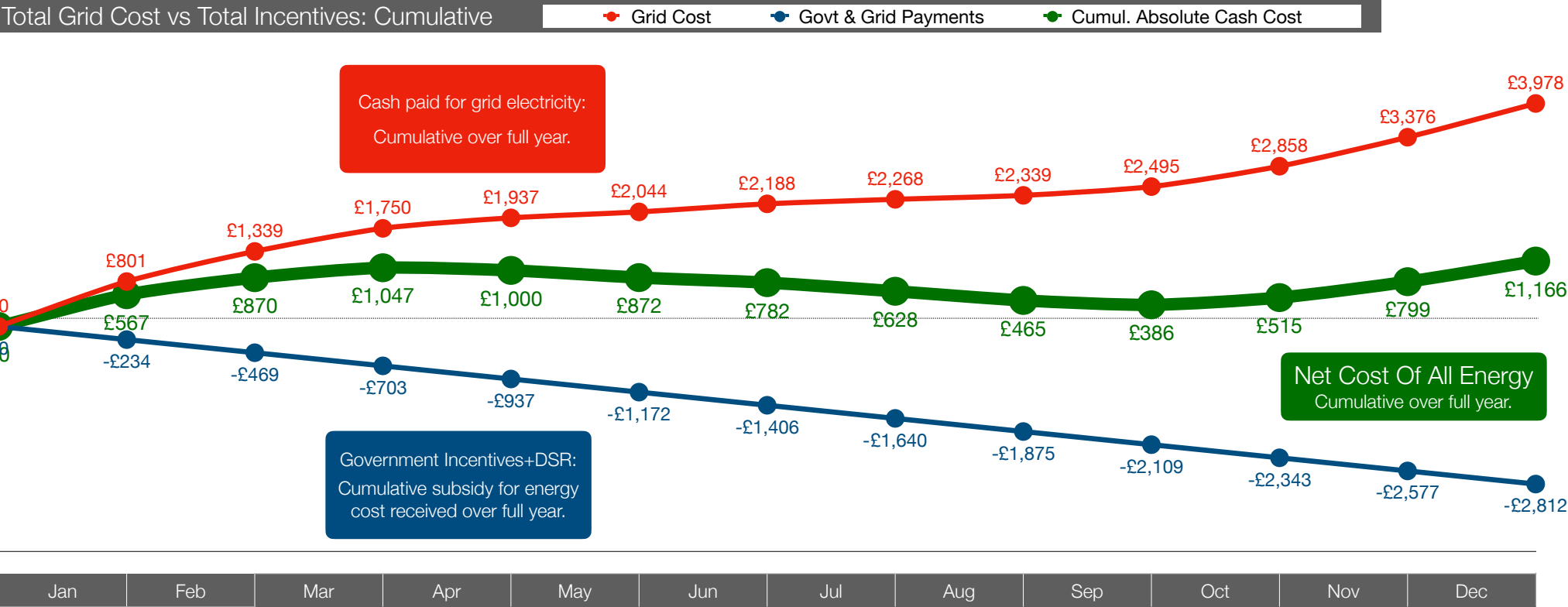
Peak Grid Import Above Peak Grid Cost Below
Off Peak Grid Import Off Peak Grid Cost



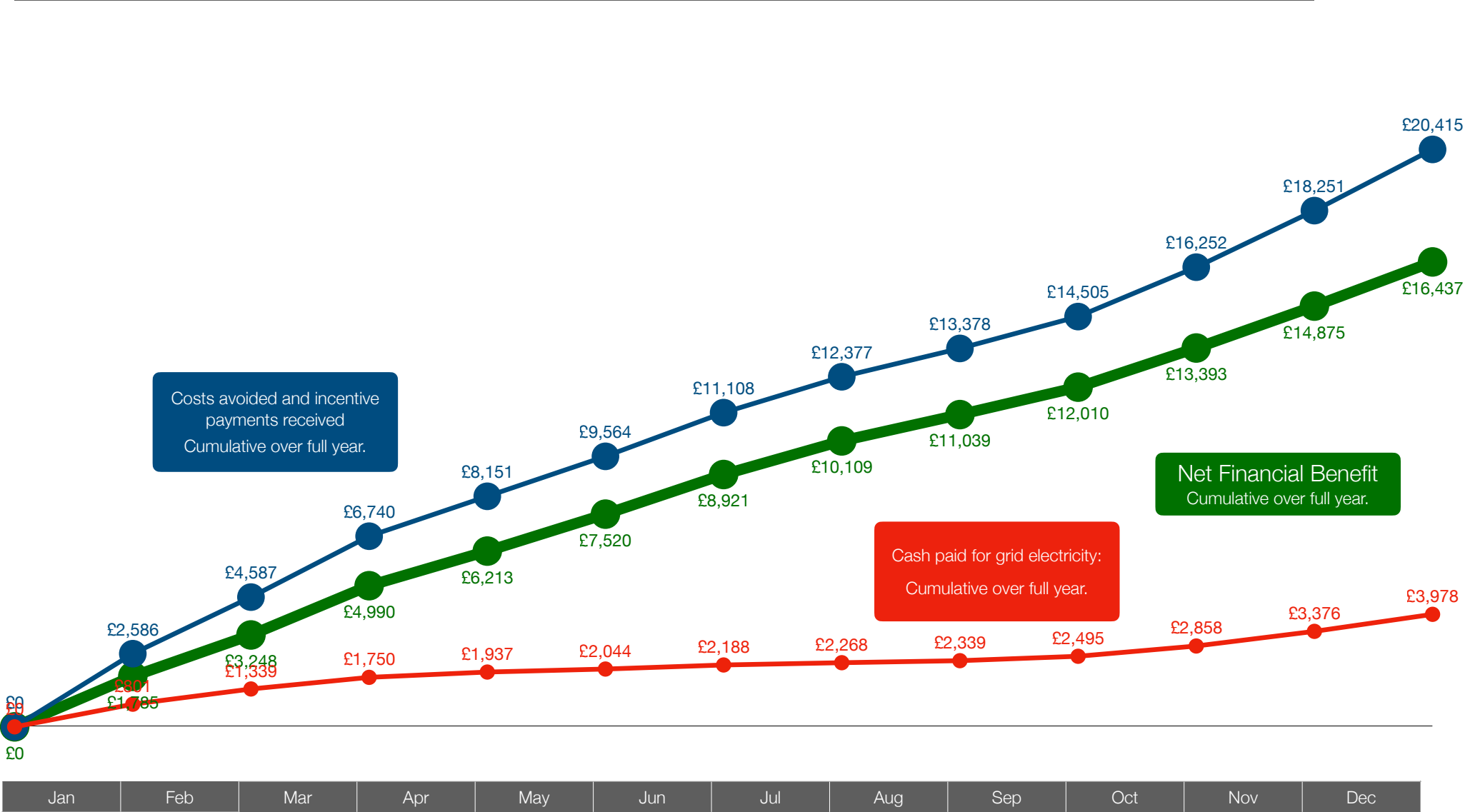
Total Energy Cost vs Total Incentives: by month.

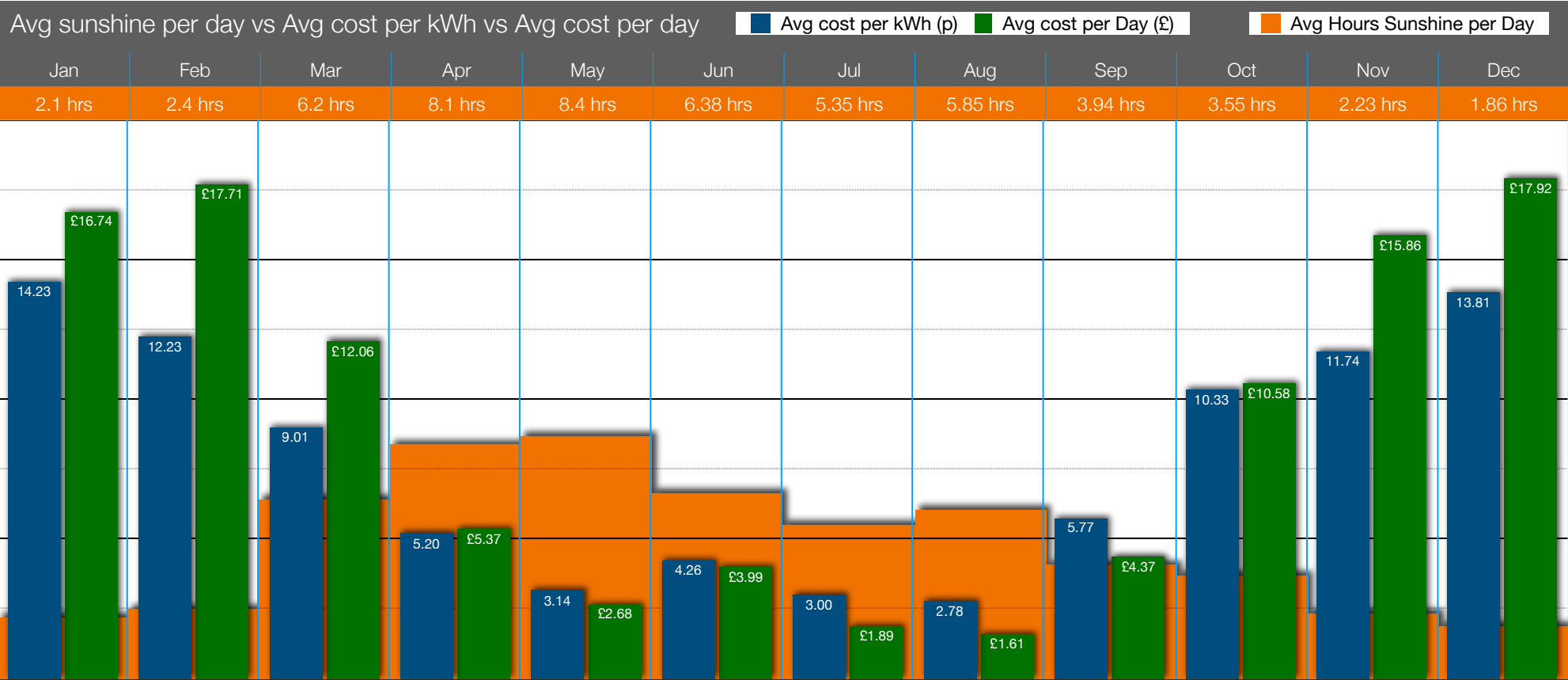


Total Grid Cost vs Total Incentives: Cumulative



Total Grid Cost vs Total Savings & Incentives: Cumulative





Grid Tariff Information shown below. Tariff: Intelligent Octopus Go. Peak and Off-Peak cost per kWh changes every quarter, in response to OFGEM (regulator) Price Cap rates.

Off-Peak: 6 Hours @ 6.67p/kWh excl VAT
Peak: 19 Hours @ 28.17p/kWh excl VAT

Off-Peak: 6 Hours @ 6.67p/kWh excl VAT
Peak: 18 Hours @ 24.60p/kWh excl VAT

Off-Peak: 6 Hours @ 6.67p/kWh excl VAT
Peak: 18 Hours @ 21.34p/kWh excl VAT

Off-Peak: 6 Hours @ 6.67p/kWh excl VAT
Peak: 18 Hours @ 26.65p/kWh excl VAT

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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