

# Mapping the Hampshire Energy Use Landscape

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15/7/2022

# Where?

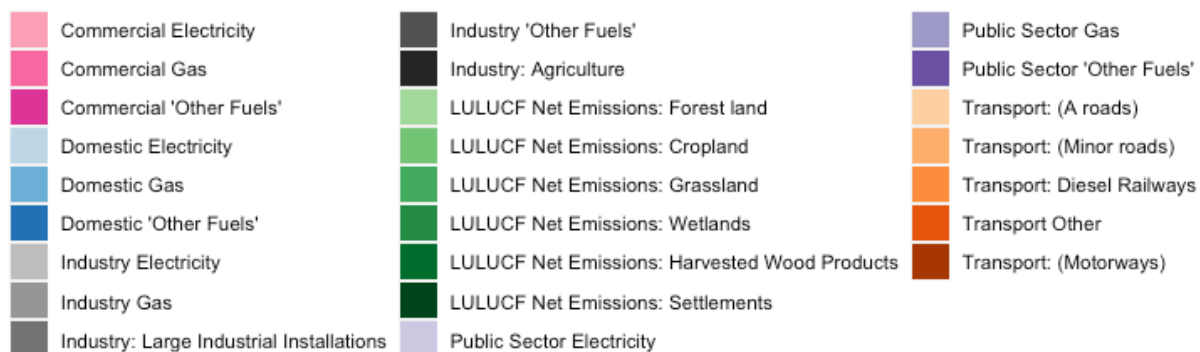
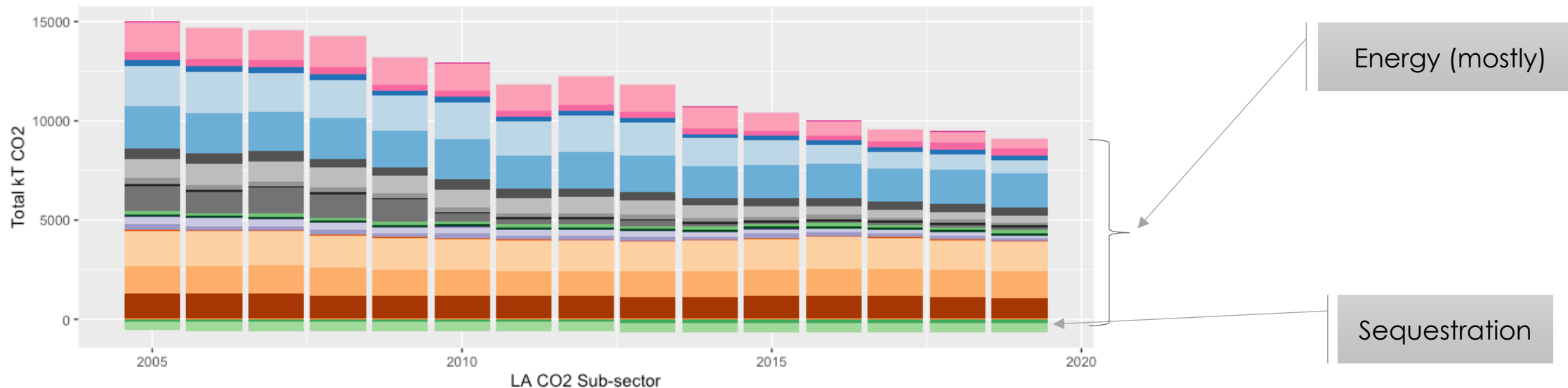


Figure 3: Map showing the boundaries and area covered at the LSOA level

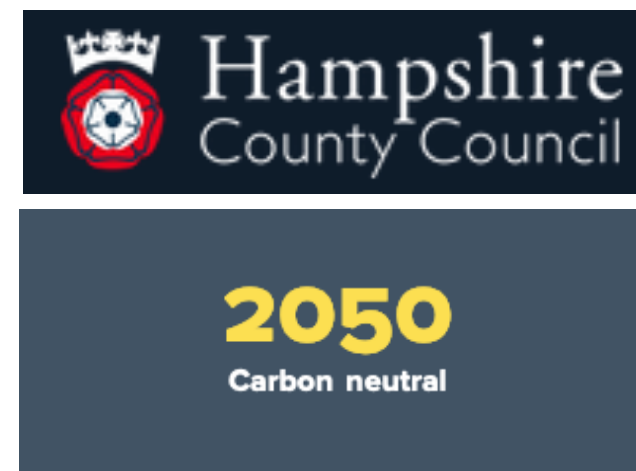
You are **here**

- All 14 'pan-Hampshire' Districts:
  - Basingstoke and Deane
  - East Hampshire
  - Eastleigh
  - Fareham
  - Gosport
  - Hart
  - Havant
  - Isle of Wight
  - New Forest
  - Portsmouth
  - Rushmoor
  - Southampton
  - Test Valley
  - Winchester

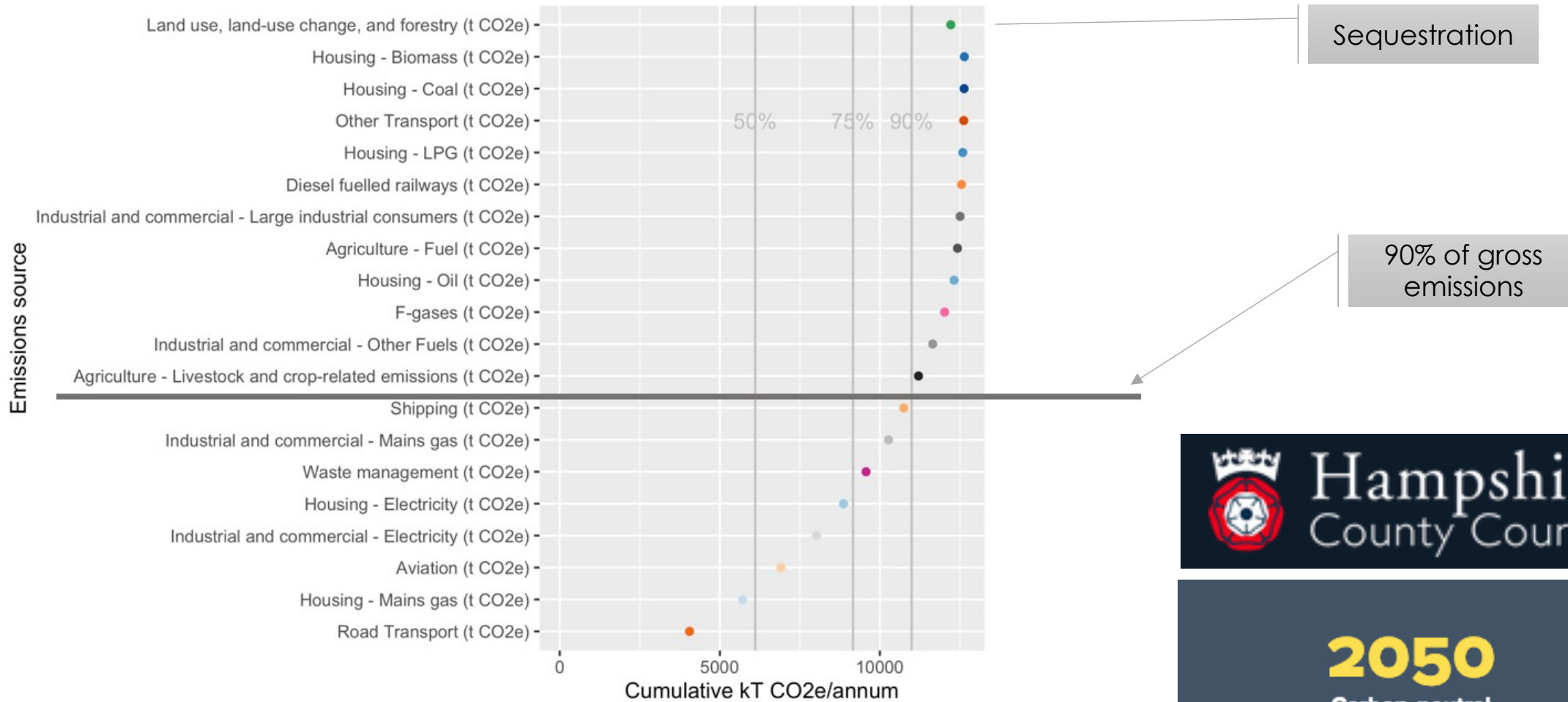
# What's the challenge?



Pan-Hampshire emissions estimates  
 (CO<sub>2</sub> only: **8,421 kT CO<sub>2</sub>** in 2019)



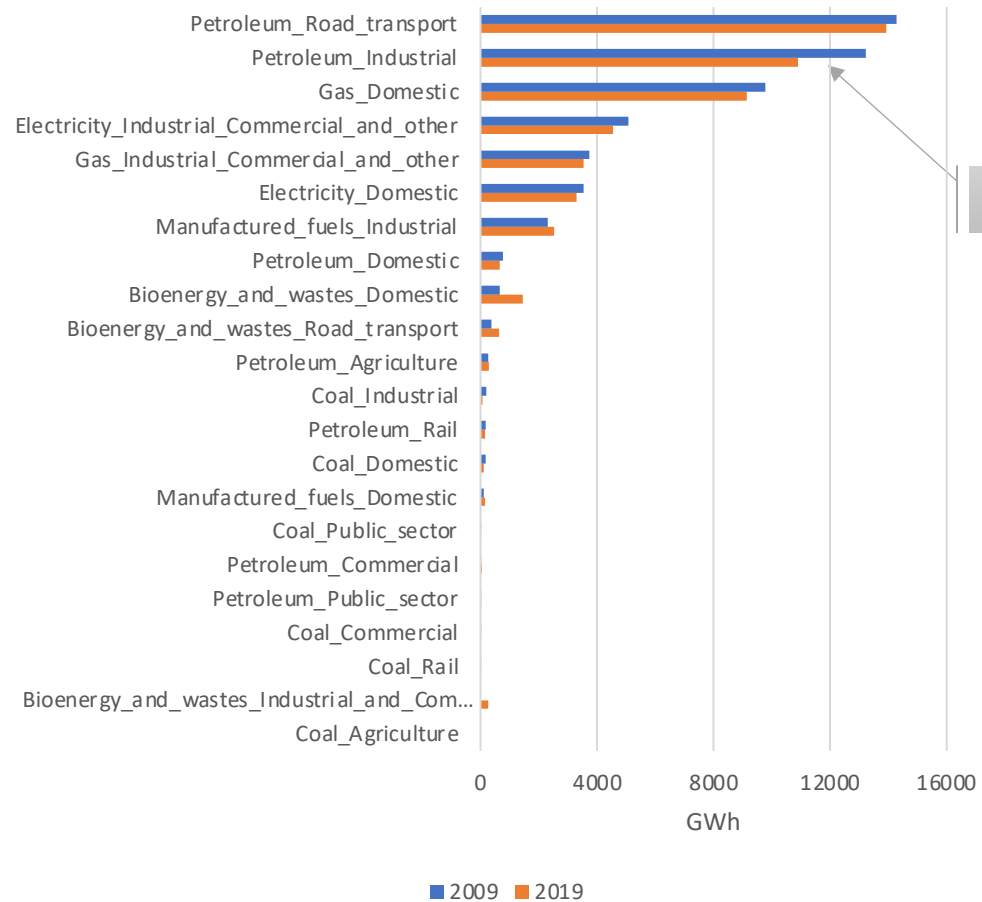
# What's the challenge?



Pan-Hampshire emissions estimates 2018/19  
 (All emissions)



# How much energy do we use?



Pan-Hampshire energy use

- 2009
  - 54,801 GWh
- 2019
  - 51,769 GWh

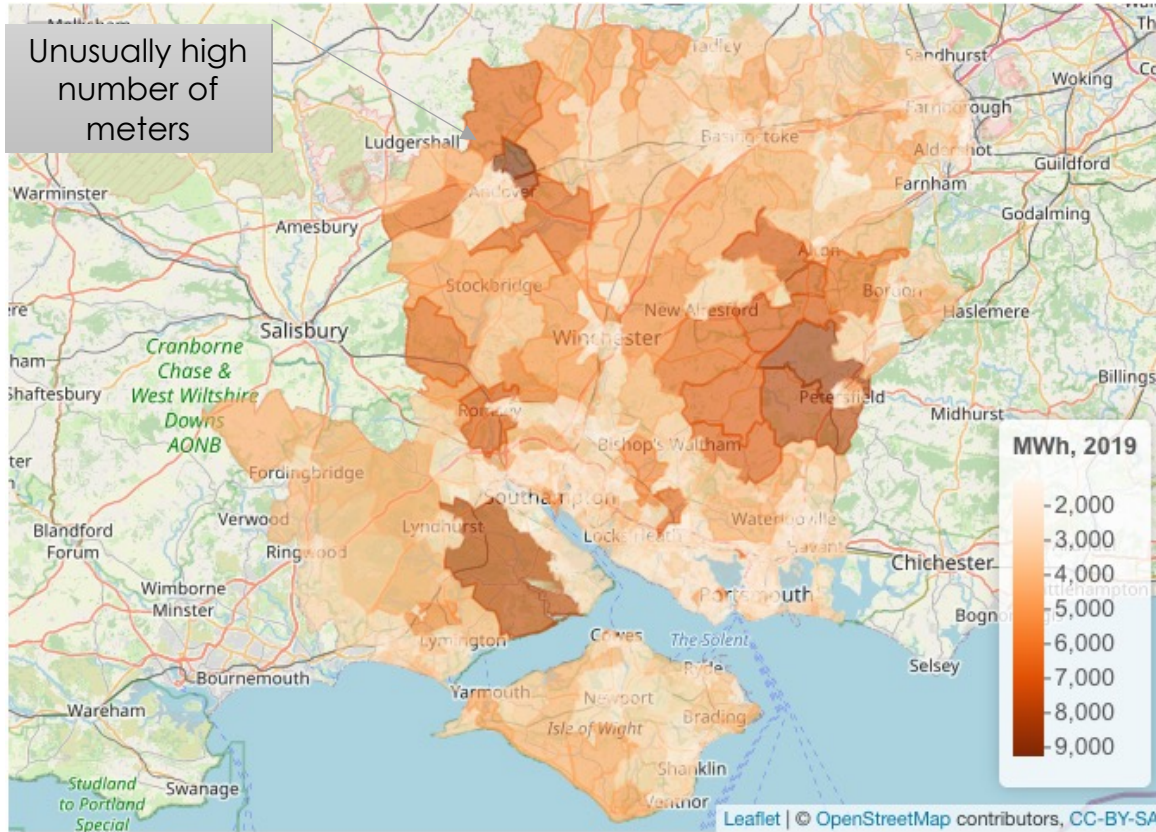
-ve

-6%

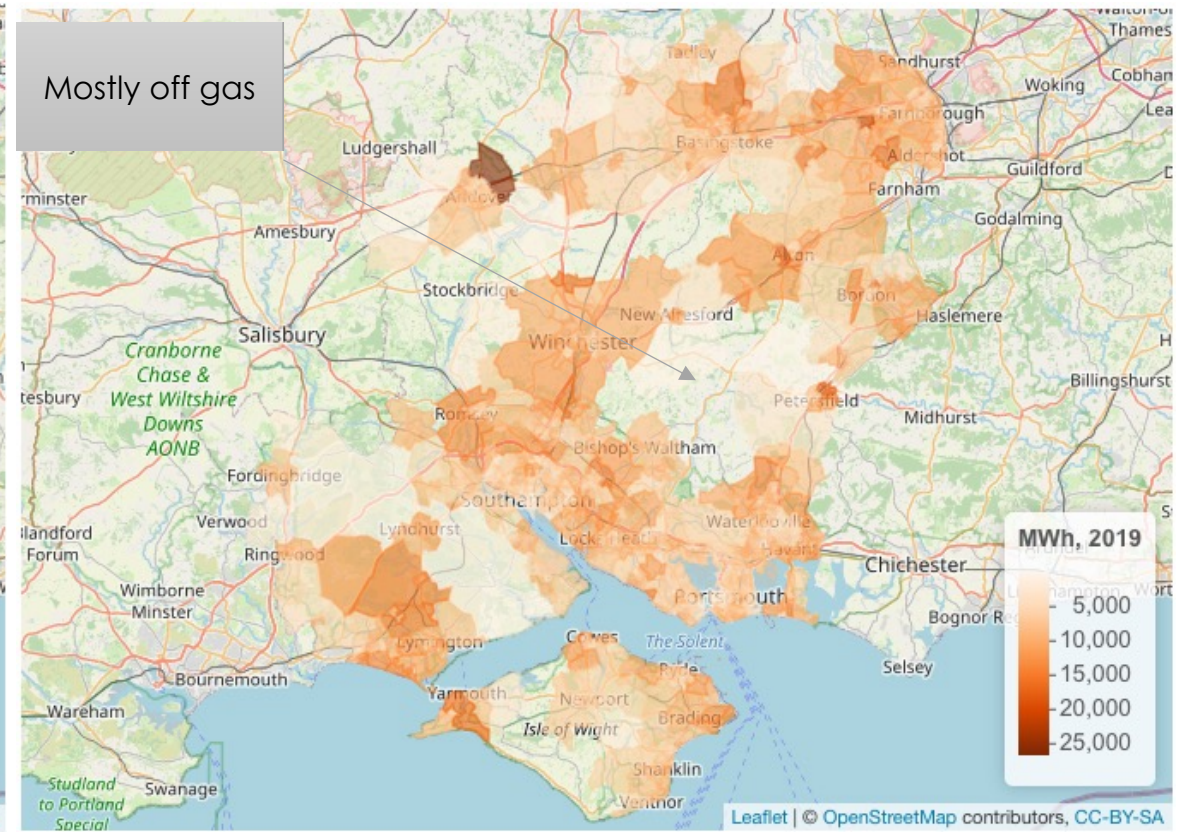
Range:

- Test Valley: +6%
- ...
- New Forest: -12%

# Where do we use it (domestic)?



Total domestic electricity, 2019

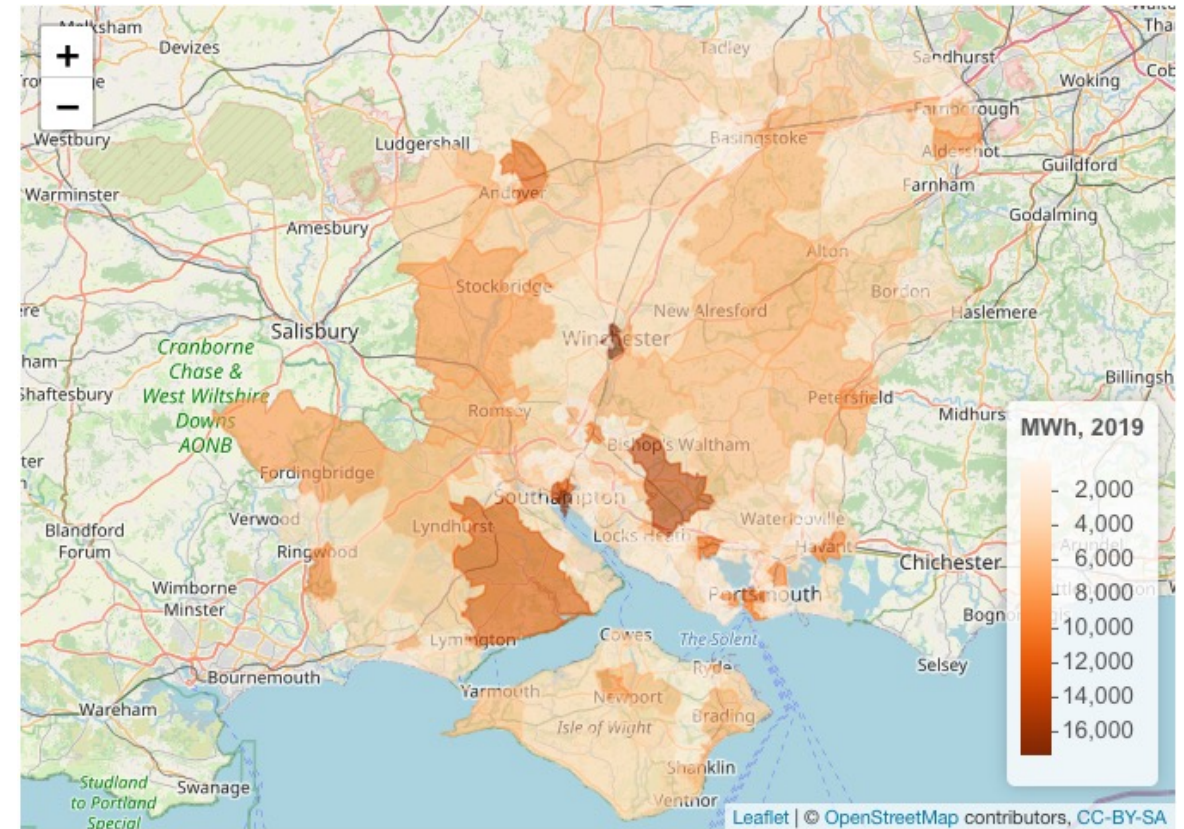


Total domestic gas, 2019

# Where do we use it (non-domestic)?



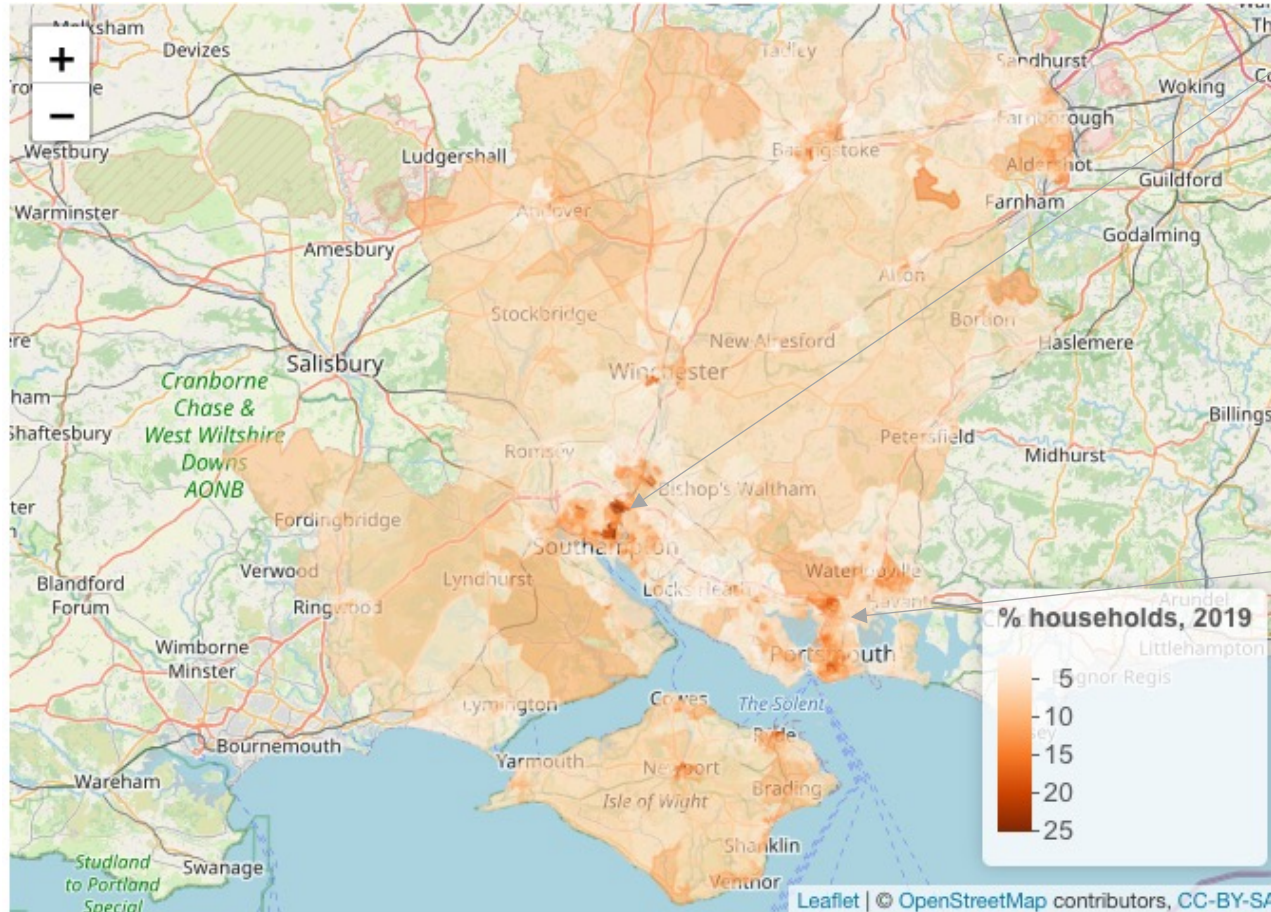
Total non-domestic electricity, 2019



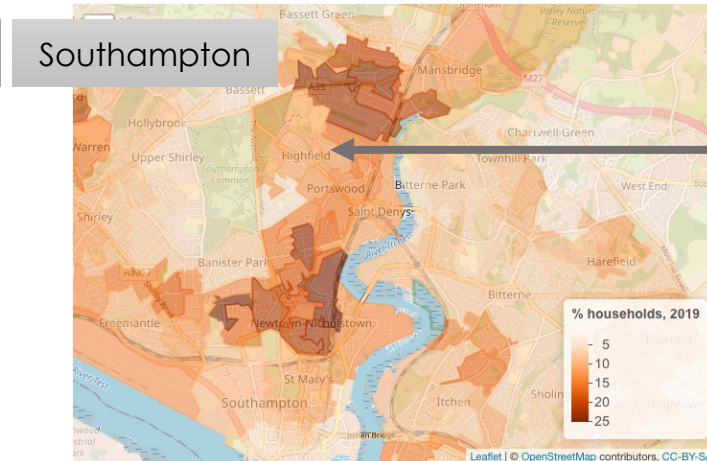
Total non-domestic gas, 2019

Warning: some use is not allocated (disclosure risk)

# But who can't afford to use it?

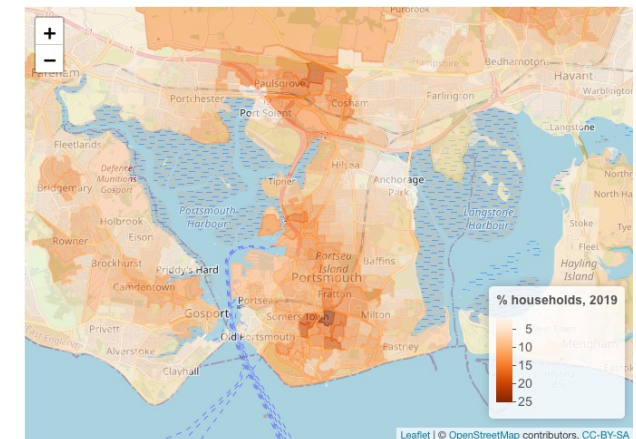


% households in fuel poverty



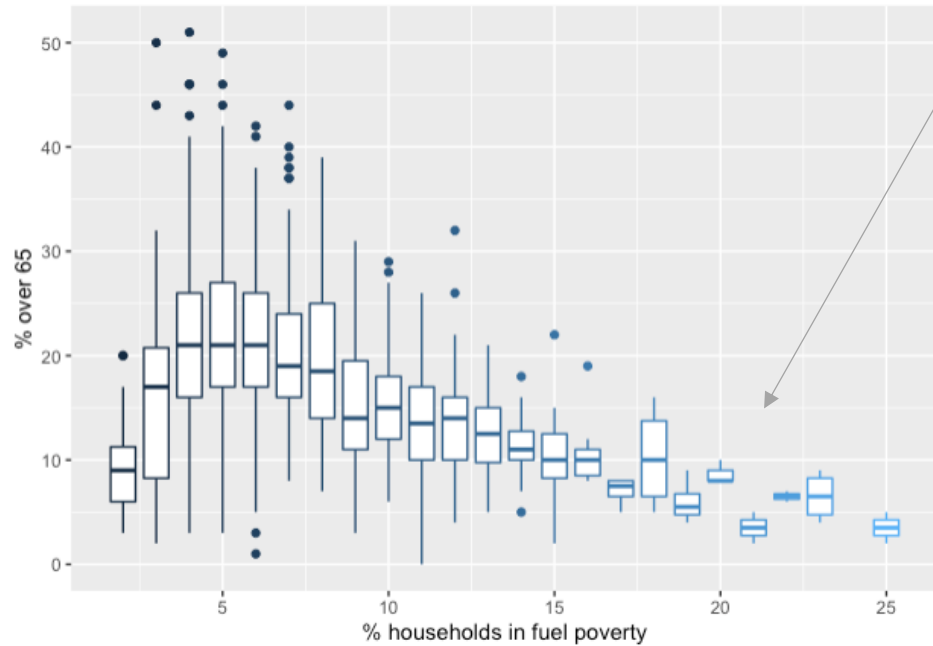
You are  
**here**

Portsmouth





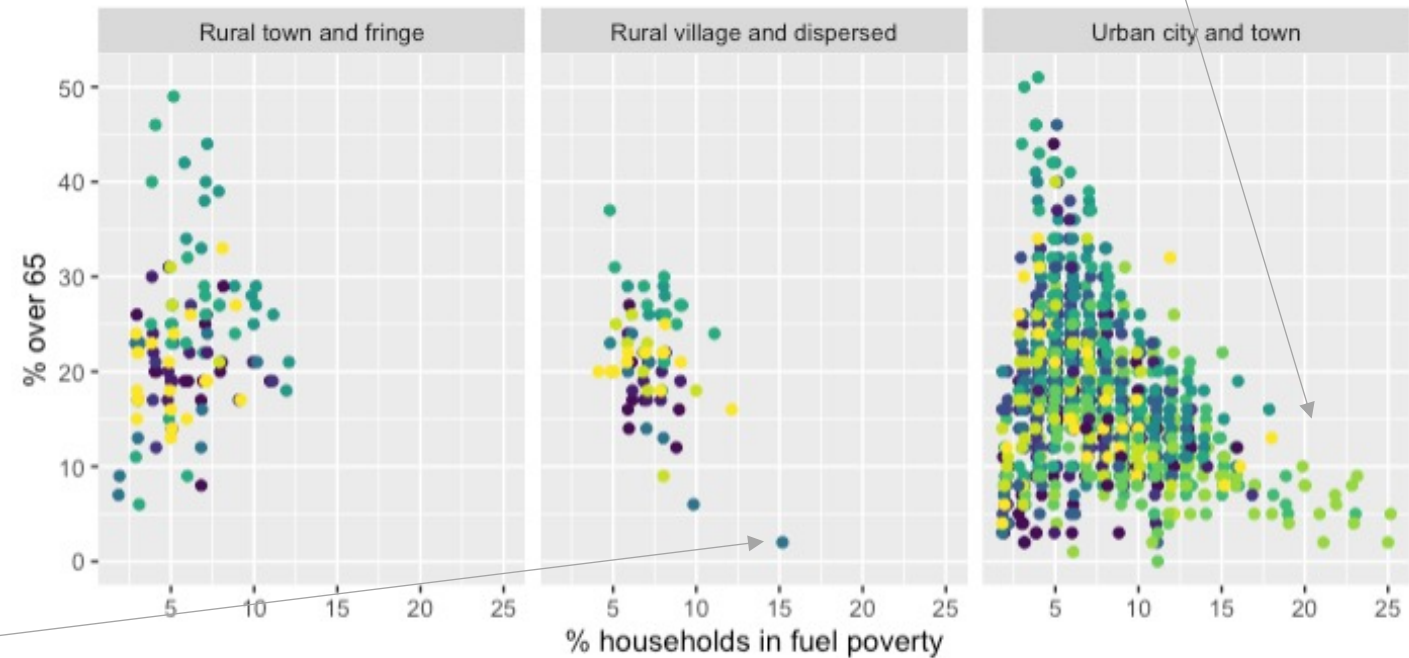
# What do we know about fuel-poor areas?



Generally 'younger'

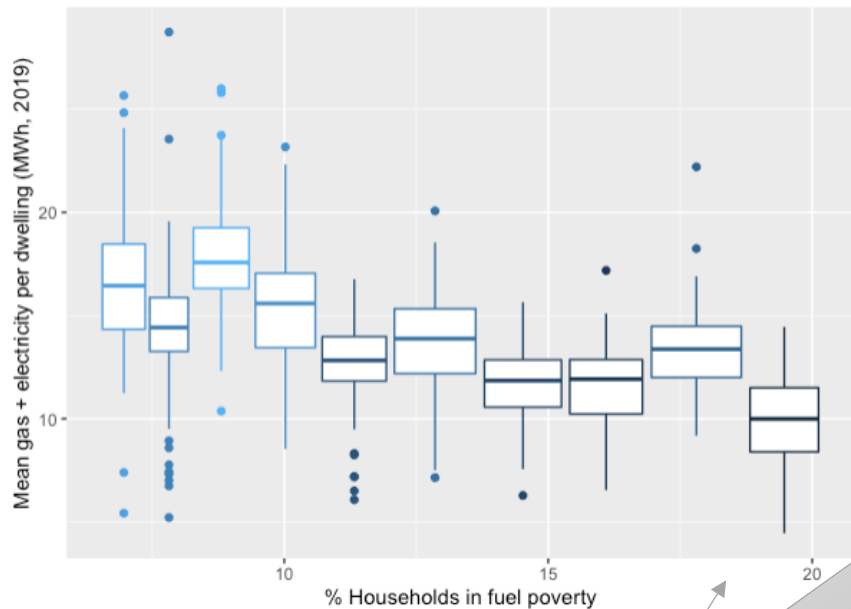
Generally 'younger' **and** 'urban'

Hart 011E (Aldershot)



- |                         |           |                 |               |               |
|-------------------------|-----------|-----------------|---------------|---------------|
| ● Basingstoke and Deane | ● Fareham | ● Havant        | ● Portsmouth  | ● Test Valley |
| ● East Hampshire        | ● Gosport | ● Isle of Wight | ● Rushmoor    | ● Winchester  |
| ● Eastleigh             | ● Hart    | ● New Forest    | ● Southampton |               |

# Fuel poverty and energy use

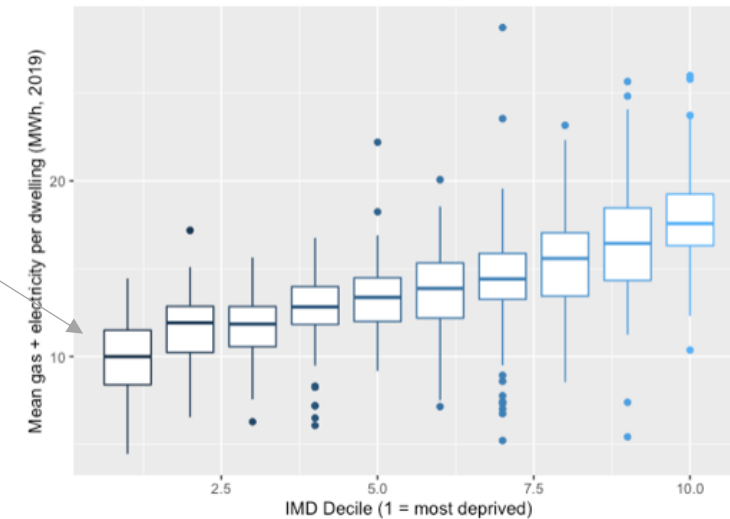
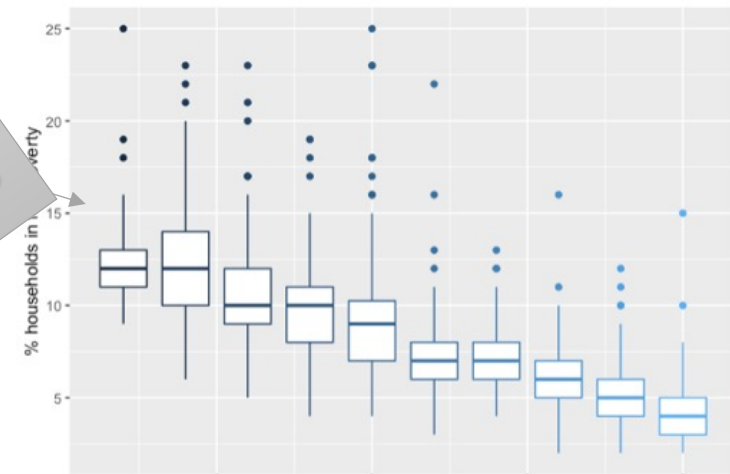


More deprived areas have higher fuel poverty

More deprived areas use less gas & electricity  
 (~50% less than the least deprived)

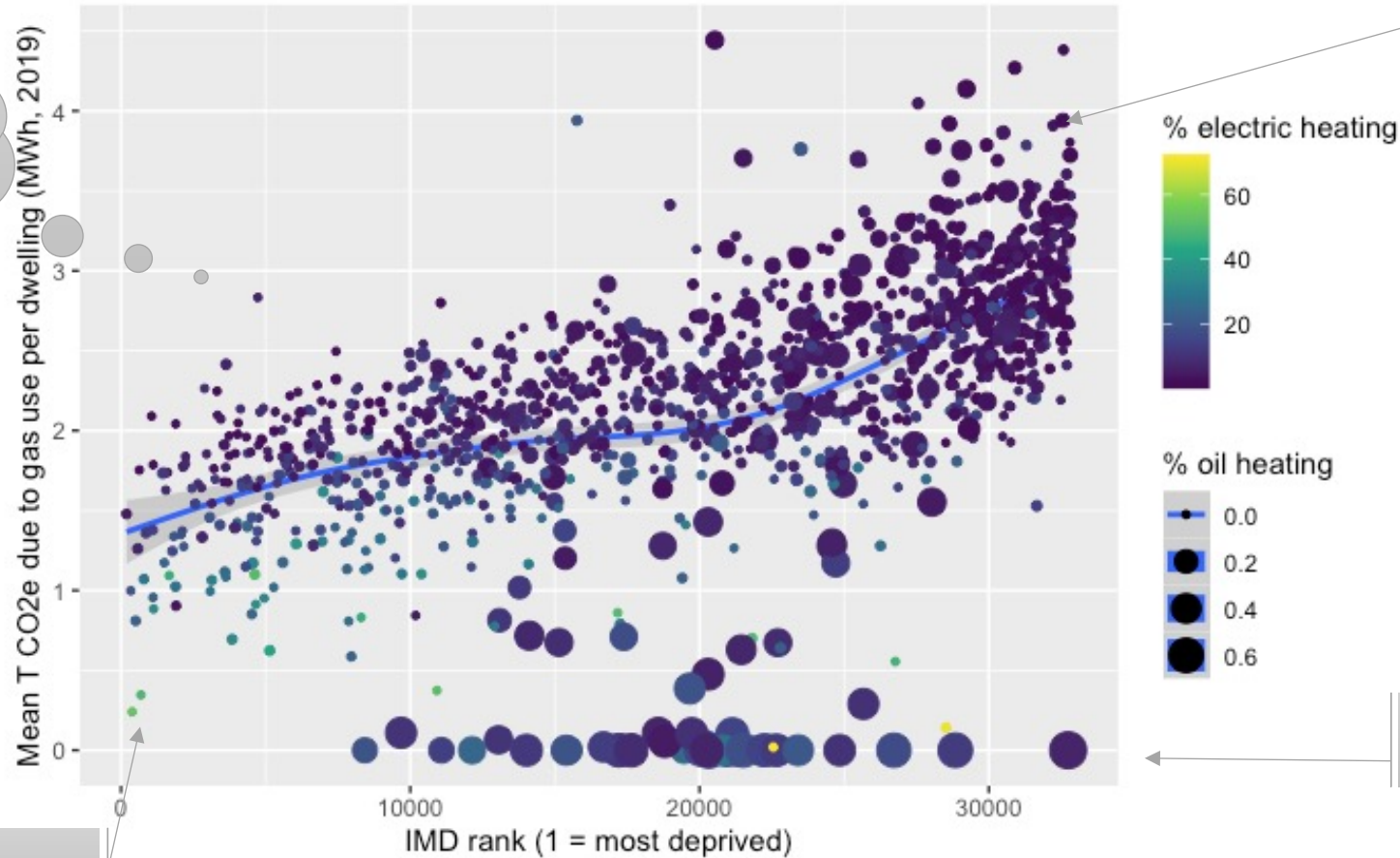
Higher fuel poverty areas (generally) use less energy

**NO S\*\*t Sherlock...**



# This follows through to emissions

Housing stock quality?



The **least** deprived areas emit the most  
 (some by a factor of > 4)

Mostly electric

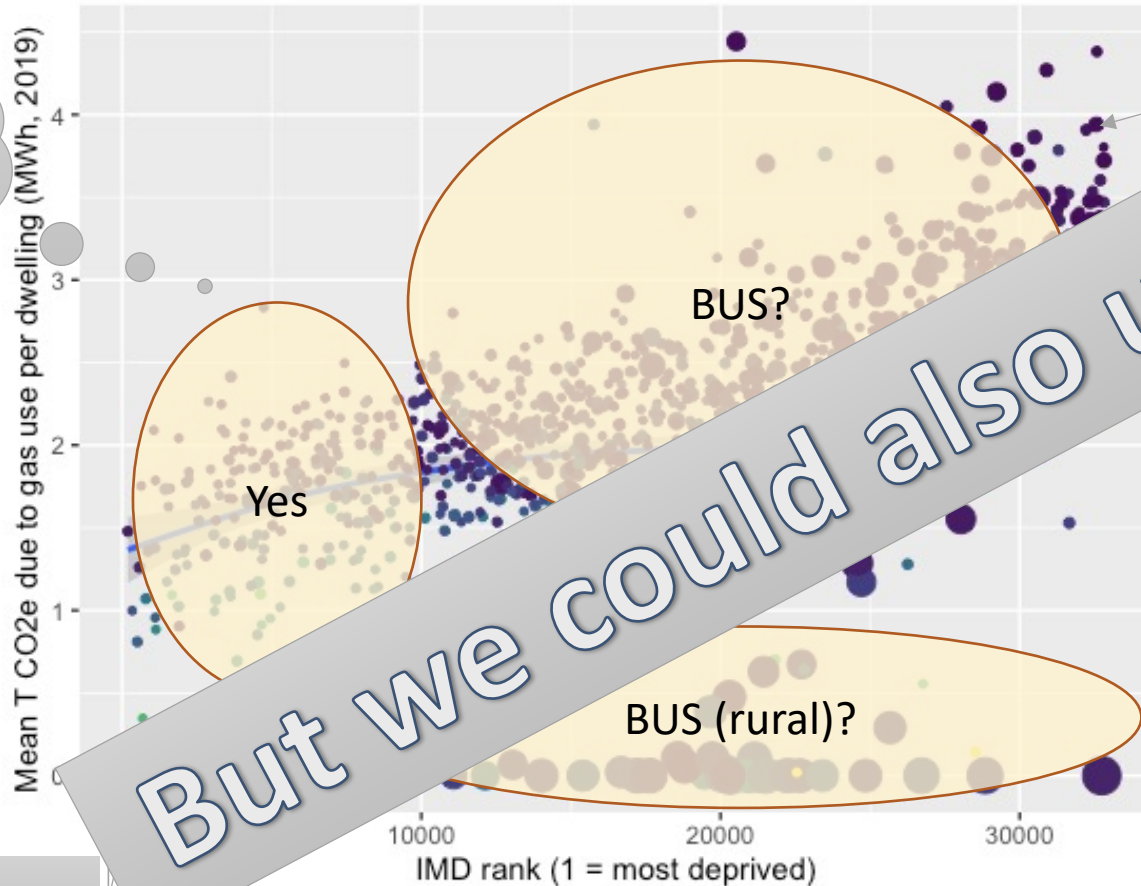
Mostly oil

# Current government policy...

Housing stock quality?



Mostly electric



The **least** deprived areas emit the most  
 (some by a factor of > 4)

**GOV.UK**

Home > Environment > Climate change and energy > Energy efficiency

Guidance  
**Boiler Upgrade Scheme**

Check if you could be eligible for money off low carbon heating technologies.

Mostly oil

# Why would we want to use less?

- Obvious:
  - Emissions reduction
  - Energy security
  - Co-benefits



## Multiple co-benefits from climate action - some examples








Action	Carbon	Health	Economy	Equity	Resilience
<b>Insulating homes</b> 	 Cuts energy demand and cuts carbon emissions	 Reduces fuel poverty as people stay warmer	 Creates jobs for local people, and people save money on their energy bills which they may spend locally	 Increased access to affordable warmth	 Households are better placed to withstand future energy price rises as well as overheating during heatwaves

Image: Ashden [Toolkit For Councils](#)

- Less obvious:
  - Avoids capital intensive generation over-build
  - Avoids capital intensive distribution network over-build

NegaWatts are the cheapest generation



**The role of energy demand reduction in achieving net-zero in the UK**

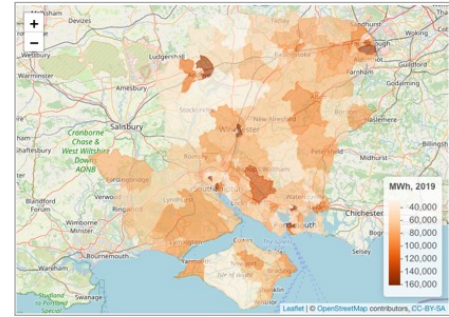
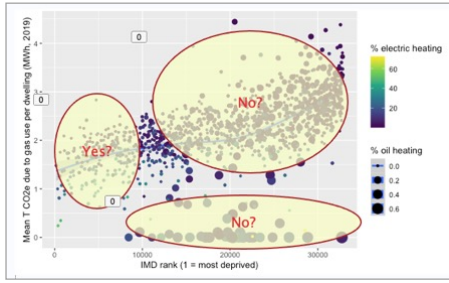
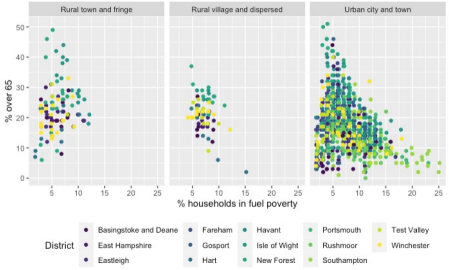
October 2021

John Barrett, Steve Pye, Sam Betts-Davies, Nick Eyre, Oliver Broad, James Price, Jonathan Norman, Jillian Anable, George Bennett, Christian Brand, Rachel Carr-Whitworth, Greg Marsden, Tadj Oreszczyn, Jannik Gieseckam, Alice Garvey, Paul Ruyssevelt and Kate Scott

Centre for Research on Energy Demand Solutions

# Future work

- Supporting the Hampshire Local Area Energy Plan 2025-2050
  - Strategic, systemic & spatial
- Reducing demand
  - Where & for whom?
- Increasing renewables
  - Where & for what purpose?





International Conference on  
**EVOLVING  
CITIES**

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