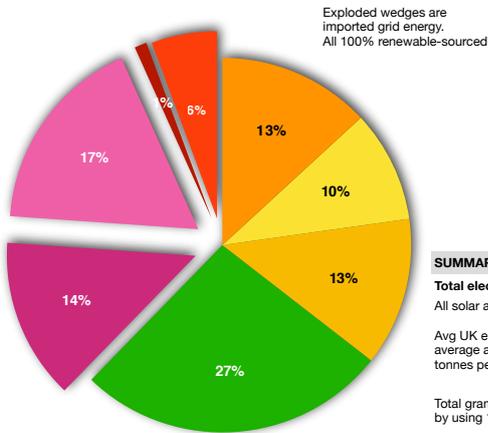


SUMMARY ENERGY RESULTS	kWh
Solar energy generated and used for domestic consumption.	207.8
Solar energy generated and used for EV charging	153.1
Solar energy generated and used for Powerwall charging	202.9
Powerwall stored energy used during peak hours. Charged 202.9 kWh solar + 220.1 kWh off-peak grid.	423.0
Paid To Consume grid energy (100% renewable sourced)	0.0
Off-peak grid to charge Powerwall (100% renewable sourced)	220.1
Off-peak grid to charge EVs (100% renewable sourced)	273.0
Off-peak grid for any other use (100% renewable sourced)	16.7
Peak grid consumption for any use (100% renewable sourced)	89.2

August 2020 How To Electrify Your Life Performance Report

Overall performance and benefits of our generation, storage and EV charging system for August 2020.



Powerwall Breakdown	kWh		GBP
Charge from off-peak grid electricity import	220.1	52.0%	£11.01
Charge from solar	202.9	48.0%	£0.00
Total charge to Powerwall	423.0	Cost Incurred	£11.01
Powerwall discharge during peak hours	423.0	Cost Avoided	£54.69
Net benefit of Powerwall peak-shifting			£43.69

SUMMARY COST SAVING RESULTS (all electricity use, incl. EV charge)	
Total energy consumed (kWh)	1,162.6
Total cost, grid electricity incl. standing charge & VAT	£44.77
Government payments for solar generation	-£27.51
Payments to consume (Demand Side Response)	£0.00
Net total electricity bill, net of payments made to us	£17.26
Actual average cost of kWh used (£17.26/1,162.6)	£0.0148
UK average electricity cost per kWh	£0.1550
Cost of 1,162.6 kWh at UK average cost	£180.21
Total saving on 1,162.6 kWh vs UK average cost	£162.95

SUMMARY OF CLIMATE BENEFITS

Total electricity used (kWh)	1,162.6
All solar and grid energy used is from 100% renewable generation.	
Avg UK emissions (g/kWh): "For all sources of electricity, the average amount of carbon dioxide emitted in 2018 amounted to 180 tonnes per GWh of electricity supplied." [Source]	180
Total grams CO2 emissions avoided by using 100% renewables versus UK average	209,274
kg CO2 avoided by using 100% renewables versus UK average	209.3

MOTORING BENEFITS RESULTS (1,185.7 miles gained from charging EVs)	
Total energy charged to EVs (kWh)	426.0
Miles range gained from charging 426.0 kWh	1,185.7
Actual cost of all grid energy used (solar is £0)	£13.65
Fuel costs to drive a petrol/diesel car 1,185.7 miles	£248.72
Total saving on motor fuel versus petrol/diesel	£235.07
Total financial benefits in month	£398.02

Grid Energy Prices	
UK average grid price	£0.1550
Off-peak 00:30 - 04:30	£0.0500
Peak (all other times)	£0.1293
Grid pays us to use	-£0.0500
Average per kWh on this month's energy mix	£0.0148

Total EV miles fuelled with 100% renewable electricity	1,185.7
Kilometre equivalent	1,908.2
Average UK CO2 emissions g/km (2018 most recent data)	125.1
Total grams CO2 emissions avoided by using EVs vs UK average	238,721
kg CO2 avoided by using EVs charged with 100% renewables	238.7
Total kilograms CO2 emissions avoided	448.0

Current Month detailed data

CORE VARIABLES	
CORE VARIABLES	
Number of days in month	30
Number of solar panels in operation in period	24
Peak generating capacity of each panel (kWp)	0.31
Peak generating capacity of all panels combined (kWp)	7.44
Off-peak grid electricity (Octopus Go tariff), cost per kWh, including VAT	£0.0500
Peak grid electricity (Octopus Go tariff), cost per kWh, including VAT	£0.1293
PAY TO CONSUME rate PAID to use to grid electricity during Demand Side Response period, per kWh, including VAT	-£0.0500
Saving for every kWh charged into Powerwall at off-peak but used at peak time	£0.0793
Average energy consumption (kWh per mile) per mile of both Tesla Model X and Nissan Leaf EVs.	0.293
Assumed average mpg of internal combustion engine cars for motoring benefit calculations	35
Gallons to Litres conversion	4.54
Assumed price per litre of fuels for motoring benefit calculations	1.32

Energy Performance and related Financial Benefits in month	Energy (kWh)	Financial (GBP)
Solar energy generated in peak hours by solar panels and used immediately on site	207.8	
Financial benefit of solar generation. (Purchase cost of 207.8 kWh peak grid electricity avoided.)		£26.86
Financial benefit of Government payments for solar generation (applies to 16 panels only, other panels too late for subsidy).		£27.51
Energy discharged from Powerwall battery during peak hours. (Energy charged to battery using off-peak grid and solar only).	423.0	
Financial benefit of Powerwall discharging stored energy during peak hours. (Cost of 423.0 kWh peak electricity avoided.)		£54.69
Energy charged to EV batteries using off-peak grid electricity.	273.0	
Cost which would have been incurred if 273.0 kWh of peak grid electricity had been used to charge EVs.		£35.29
Cost actually incurred to charge 273.0 kWh to EVs, using off-peak grid electricity only.		£13.65
Financial benefit of using off-peak energy (Octopus Go tariff) to charge EVs - peak cost avoided minus off-peak cost paid		£21.65
Energy charged to EV batteries using energy from solar generation	153.1	
Financial benefit of charging EVs with solar-generated energy (cost of 153.1 kWh peak hours grid electricity avoided).		£19.79
Energy used during PAY TO CONSUME Demand Side Response period	0.0	
Per kWh rate PAID to us by Octopus for consuming energy during Demand Side Response Period		£0.05
Financial benefit of Octopus PAY TO CONSUME. (Payment for 0.0 kWh used during Demand Side Response Period.)		£0.00
Total direct energy-related financial benefits in month		£150.50

Motor fuel saving benefits in month	Energy (kWh)	Financial (GBP)	Calcs
Total energy charged to EVs from off-peak grid electricity: (64.1% of EV charging at home)	273.0		
Range gained by EVs with 273.0 kWh off-peak charging, assuming 0.293 kWh per mile consumption. (Miles)			930.7
Total gallons required to cover 930.7 miles at assumed internal combustion car average mpg			26.6
Litres equivalent of 26.6 gallons			120.7
Total cost of petrol/diesel fuel that would be payable to purchase 120.7 litres, at 1.32 per litre.		£159.36	
Off peak grid energy cost actually incurred to charge 273.0 kWh into EVs.		£13.65	
Financial benefit of charging EVs with off peak electricity versus the cost of petrol/diesel fuel to cover the same distance.		£145.71	
Total energy charged to EVs from PAID TO CONSUME grid electricity: (0.0% of EV charging at home)	0.0		
Range gained by EVs with 0.0 kWh off-peak charging, assuming 0.293 kWh per mile consumption. (Miles)			0.0
Total gallons required to cover 0.0 miles at assumed internal combustion car average mpg			0.0
Litres equivalent of 0.0 gallons			0.0
Total cost of petrol/diesel fuel that would be payable to purchase 0.0 litres, at 1.32 per litre.		£0.00	
per kWh rate PAID to us by Octopus to consume this energy during Demand Side Response period		-£0.05	
Off peak grid energy cost actually incurred to charge 0.0 kWh into EVs.		£0.00	
Financial benefit of charging EVs with PAY TO CONSUME electricity vs the cost of petrol/diesel to cover the same distance.		£0.00	
Total energy charged to EVs from solar: (35.9% of EV charging at home)	153.1		
Range gained by EVs with 153.1 kWh solar charging, assuming 0.293 kWh per mile consumption. (Miles)			521.9
Total gallons required to cover 521.9 miles at assumed internal combustion car average mpg			14.9
Litres equivalent of 14.9 gallons			67.7
Total cost of petrol/diesel fuel that would be payable to purchase 67.7 litres, at 1.32 per litre.		£89.36	
Cost of solar energy to charge 153.1 kWh into EVs.		£0.00	
Financial benefit of charging EVs with solar electricity versus the cost of petrol/diesel fuel to cover the same distance.		£89.36	
Total motor fuel savings: 1,185.7 miles charged by a total of 426.0 kWh.		£235.07	
Mix: Solar 153.1 kWh; Off-peak grid 273.0 kWh; Paid To Use grid 0.0 kWh.			

Variables & Key Inputs

Energy Cost Saving Benefits

Motor Fuel Cost Saving Benefits

Monthly Performance Report: August 2020

Energy flows may not add to precisely 100% due to input rounding

Total energy CONSUMPTION in month (kWh): **1,162.63**

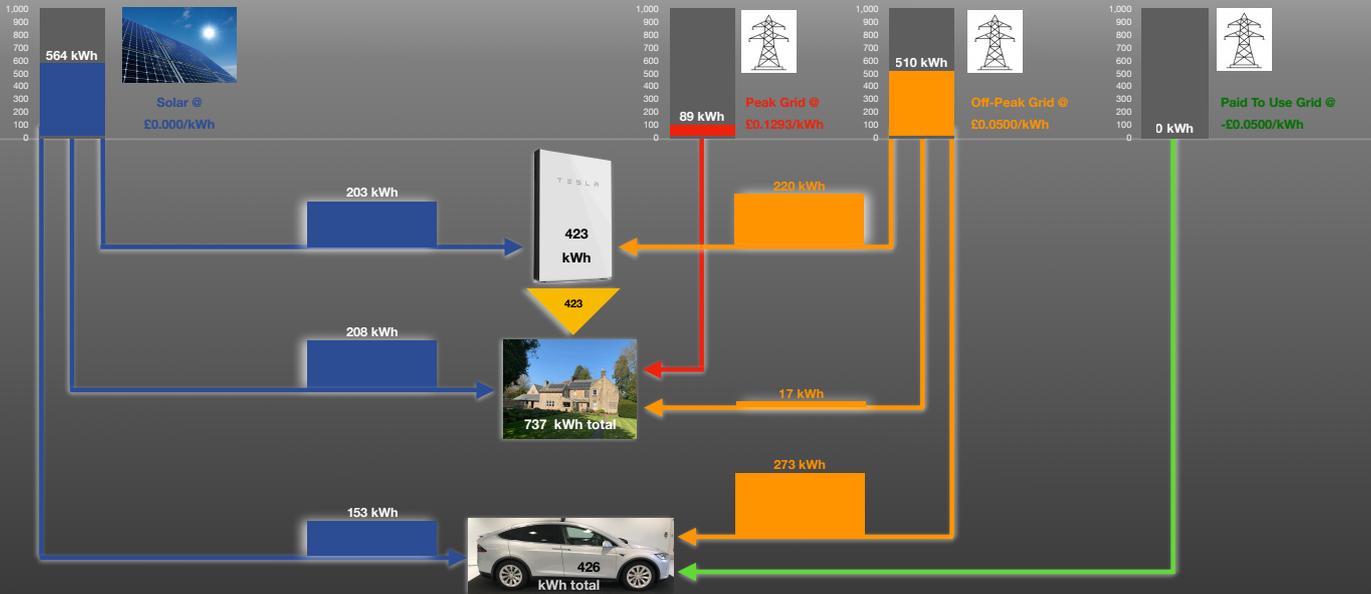
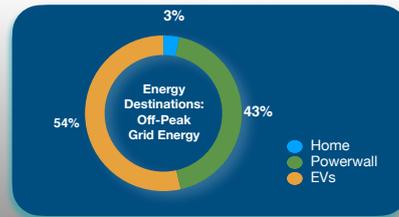
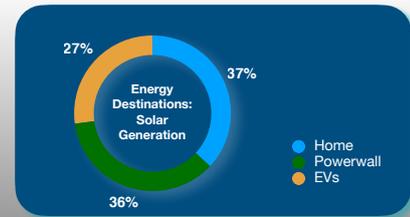
Net electricity COST in month: **£17.26**

Total BENEFIT (net electric cost vs UK avg + petrol savings): **£331.99**

CO₂ avoided in month, all domestic use and all home-charged EV miles (kg): **448.00**

■ Government Payment for Solar Generation & Grid Payments to Us
■ Total Cost Of Grid Energy & Standing Charge

■ Solar incl via Powerwall (Free) **48.5%**
■ Grid incl via Powerwall (We Pay To Use) **51.5%**
■ Grid (Pays Us To Use) **0.0%**



Motoring Benefits Summary

Miles Range Gained @ avg Tesla + Leaf kWh/m	Total cost of 1,186 miles on actual energy mix.	Actual Cost Per Mile (pence)	Petrol cost of 1,186 miles @ 35 mpg and £1.32 per litre.	Net Financial Benefit	CO ₂ Emissions Avoided
1,186	£13.65	1.151	£248.72	£235.07	238.7 kg

£331.99 SAVINGS 448.0 kg

Domestic Consumption Benefits Summary

737 Total Energy Consumed kWh	£17.26 Total cost of 737 kWh on actual energy mix incl Govt subsidies.	2.343 Actual Cost Per kWh (pence)	£114.18 Cost of 737 kWh @ UK Average cost per kWh	£96.92 Net Financial Benefit	209.3 kg CO ₂ Emissions Avoided vs UK avg Grid Mix
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