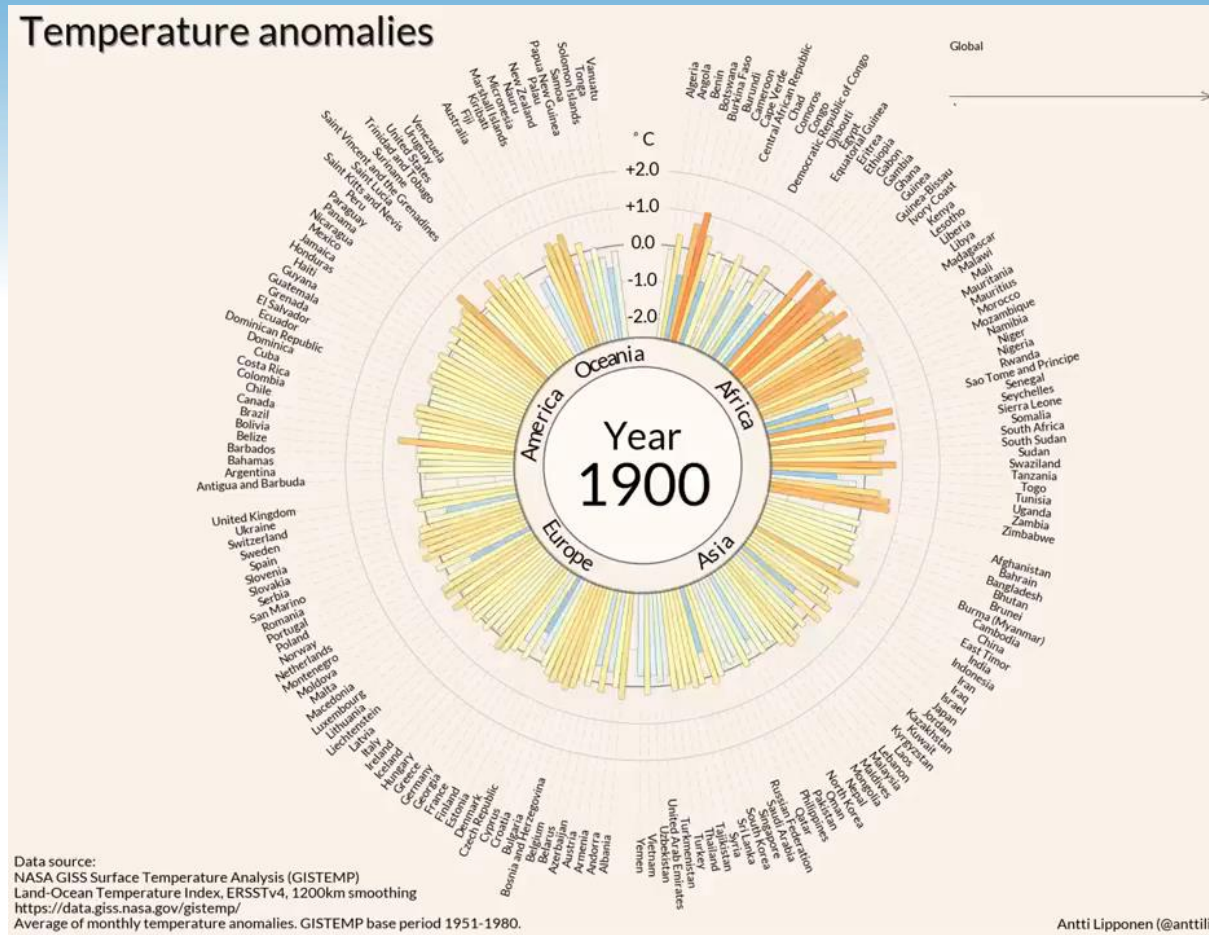


A review of current heat pump policy - opportunities available to landowners and rural landlords

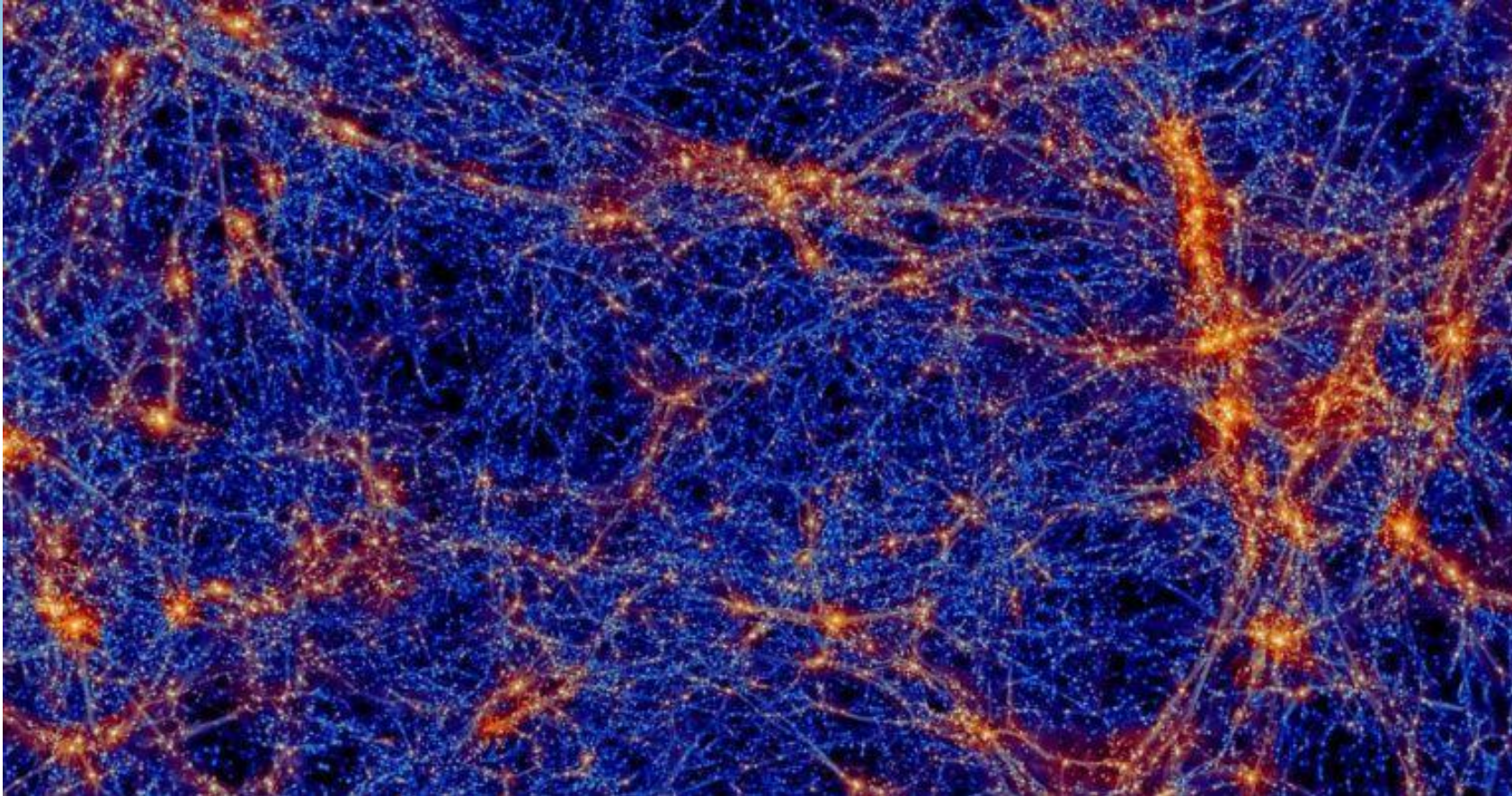
The UK Heat Pump Associations
Thursday 7th February 2019



Why are we worried - Global Temperature Anomalies since 1900



In the beginning.....



The Ultimate Renewable Energy Source



Evolving UK Government policy drivers

- Climate change
- Air quality (NO_x, SO_x & particulates)
- EU carbon emissions reduction targets & the legally binding UK Carbon Budget
- UK dependency on fuel imports
- UK balance of payments
- Fuel security
- Fuel poverty



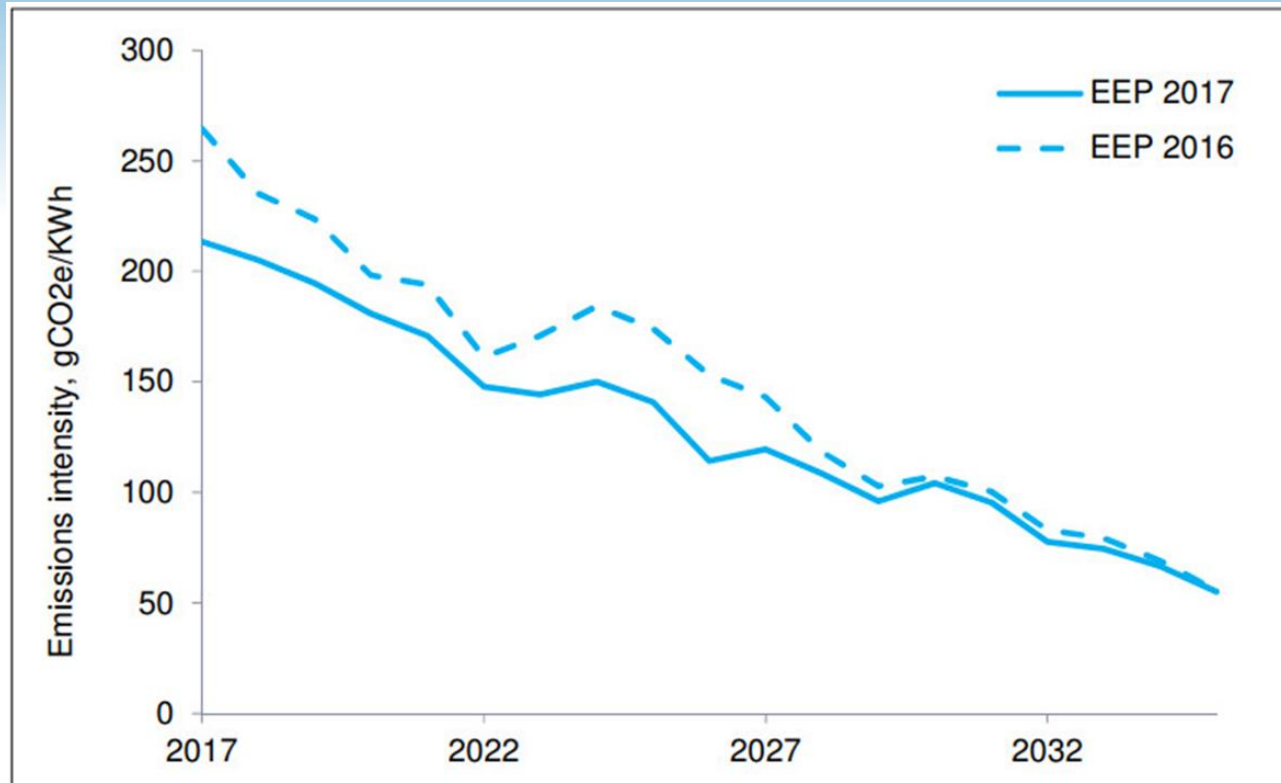
Renewable heat policy update

- Air quality and fuel poverty of equal importance to carbon emissions reduction, evidenced by GLA Boiler Scrappage scheme excluding biomass
- Subsidies largely eliminated but Renewable Heat Incentive 2, post April 2021?
- But, potential support for ground collector infrastructure
- Changes to district main heat loss assessment in SAP to 50-100%, but 0-10% for ambient heat networks
- Potential new measurement in SAP for operating cost per m² to reduce attractiveness of resistive heat
- MEES minimum EPC E rating from 1st April 2018 in rented property. D by 2025, C by 2035? (Exemptions apply but are time limited)
- More accurate recognition of the costs of Economy 7 electricity could reduce EPC banding for Night Storage Heaters
- Increased Building Regulation requirements, “stick rather than carrot”

Renewable heat subsidy update

- 31st March 2021 Renewable Heat Incentive closes to new applicants
- Funds remain available (quarterly degression constantly watched)
- Regulations expected to remain largely unchanged until scheme close
- Shared ground-loops represent a new opportunity since April 2018
- Replacement plant allowed under the Non-domestic scheme from 1st October 2018
- Heat demand limits for large domestic residential applications have changed the subsidy landscape. Two or more dwellings on a common plant room is now the only viable subsidised route
- Cooling metering rules have been clarified
- Significant backlogs remain at OFGEM
- Metered for payment meter recalibration will be problematic
- OFGEM anticipates up to 100% biomass plant replacement inside 20 years, but a significantly lower figure for heat pumps

What else is happening? Grid Carbon Intensity



CO₂ from Heating systems

UK grid at : **2018-10-12 08:30**

is emitting : **194 grams CO₂ /kWh**

Ground Source Heat Pump (400%):	48	grams CO ₂ per kWh delivered heat
Ground Source Heat Pump (320%):	61	
Direct Electric heating (100%):	194	
Gas boiler (85%):	215	
Oil boiler (85%):	320	
Coal (50%):	630	

GSHP
association

www.gshp.org.uk

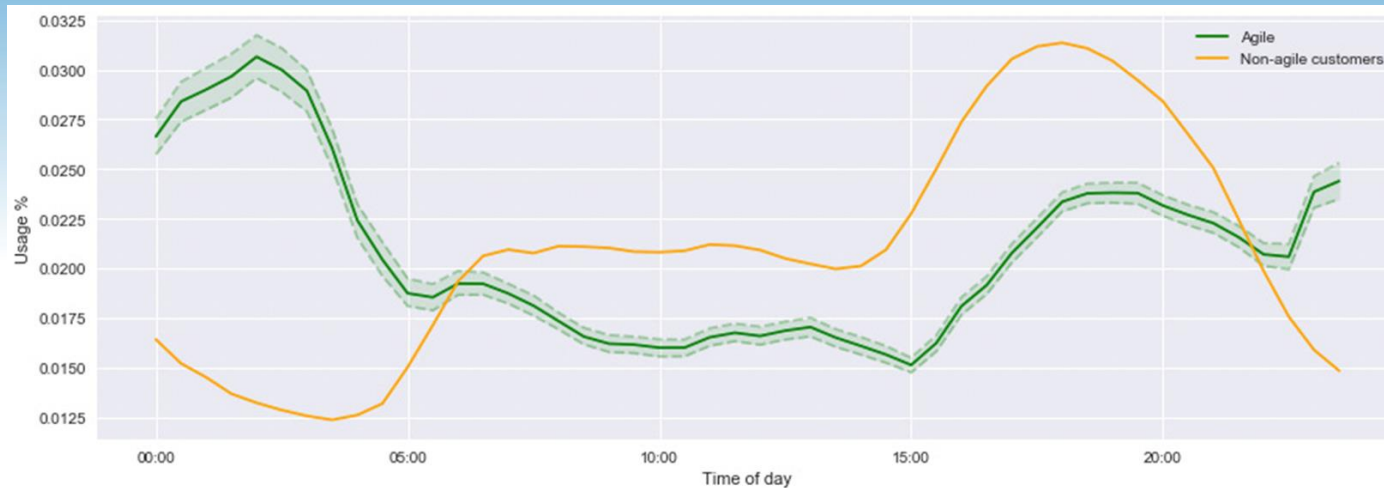
Planning – where London leads....

New 2019 GLA Guidance
Air Quality Gets Equal Billing

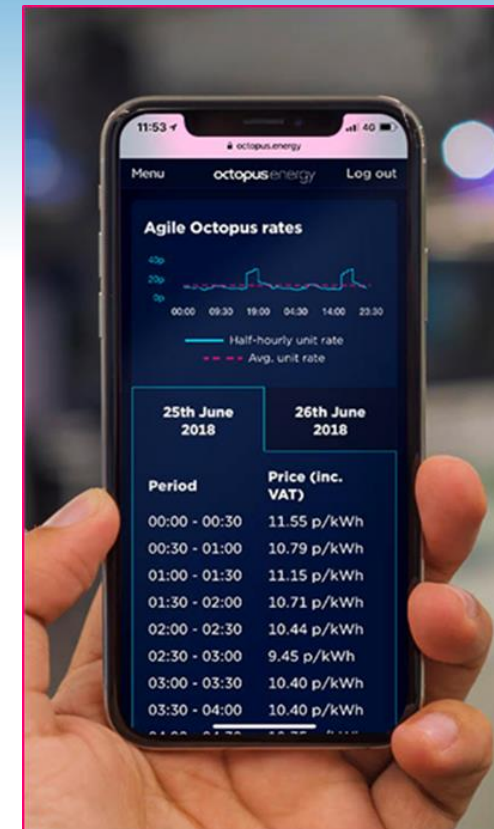
Fuel type	Fuel Carbon Factor (kWh/kgCO ₂)	
	SAP 2012	SAP10
Natural Gas	0.216	0.210
Grid Electricity	0.519	0.233



Nudge Theory Billing for Load Shifting



Octopus Energy Agile Tariff consumers demonstrate significantly different consumption profiles compared to average non-agile consumers. Low cost electricity is a proxy for low carbon intensity. Initial benefits for EV charging but progressing to heat pump deployment with thermal storage.



The resulting opportunities

- Leasing of thermal rights
- Third-party or shared ownership (of subsidy claims)
- Co-location of a-seasonal heating and cooling loads, new agricultural opportunities
- New thermal storage technologies – can be as effective as battery storage
- The value of demand side management, demand side response and load shifting
- Smart integration between local electrical generation, electrical demand and heat (or coolth) demand
- Significant contributions to rented property improvements
- Significant contributions to the removal of oil from the rural energy mix
- Heat as a service and other innovative funding models

Thank you

www.gshp.org.uk

www.heatpumps.org.uk

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