



WORKING TOGETHER TO  
MAKE A MASSIVE CHANGE  
IN THE ENERGY SYSTEM

# LET'S CREATE ENERGY WE CAN FEEL GOOD ABOUT FOR OXFORDSHIRE AND THE UK



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# Local Energy Oxfordshire

Local Energy Oxfordshire:  
Building the energy system from the bottom up

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11.25-11.45 18<sup>th</sup> September 2018



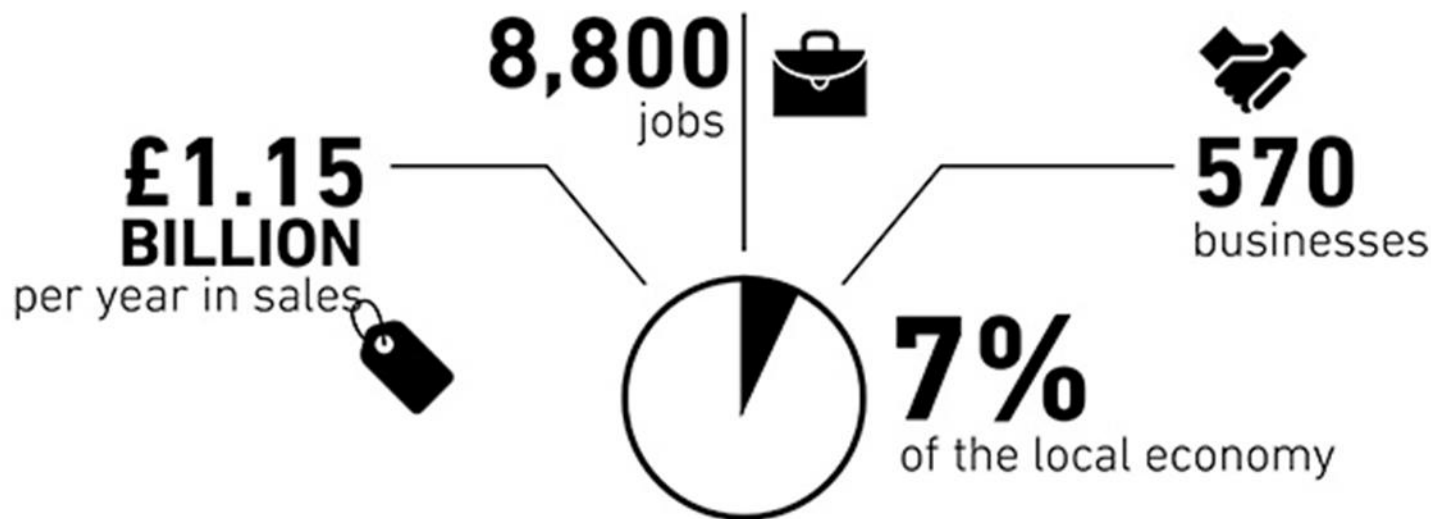


...to this?





# ...and build on this?



By 2030 we could have:

- another £300m of clean growth
- another 3,000 local jobs



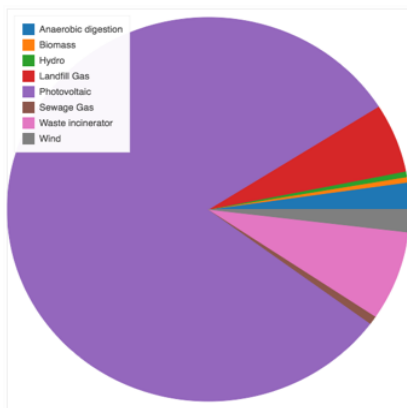
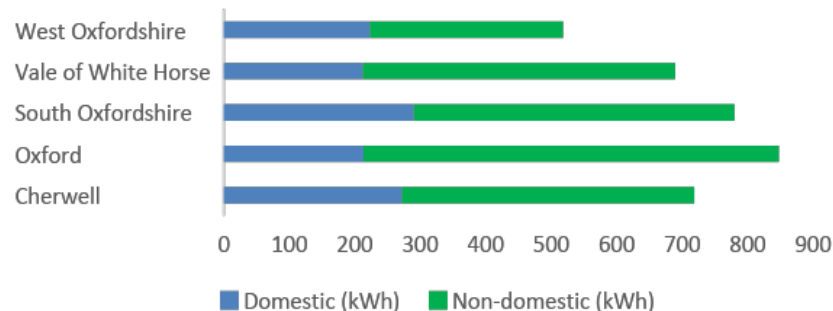
# Oxfordshire's energy mix

- 16,000 GWh total energy demand 2015 (40% transport)
- 3,500 GWh electricity demand

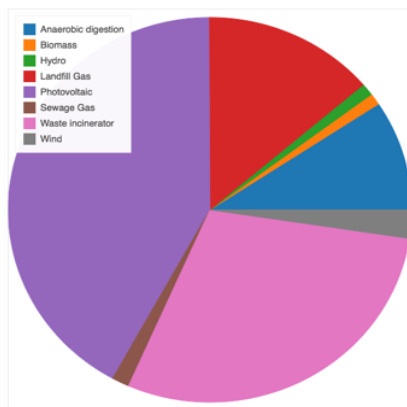
## Low carbon energy

- 2.35 GW declared net capacity
- 700 GWh estimated energy generation 20% of electricity demand (200 GWh from Ardley)

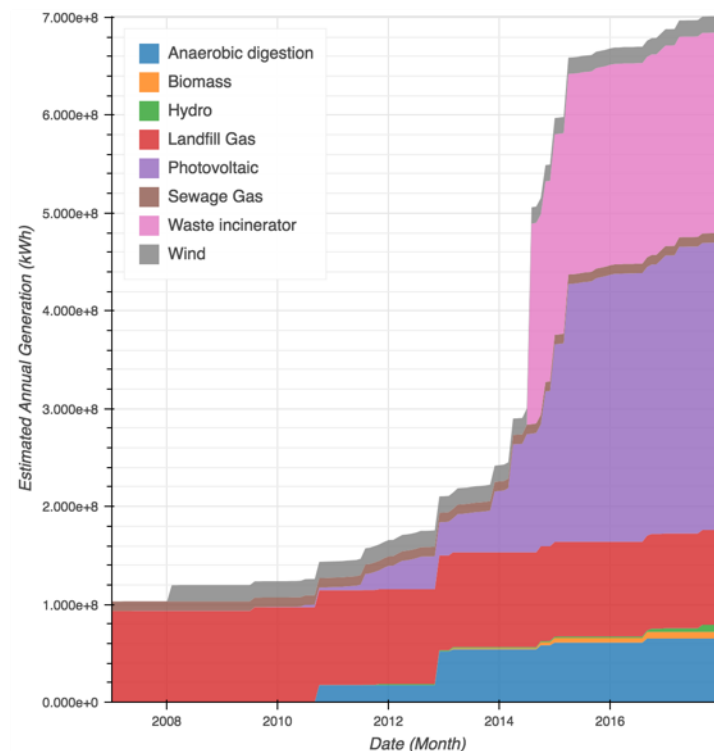
Oxfordshire District Electricity Demand 2016 (GWh)



# of installations



Estimated annual generation



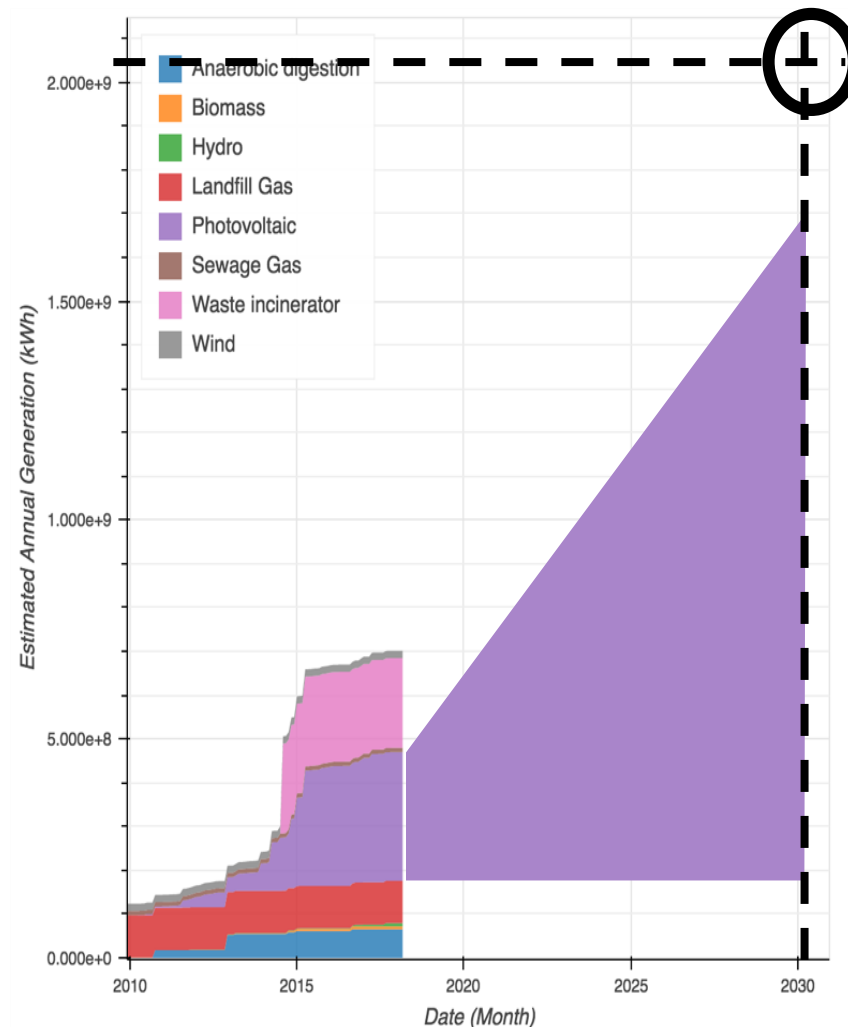
## Oxfordshire's 2030 target

- Reduce GHG emissions by 50% by 2030  
(from 2008 baseline of 5,700 ktCO<sub>2</sub>)
- 58% of total electricity from low carbon sources  
40% of heat<sup>1</sup>
- 2,050 GWh generation per annum
- Majority limited to solar...
- Increase in capacity from 300 MW to 1900 MW, > 6 times
- ~145 MW of solar capacity per year.
- ~2.3 kW per person

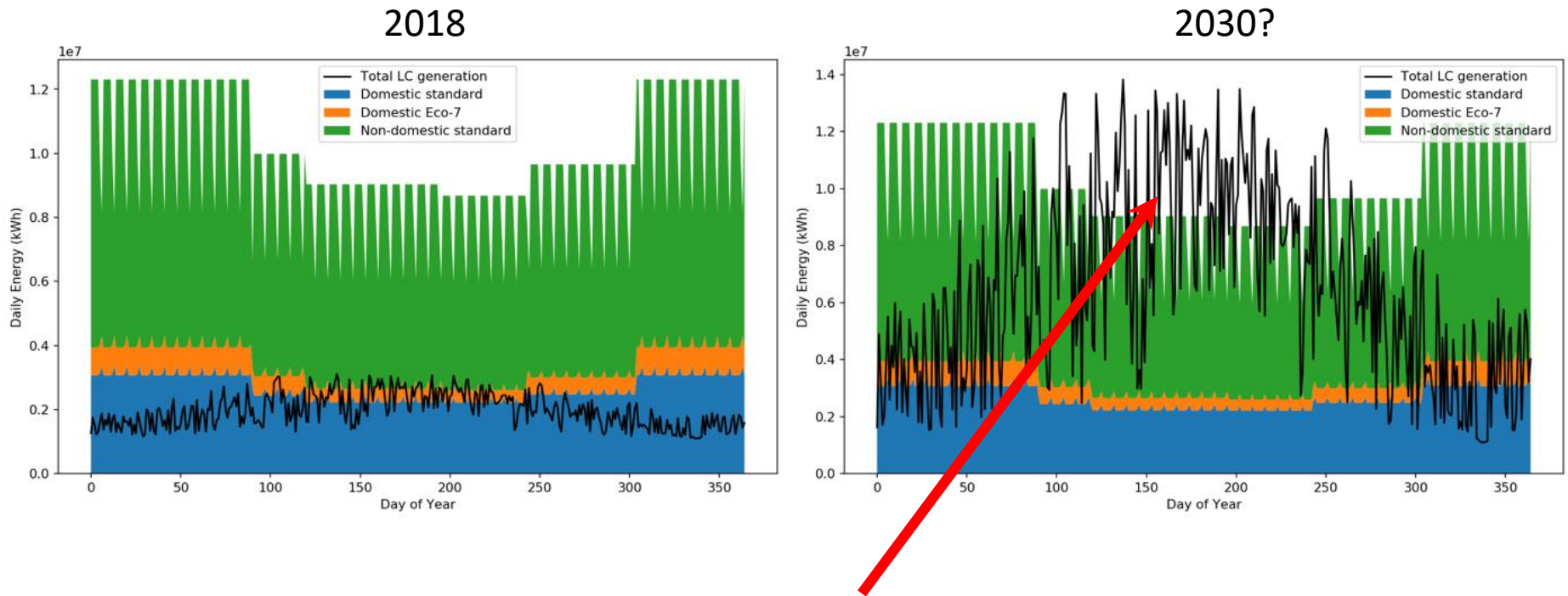
## Questions

- 1) How do we do this without FiTs?
- 2) How do we avoid solar devaluation?
- 3) Can the network cope?

1. Aether report for OxLEP



# Move energy through time

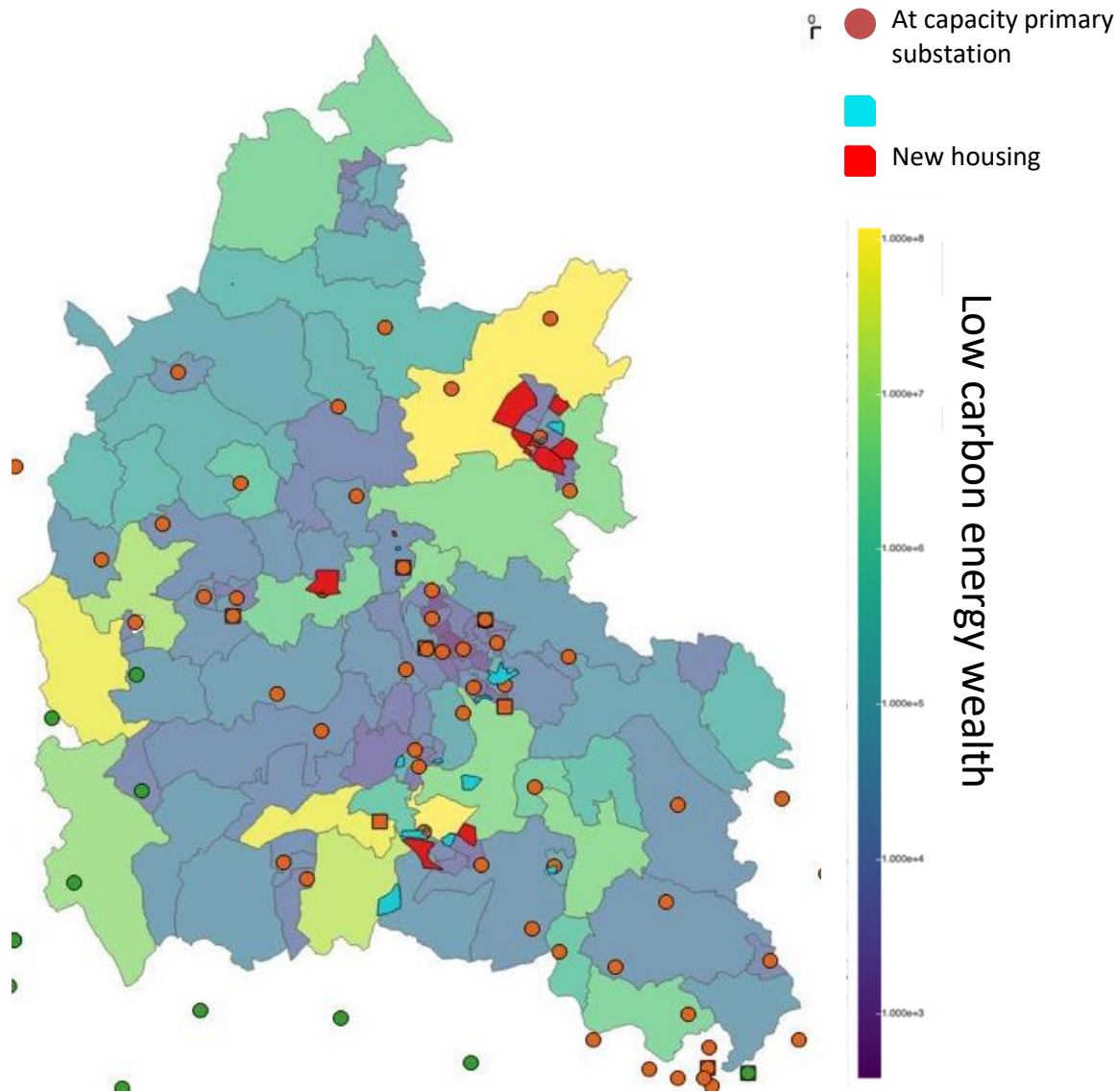


Need to move energy through time: storage

Solar and wind capacity factors for 2014 using weather reanalysis through renewables.ninja. Other technology capacity factors have been estimated. Demand is based on Elexon demand profiles 1 (domestic standard), 2 (domestic eco7) and 3 (non-domestic unrestricted), scaled by BEIS reported MSOA annual demand figures.



# Move energy through space





# Are consumers at the heart of the system?





# How can this be a Power Station?





# How can this serve its community?





# How can this community use its own solar?





# The elephant in the room – what do we do?





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COMMUNITY ENERGY CAN POWER  
A LOW CARBON ECONOMY