Turley

The Future of our Homes: Energy and Beyond

September 2025

Turley

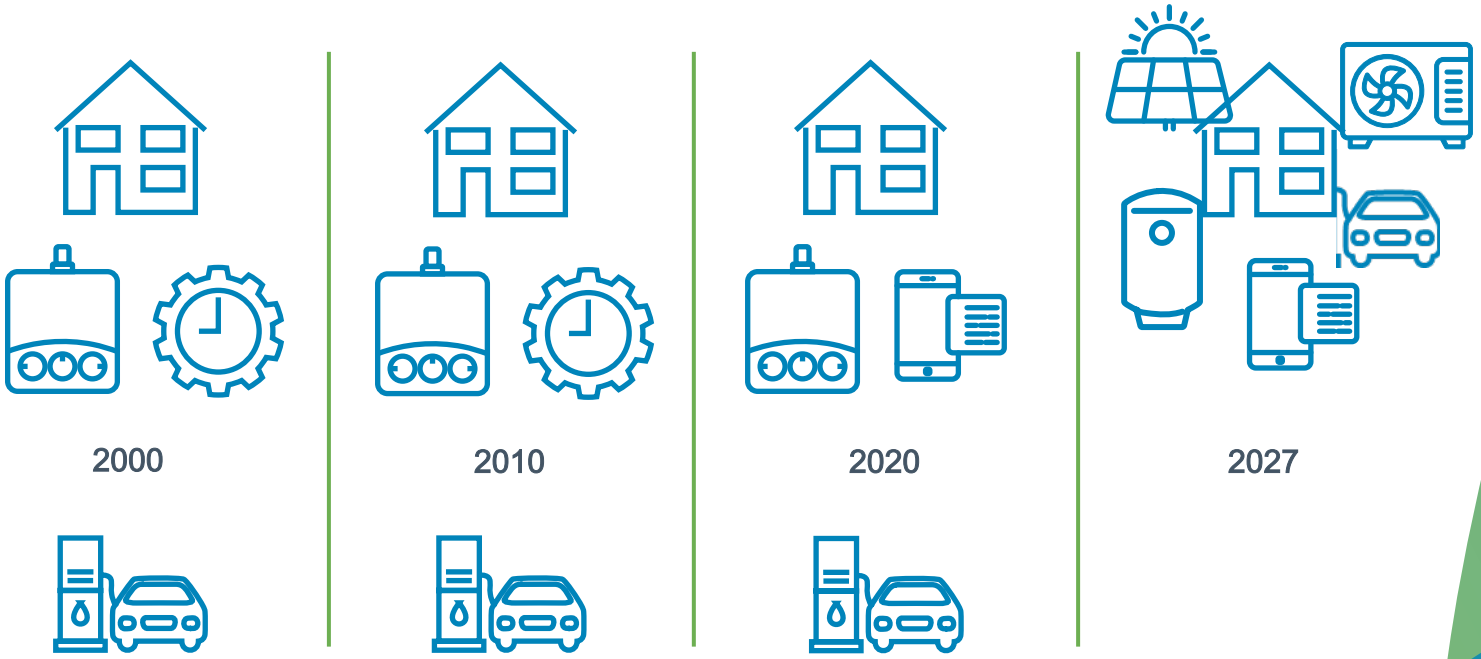
Our Services

Trusted independent advisors with restless ambition to shape a more sustainable future.

An employee-owned business, we work collaboratively with our clients to deliver places and communities that thrive.

How we got here….. And where we are going

2020s is when it happens



Turley

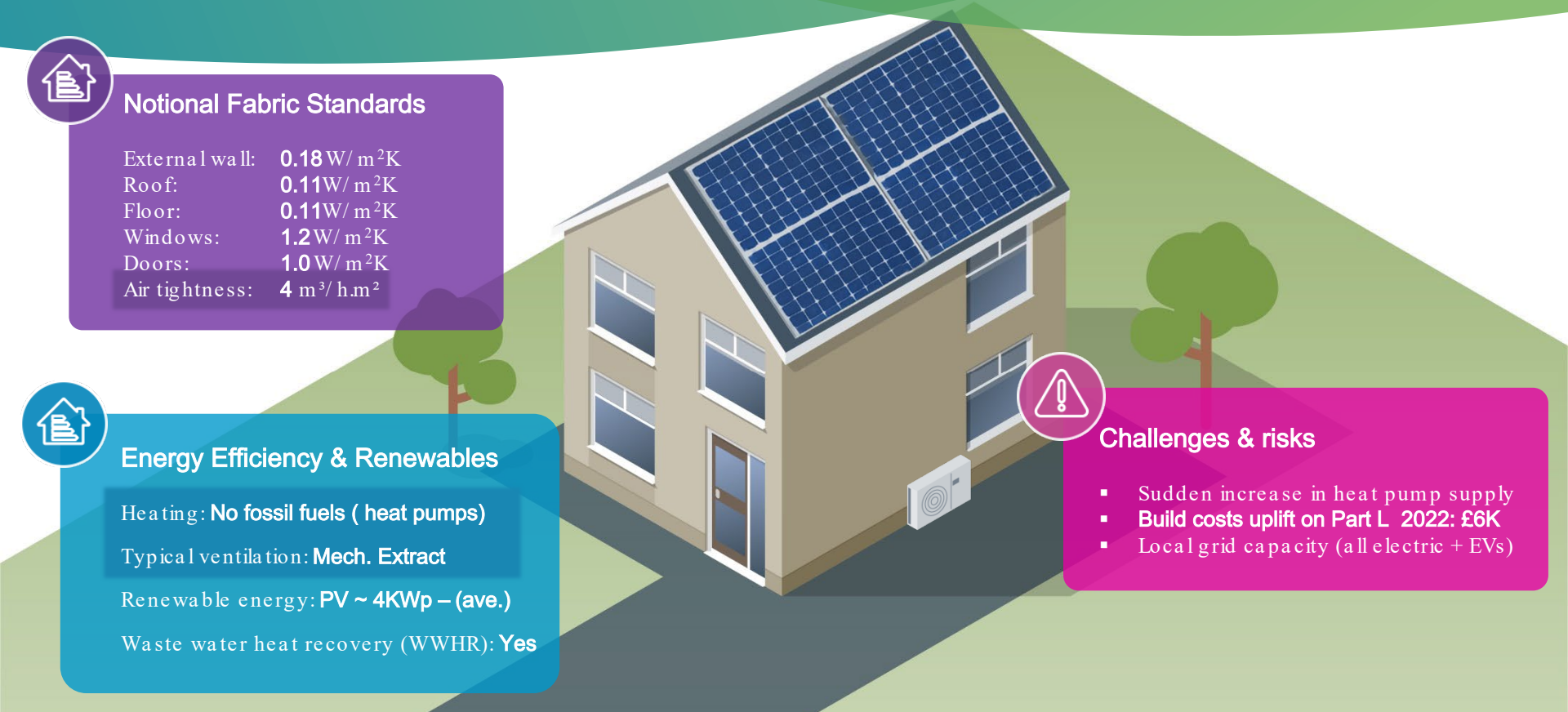
Now

Future Homes Standard

Probable Route – Option 1

Notional Fabric Standards

External wall:	**0.18** W/ m^2K
Roof:	**0.11** W/ m^2K
Floor:	**0.11** W/ m^2K
Windows:	**1.2** W/ m^2K
Doors:	**1.0** W/ m^2K
Air tightness:	**4** m^3/ $h.m^2$



Energy Efficiency & Renewables

Heating: **No fossil fuels (heat pumps)**

Typical ventilation: **Mech. Extract**

Renewable energy: **PV ~ 4KWp – (ave.)**

Waste water heat recovery (WWHR): **Yes**

Challenges & risks

- Sudden increase in heat pump supply
- **Build costs uplift on Part L 2022: £6K**
- Local grid capacity (all electric + EVs)

Part O

Overheating Risk

- Simplified Method
  - Or
- Dynamic modelling
- Important for city centre flats & noisy locations – Check early

Part S

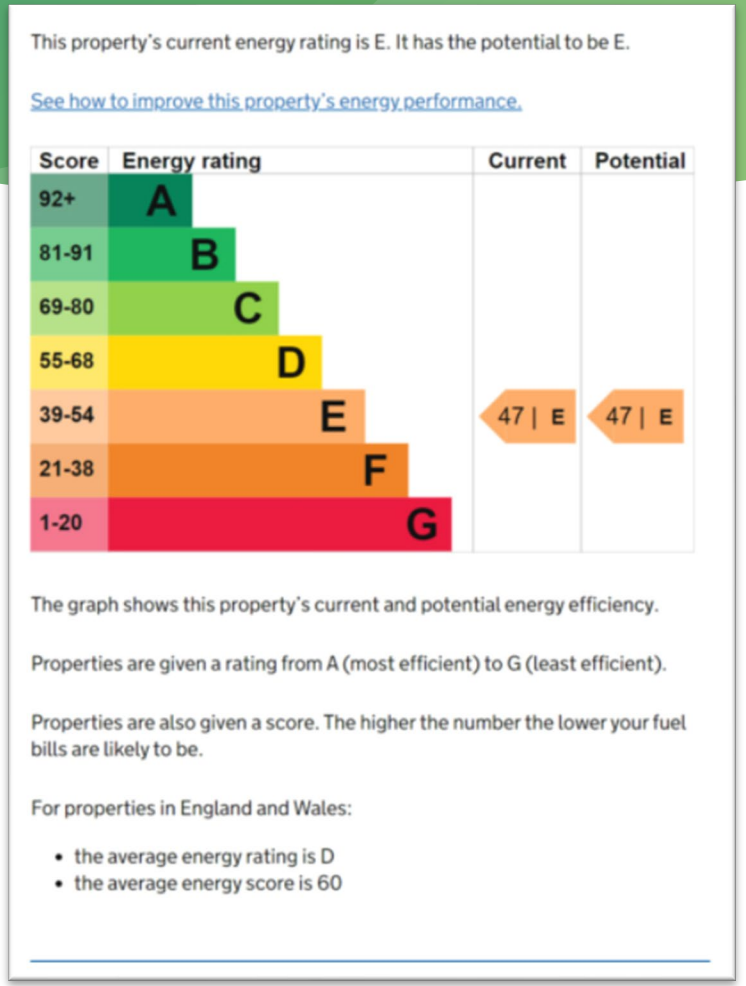
EV Charging Points

- Require new homes to have EV charger
- Same for major renovations

Energy Performance

Energy Performance Certificates Consultation

- Proposed Headline Metrics
  - Energy cost
  - Fabric Performance
  - Heating System
  - Smart Readiness
- Lot hanging on this (in theory)



Other things

UK Net Zero Carbon Buildings Standard

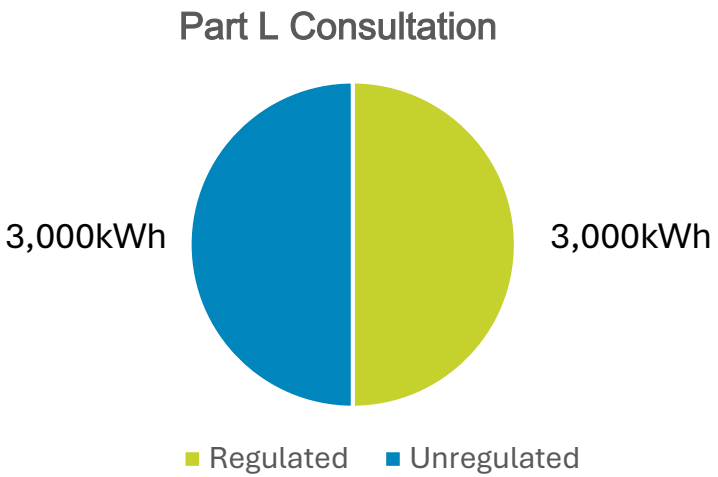
Realistic Industry Pressure?

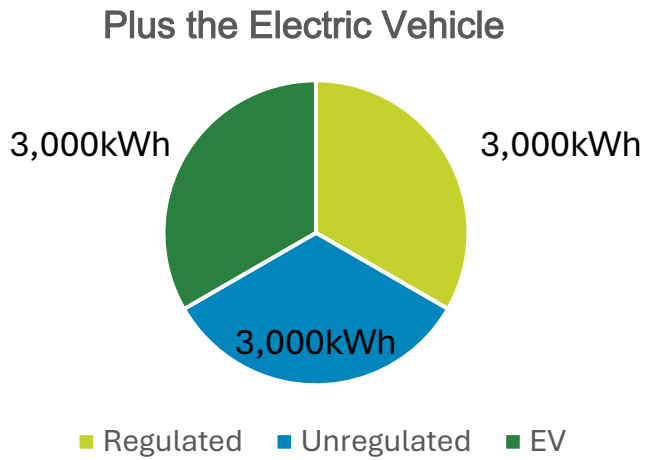
The 10 Elephants in the Room

The Numbers

FHS– The Rule of 3,000

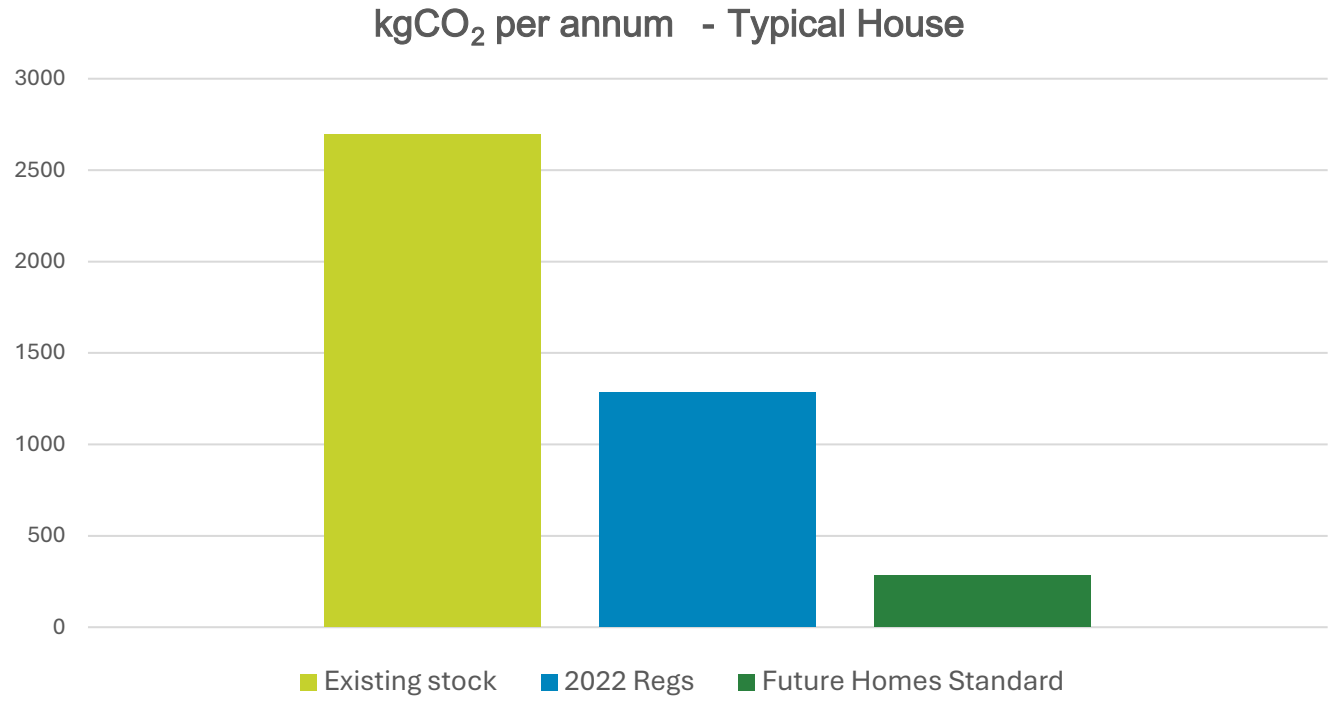
Electricity Consumption



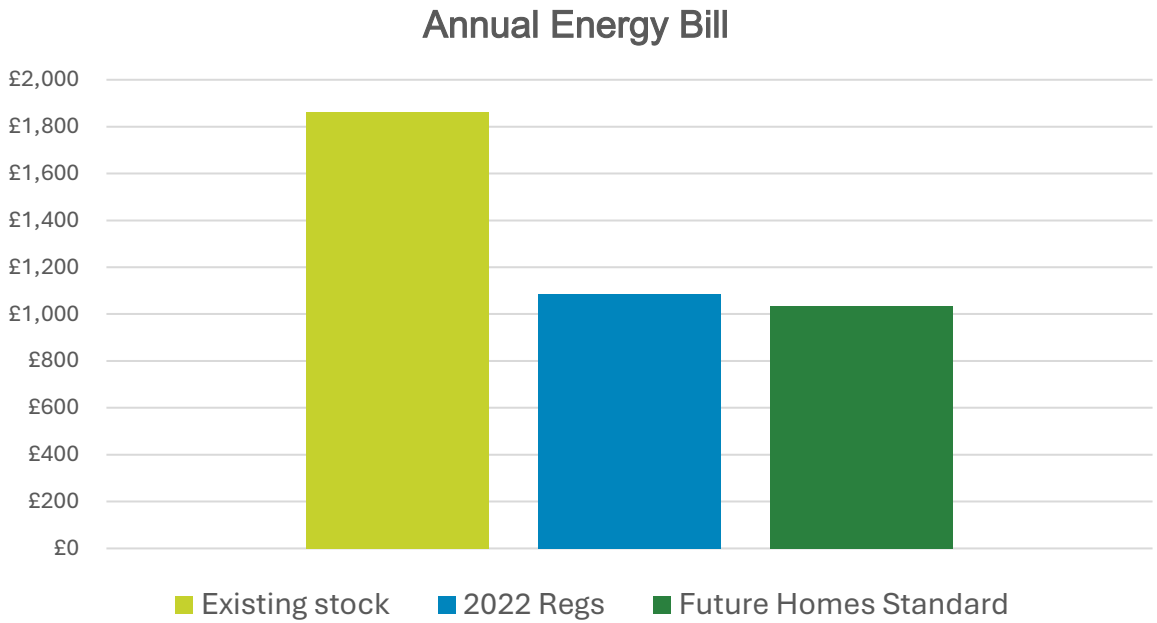


Average rooftop solar generates 3,000kWh

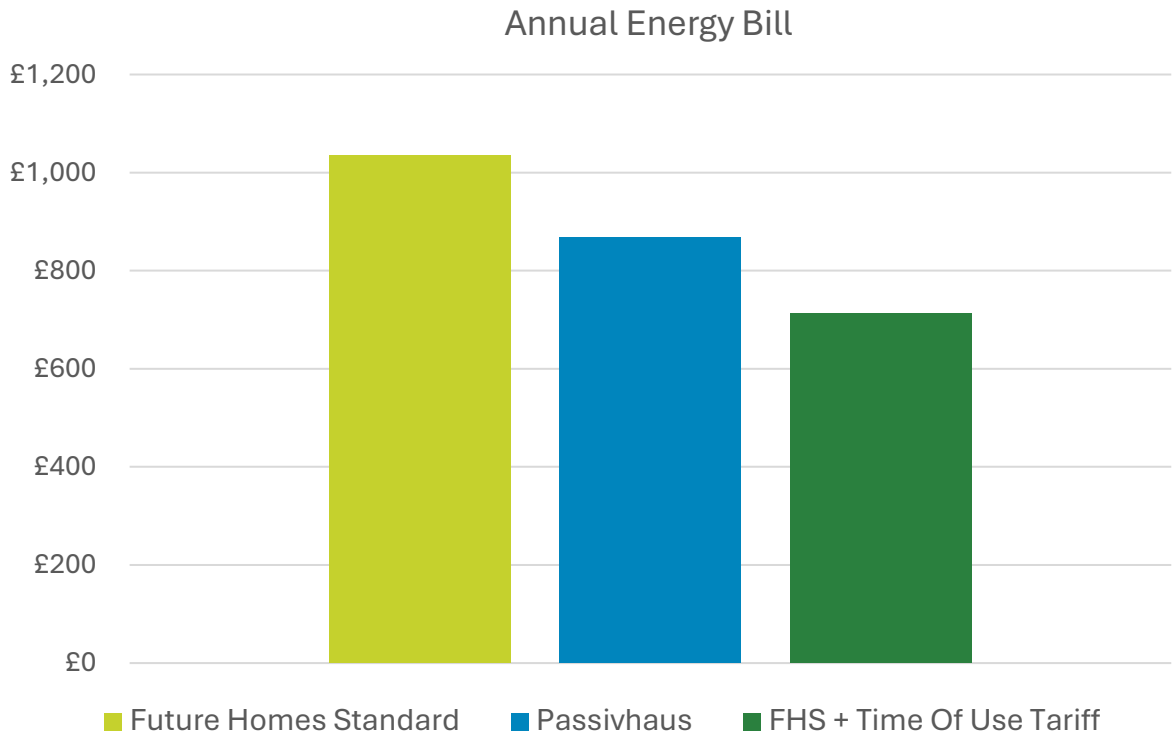
The Post-Carbon World - (operational)



Running Costs – Standard Tariff

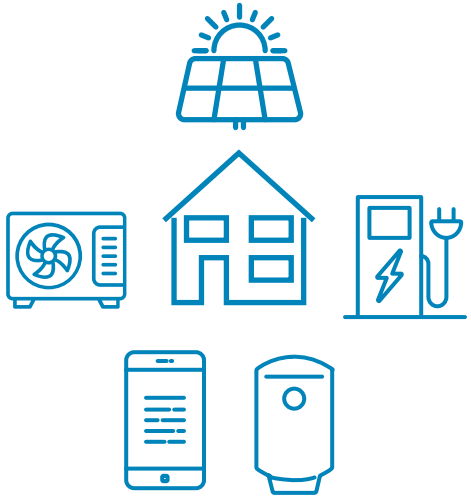


It’s not what you do, it’s when you do it

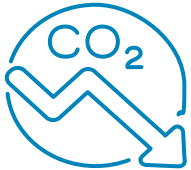


It is going to be wonderful!

Healthier environment



Net zero ready

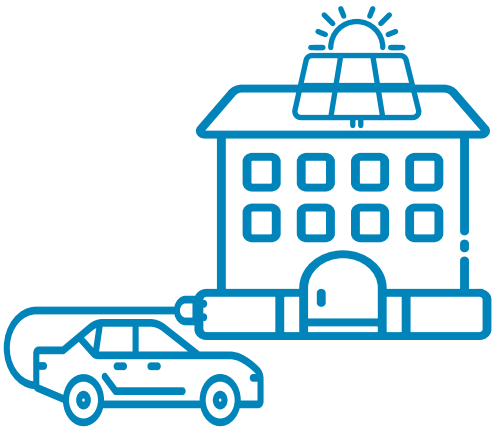


End fuel poverty

More desirable – Higher value

Creates Energy Bill Paradox

Big flashy house + electric Ferrari 911 attached

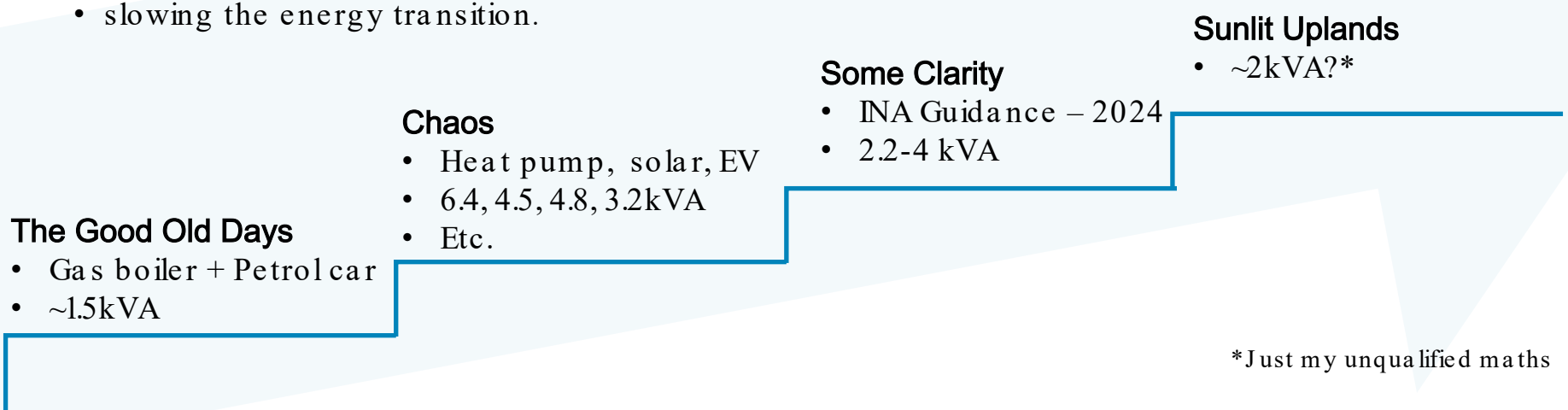


Tiny flat with cheap EV not attached

Which one has the bigger energy bill?

The Grid Wars – ADMD and All That

- As we electrify everything, growing demand on the grid.
- Estimating home electricity peaks has got complicated
- This is:
  - costing the industry & the public a lot of money,
  - reducing no. of homes built
  - slowing the energy transition.



*Just my unqualified maths

The Future

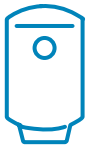
We are all players in the same game

Semi-flexible energy user

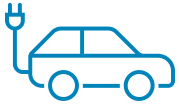
4kWp Intermittent power generator

Flexible energy user
- Dishwasher
- Washing machine
- Fridge / Freezer

Home Control Centre



8kWh of thermal storage



80kWh of energy storage

200MWh of energy storage

NESO Control Centre

2GW flexible power generator

3.2GW Inflexible power generator

200MWp intermittent generator

2GW Intermittent power generator

Opportunities – Microgrids

Microgrids

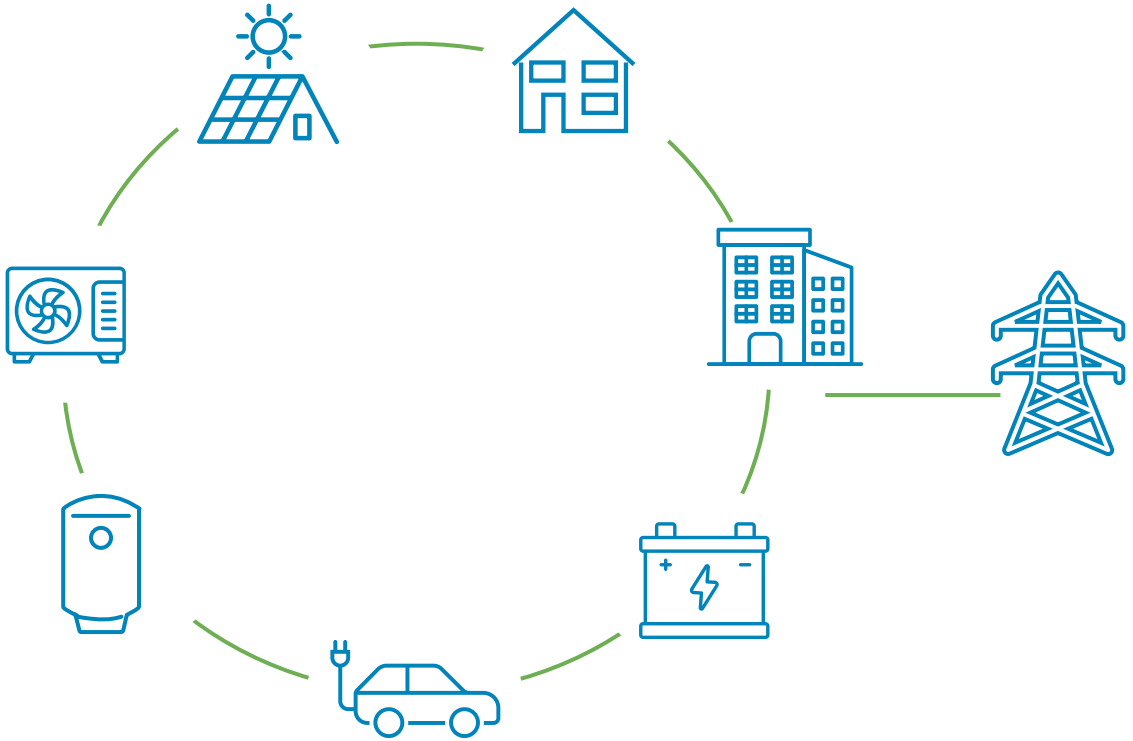
All homes, businesses, charging and generation on single network.

Reduce grid connection size further

Sharing energy so flats can benefit

Charge cars on terraced streets for same price as at home.

Zero Bills Communities?



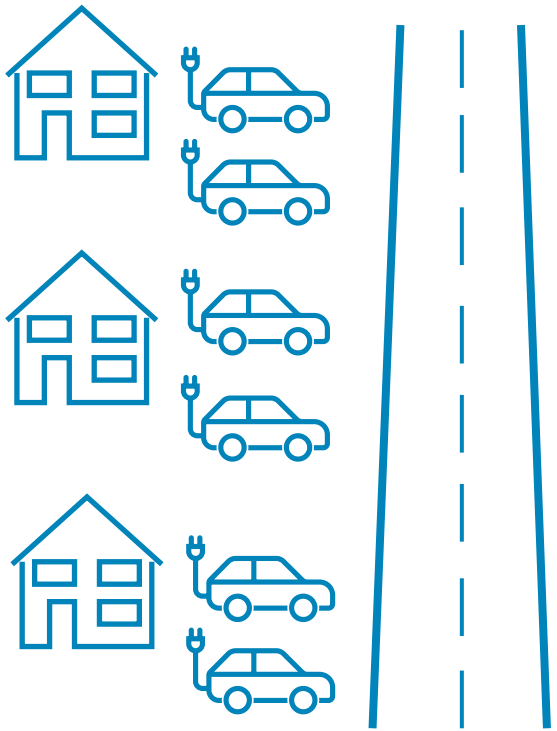
Opportunities – Future Movement

Standard approach is holding back good development

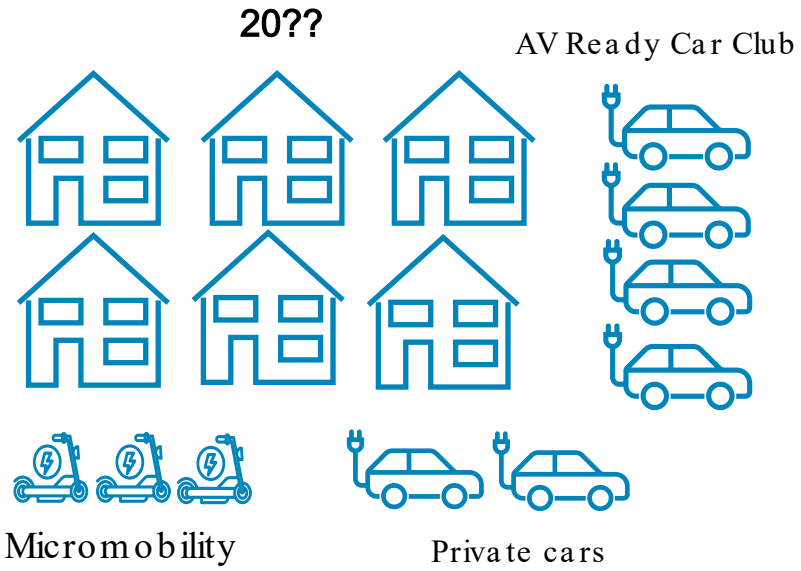
Public transport and bikes can't solve that alone

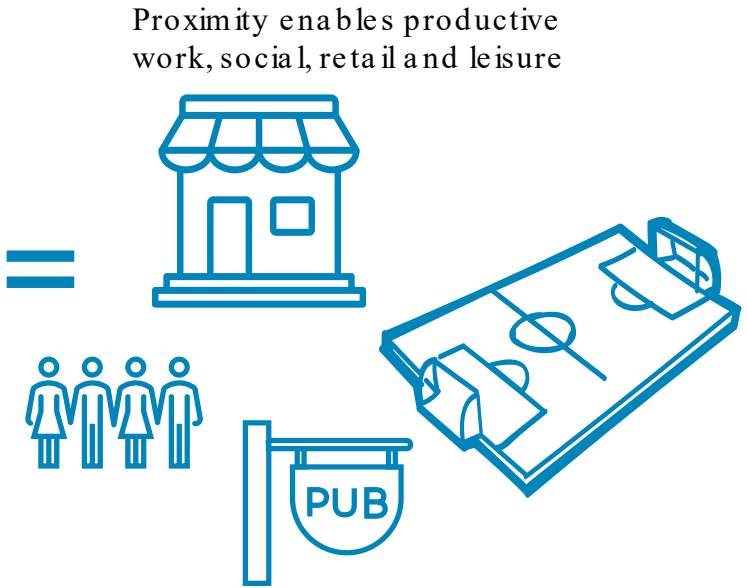
Shared mobility and micromobility can change everything

Need development that embeds this



The Mobility Opportunity





Thank you

For more information

Barny Evans

Barny.evans@turley.co.uk

07827 306501

Turley

Belfast
Birmingham
Bristol
Cambridge
Cardiff
Derry~Londonderry
Dublin
Edinburgh
Glasgow
Leeds
London
Manchester
Nottingham
Reading
Southampton