



Stephen Cockett – General Manager Wight Community Energy

Stephen Cockett

- Manager
- DEA retrofit advisor
- Climate advocate

This talk

- Why do all this?
- Electrifying stuff
- Carbon footprints
- Community energy
- Housing decarbonisation



The problem with energy.

- Vital to economic development
- An endless appetite
- Social dependency
- Reliance on despots
- Damaging to the climate

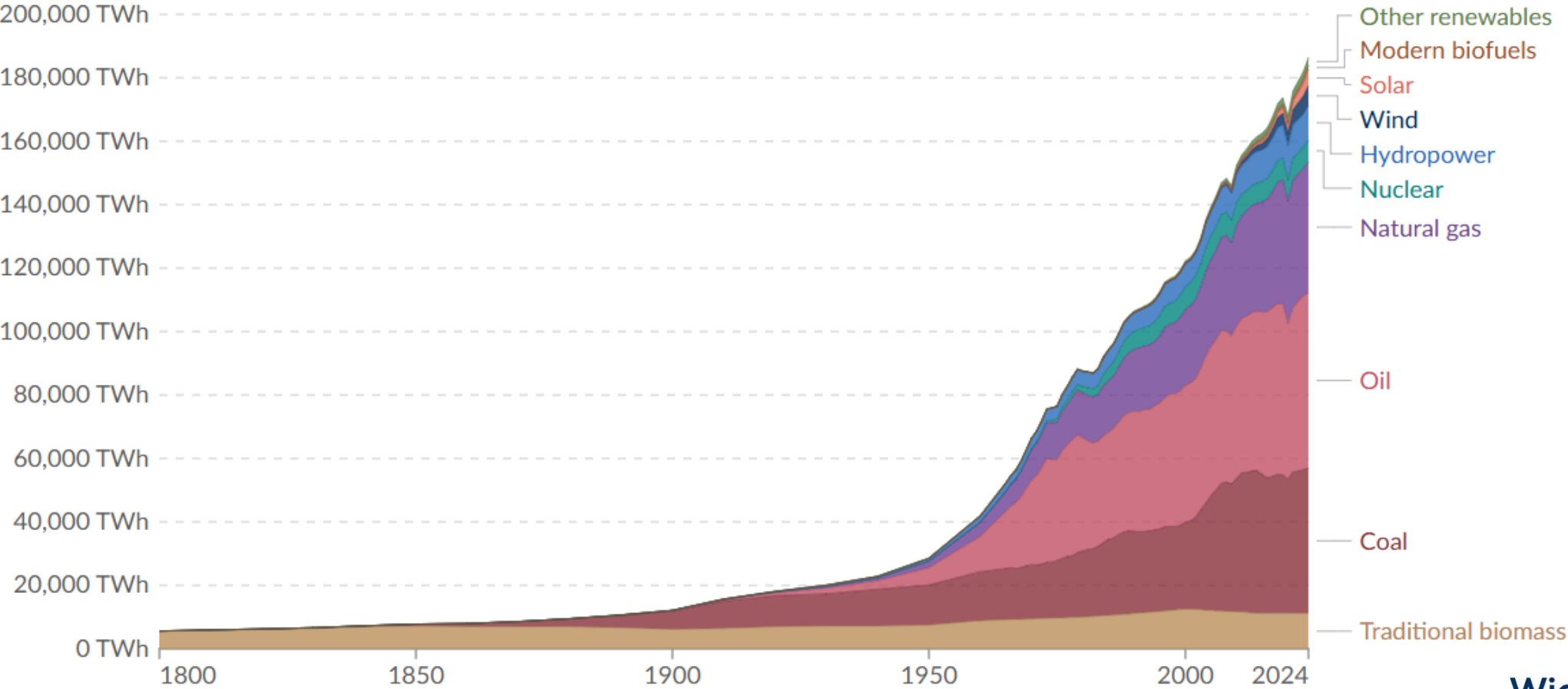
Global primary energy consumption by source

Primary energy is based on the substitution method and measured in terawatt-hours.

Table

Chart

Settings



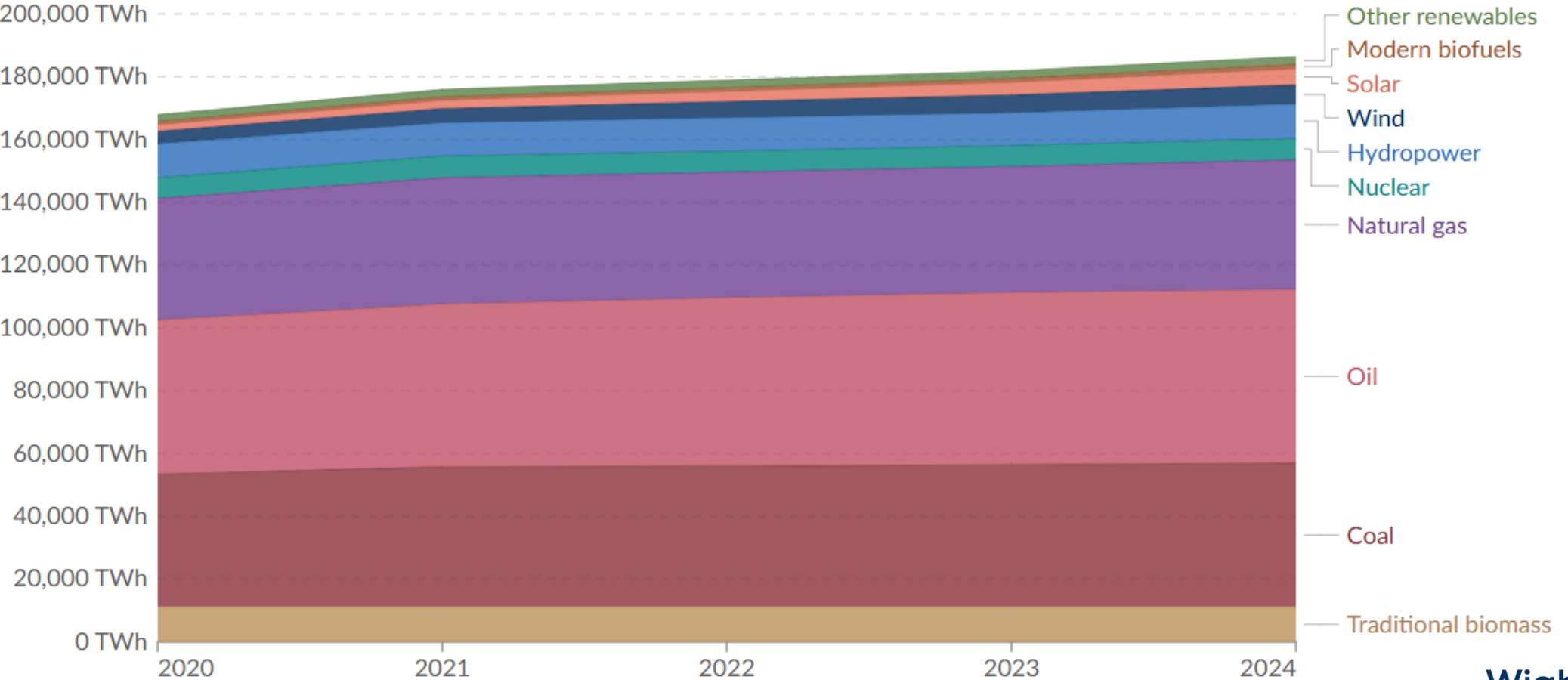
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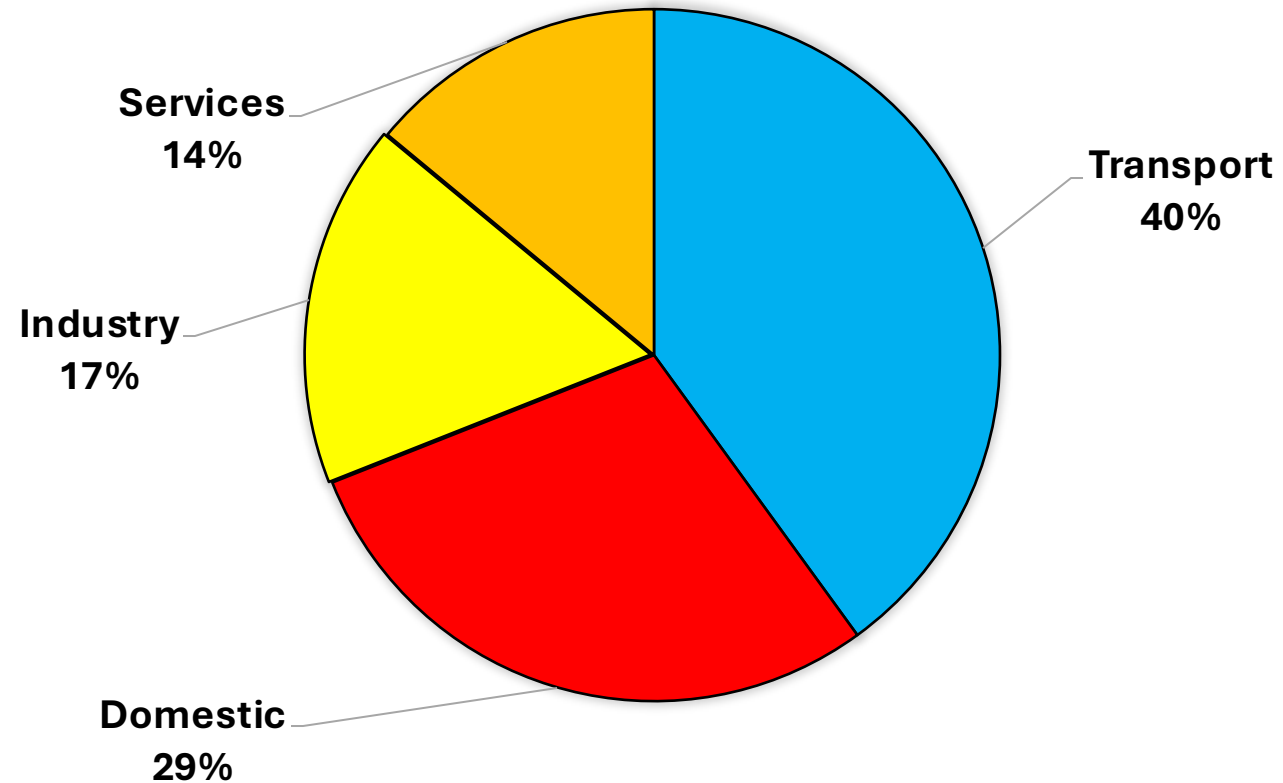
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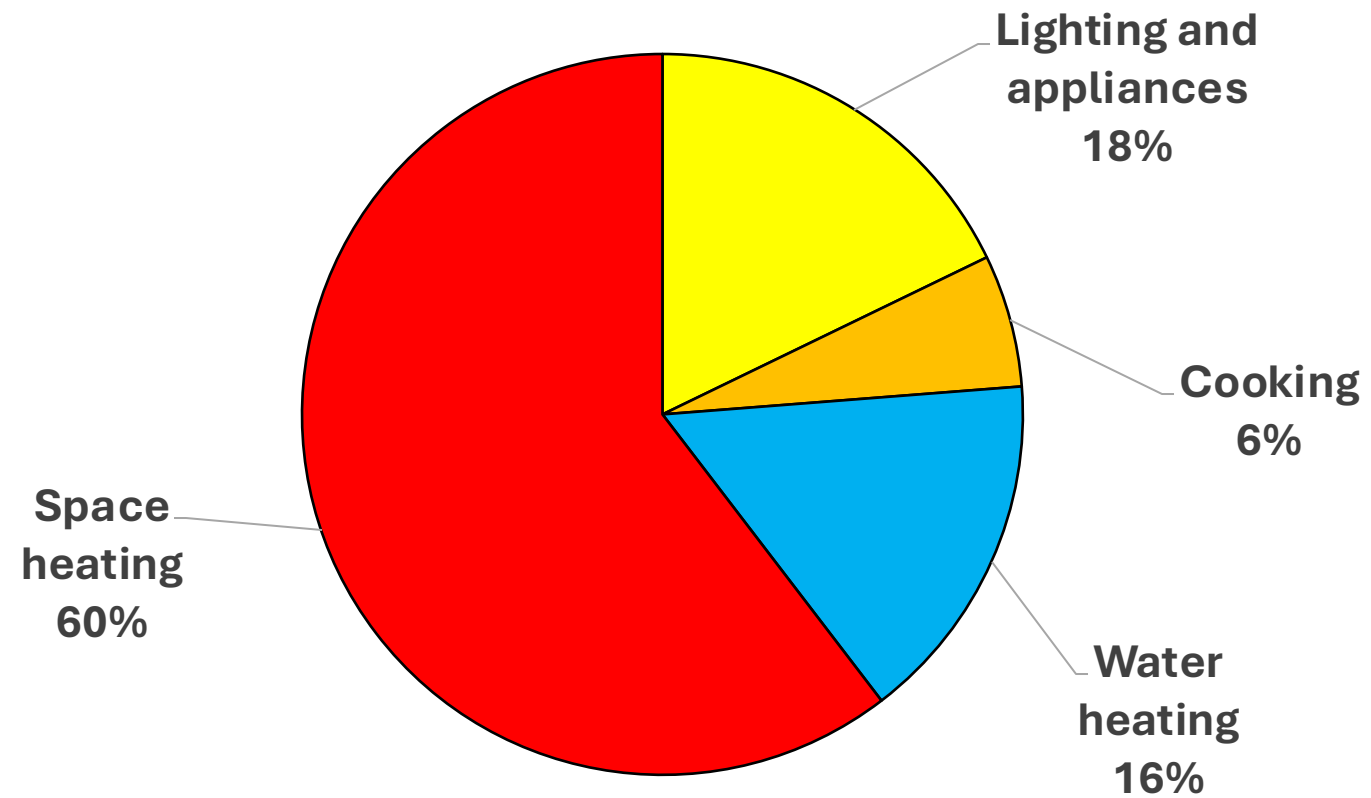
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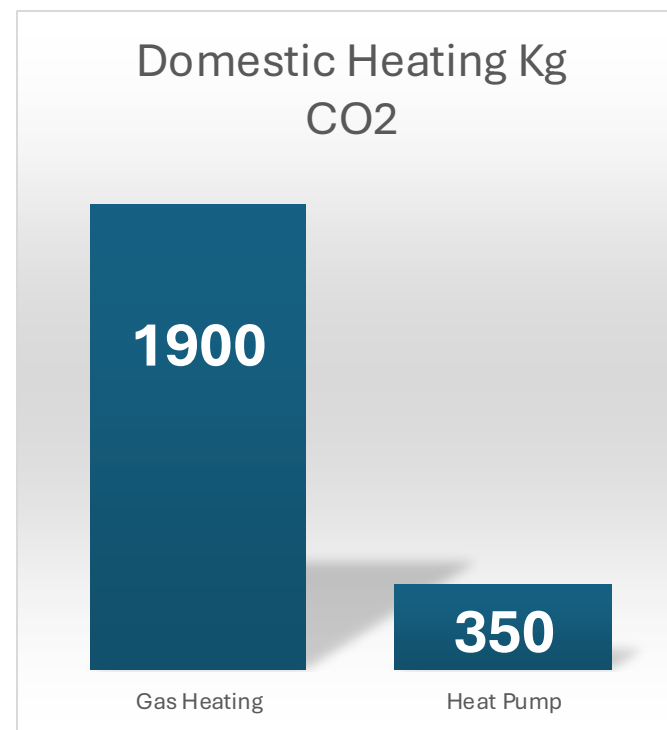
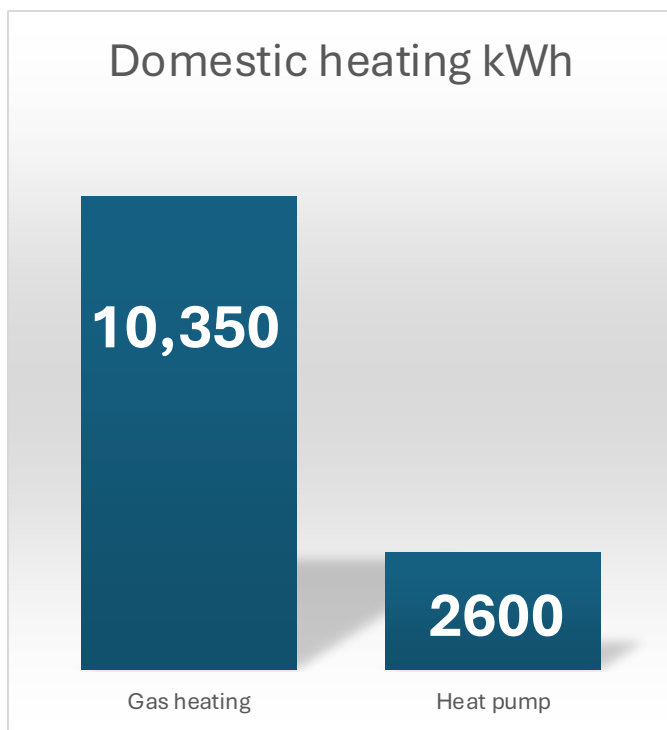
UK OVERALL ENERGY USE ALL SOURCES



Domestic Energy use

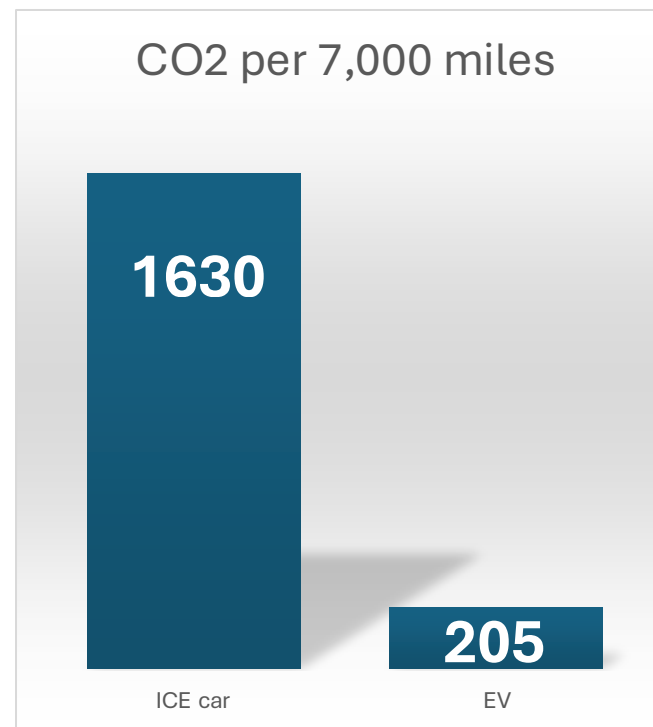


Heating – gas vs heat pump



Assumptions: SCOP 4 & last 12 months UK grid CO2 intensity

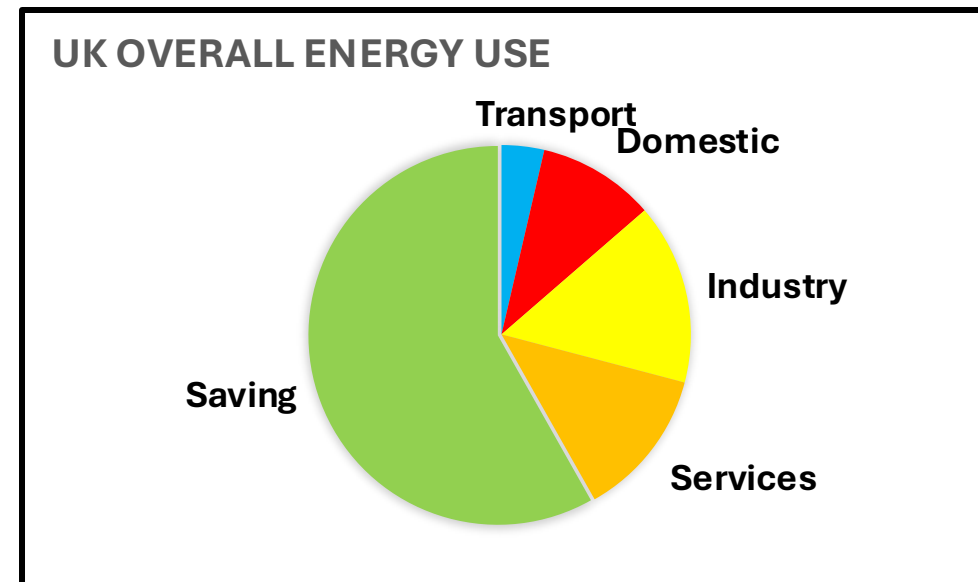
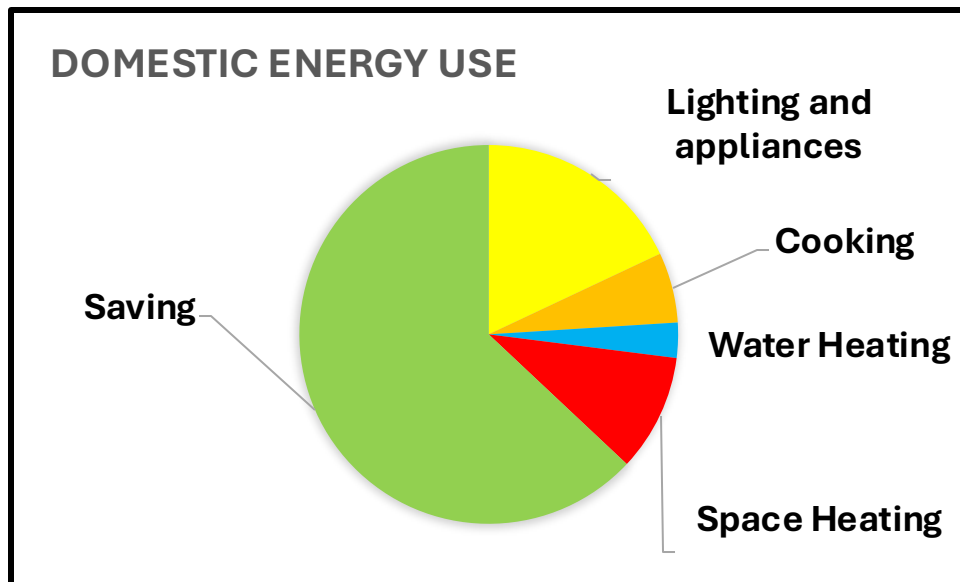
Transport – ICE vs EV



Assumptions: 5 litres per KM & 2.3 KG CO2 per litre burnt

Takeaways

- Heat with electricity = - 81% CO2
- Drive with electricity = - 87% CO2



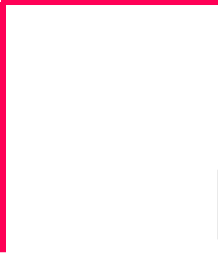


Wight Community Energy

- Formed in 2015
- Has 246 members
- Operates a 4MW solar farm



Community energy projects



Solar

LED lighting Outreach Insulation

Housing retrofit EV chargers

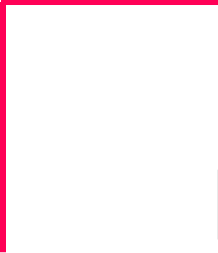
Nature projects Research projects

Tackling fuel poverty

Wind Energy advice

E-bikes

Advocacy Education



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Community
Energy

Powering The Island's Future



Going Electric 2025

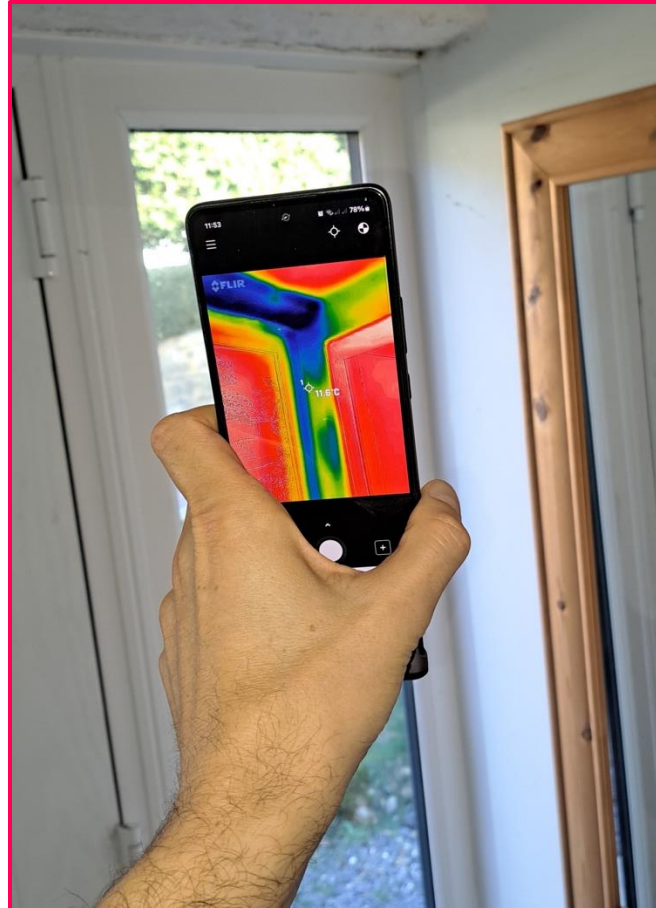


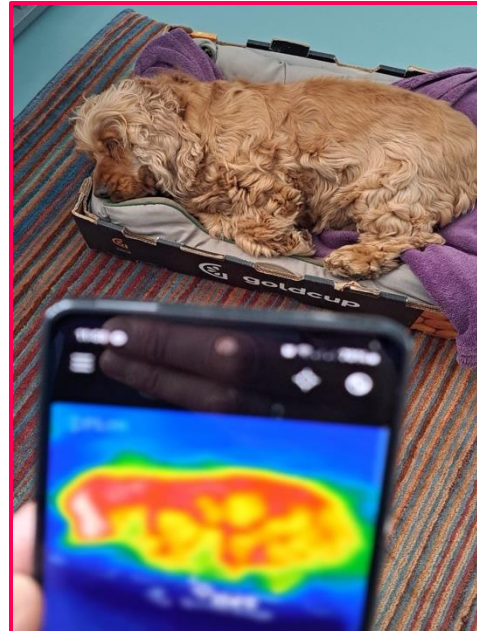
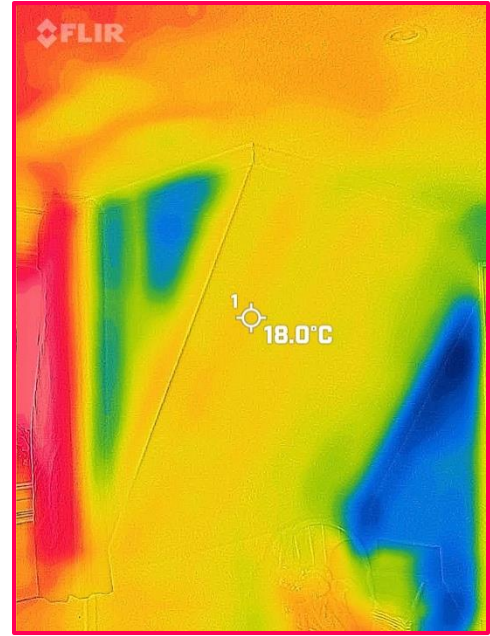
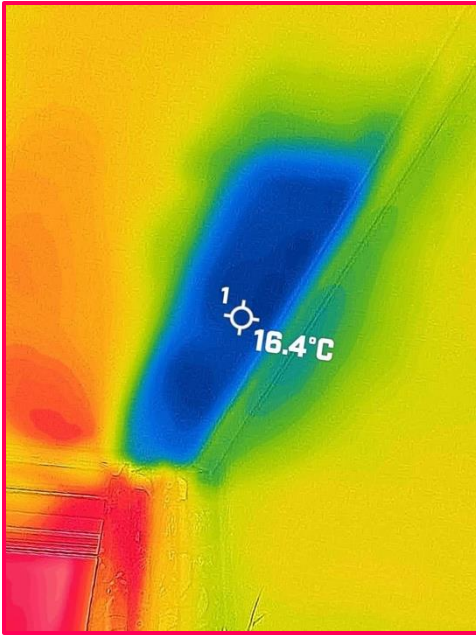
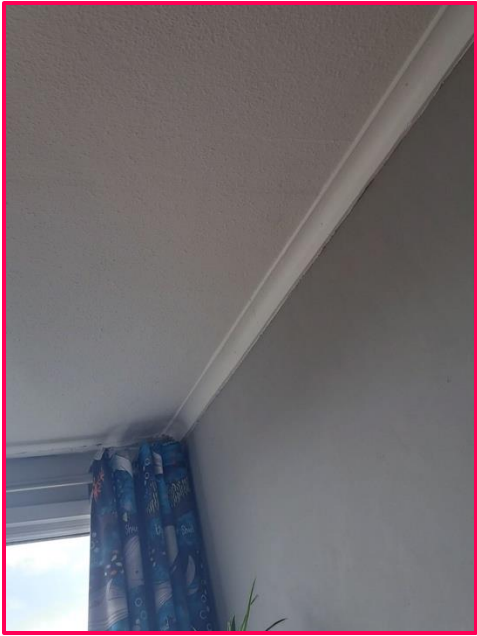


New frontiers for WCE

- Retrofit database
- Online content
- Housing service – camera & fan
- Community asset advice

Housing service – camera & fan





Strategies for saving energy

- Fixing draughts
- Enhancing insulation
- Doors and windows
- Complex insulation schemes

Strategies for saving energy

- Fixing draughts £10's
- Enhancing insulation £100's
- Doors and windows £1,000's
- Complex insulation schemes £10,000's

Strategies for building decarbonisation

- Heat pumps & clean grid

Strategies for decarbonisation with heat pump

- Deep retrofit – low energy
Vs
- Lite retrofit – low carbon

Strategies for decarbonisation with heat pump

Deep



Strategies for decarbonisation with heat pump

Lite

Windows

Heat pump

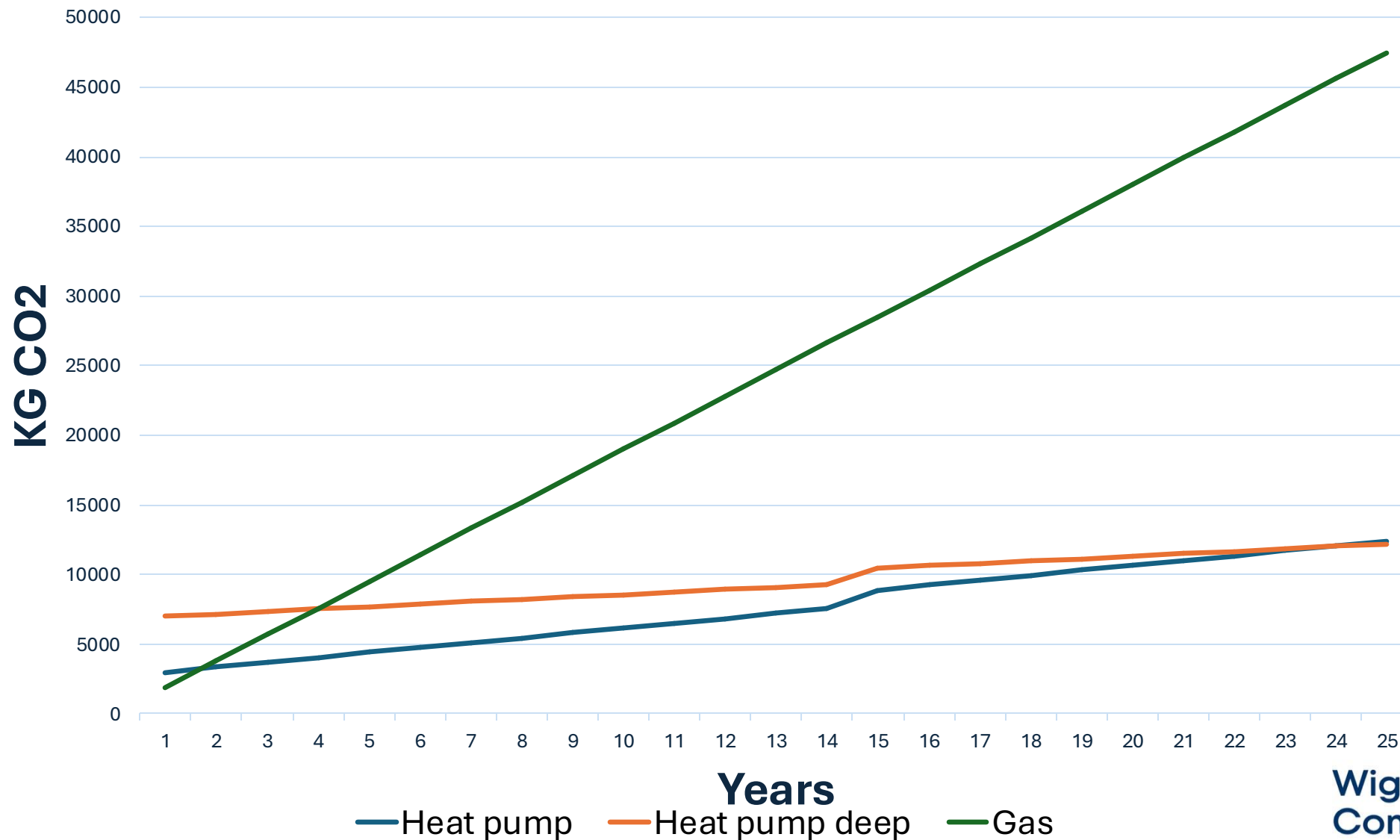


Loft

Cavity walls



Total emissions over time



Assumptions, 3000kg to install HP, 1000 to replace, 4000 to deep retrofit





Solar?

A good project has:

- A good roof
- Secure tenure
- High on-site demand

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No choice

80% of the answer

What we make of it

Gas >>> Electric

Heat pumps!



Talk to us!