

North Tyneside Climate Emergency Action Plan

Workshop 1 – vision and strategic priorities

March 2020

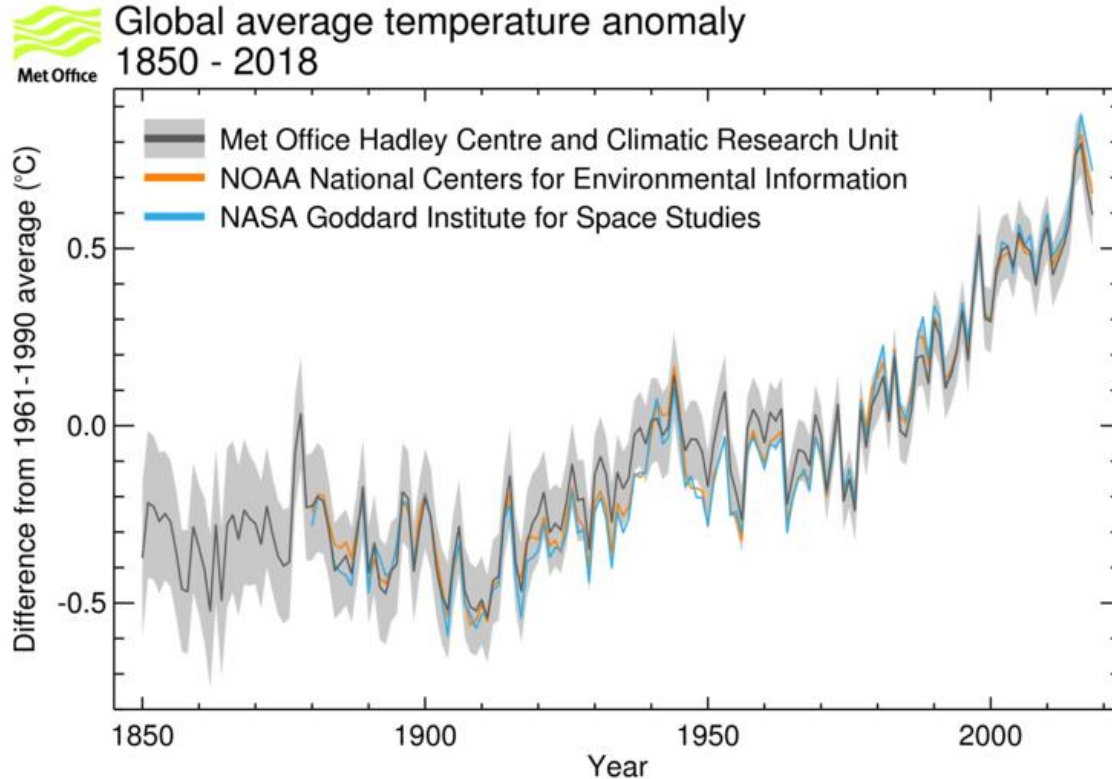
Agenda

| Item | | Time |
|--|---|-------------|
| Welcome | Phil Scott, Head of Environment, Housing and Leisure, North Tyneside Council | 09.05-09.15 |
| How are we doing? | Paul Nelson, Environmental Sustainability and Street Lighting Manager, North Tyneside Council | 09.15-09.30 |
| Developing a Climate Emergency Action Plan | Carbon Trust (Paul Wedgwood) | 09.30-09.40 |
| Insights from the North Tyneside baseline analysis | Carbon Trust (Charlie McNelly) | 09.40-10.00 |
| Strategic vision and objectives | Group discussion | 10.00-10.20 |
| Brunch | | 10.20-10.50 |
| Challenges and opportunities across heat, power and transport | Carbon Trust (Paul Wedgwood/Charlie McNelly) | 10.50-11.05 |
| Introducing the roundtables | Carbon Trust (Paul Wedgwood) | 11.05-11.10 |
| Developing strategic priorities for the North Tyneside Climate Emergency Action Plan | Roundtables (themes: heat, power and transport) | 11.10-11.50 |
| Next steps and workshop close | NTC & Carbon Trust | 11.50-12.00 |

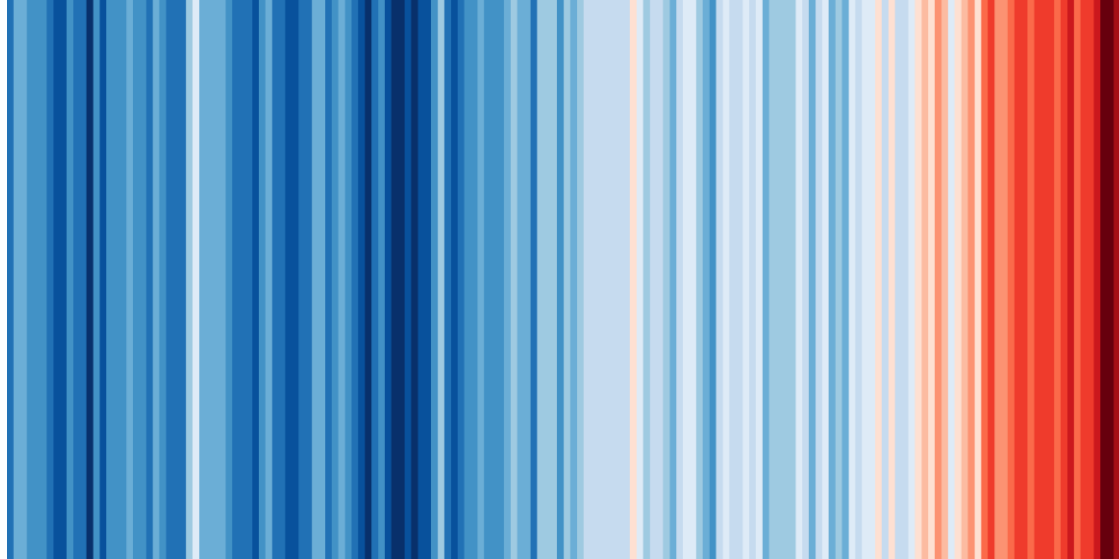
1

Developing a Climate Emergency Action Plan for North Tyneside

We are in a climate emergency



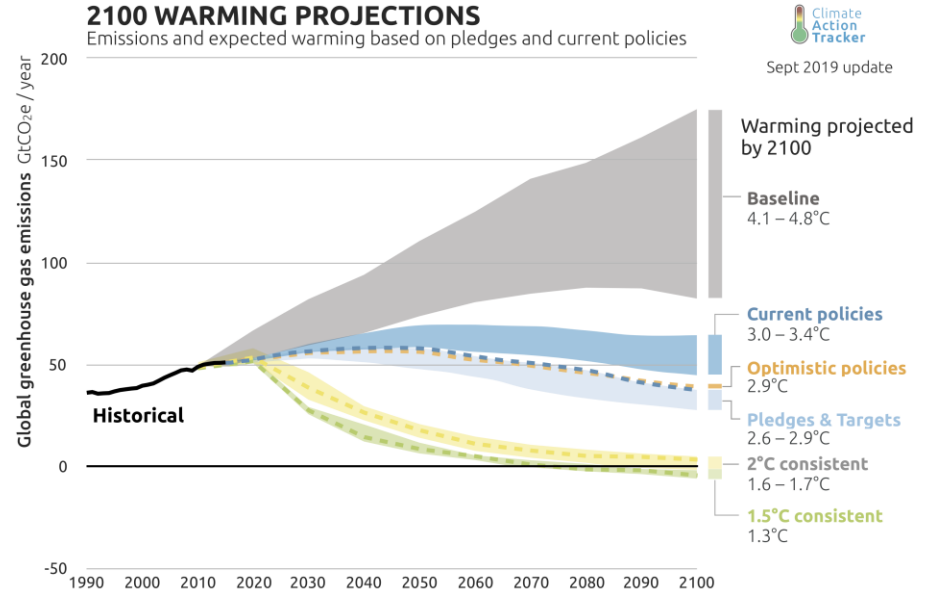
...or in colour



- Each stripe represents a year
- 1850-2018
- @ed_hawkins

Temperature projections for 2100

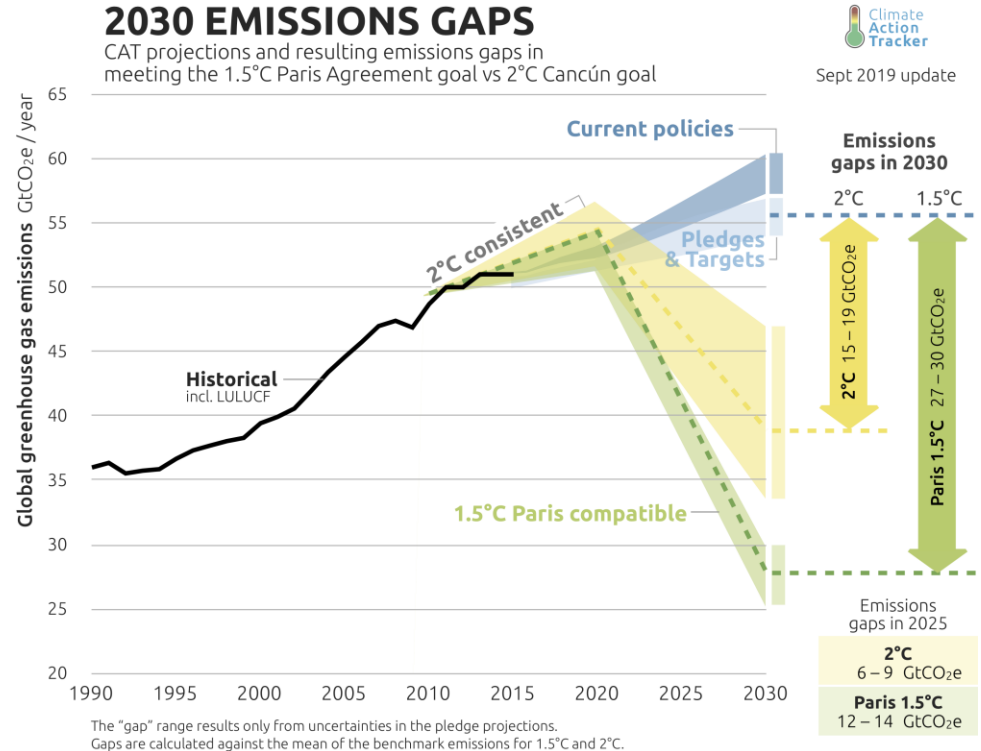
- Current global policies on track for 3.3°C temperature rise
- Current global government pledges result in 2.7°C rise



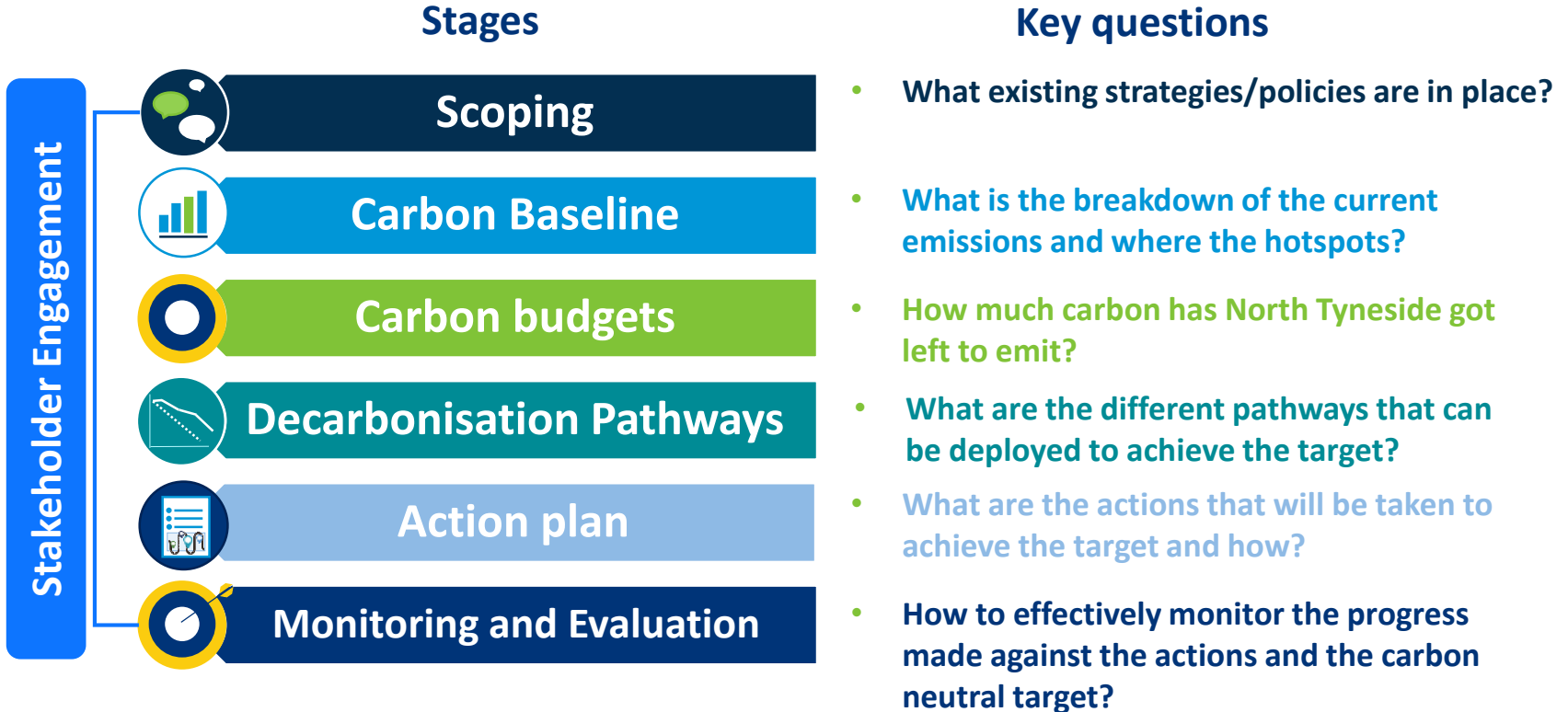
Source: Climate Action Tracker

Meeting the 1.5°C Paris Agreement goal

- 45% reduction in emissions by 2030 required to meet 1.5°C (c/w 2010 levels)
- Net zero by 2050



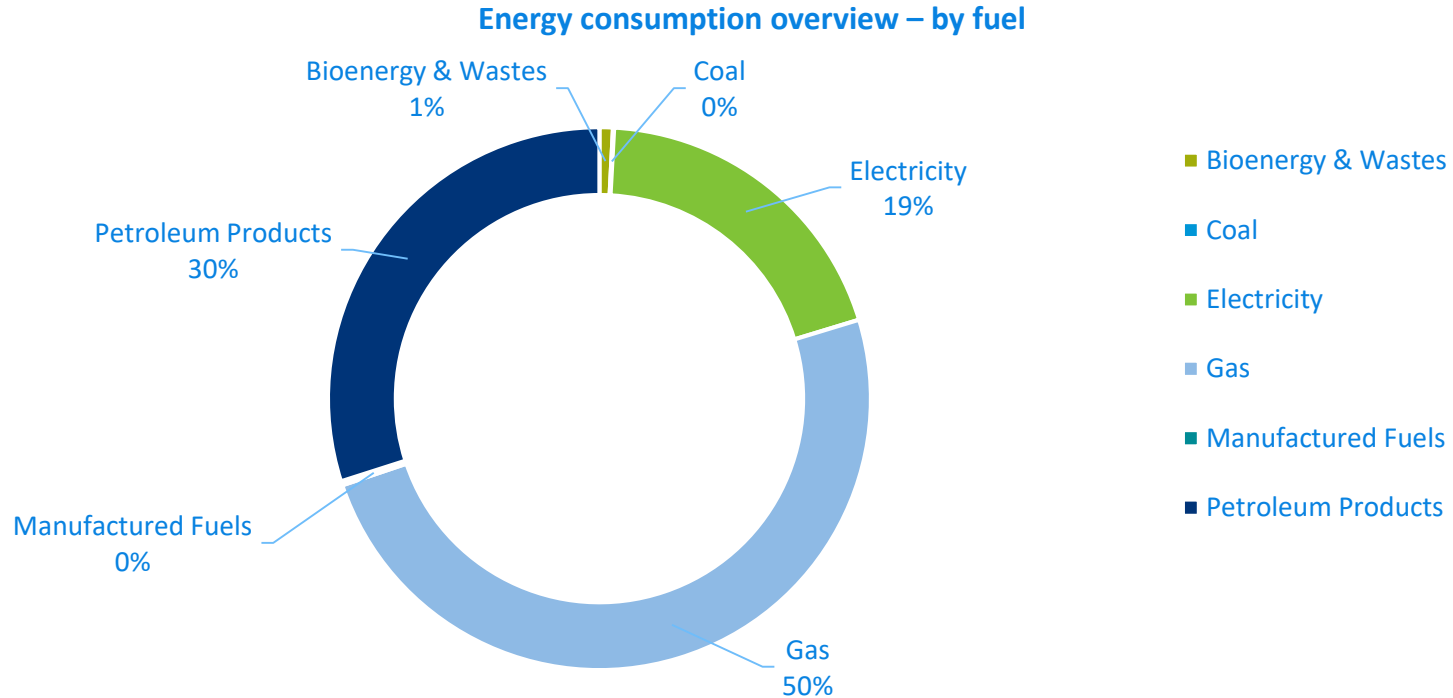
A Climate Emergency Action Plan for North Tyneside



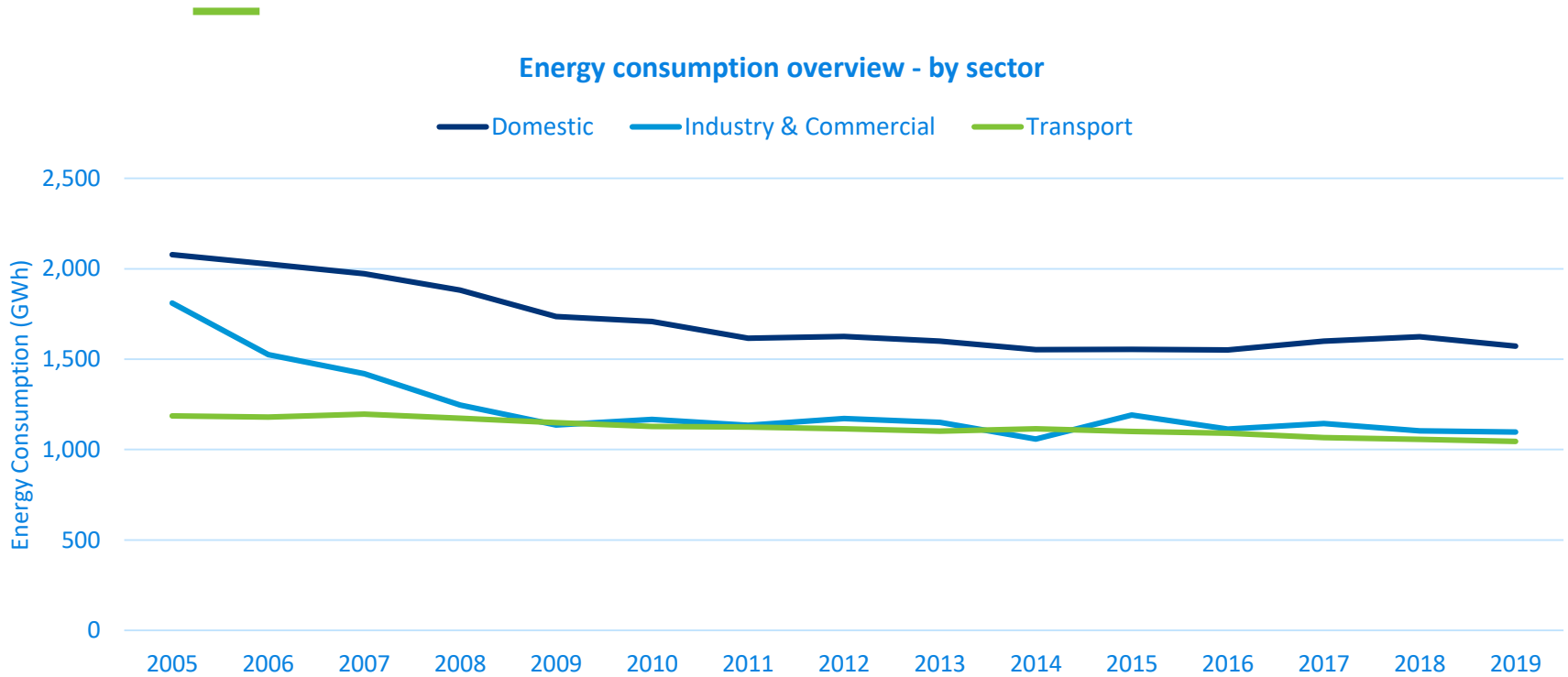
2

Insights from the North Tyneside baseline analysis

Gas dominates energy consumption due to heating, with petroleum sizeable due to transport



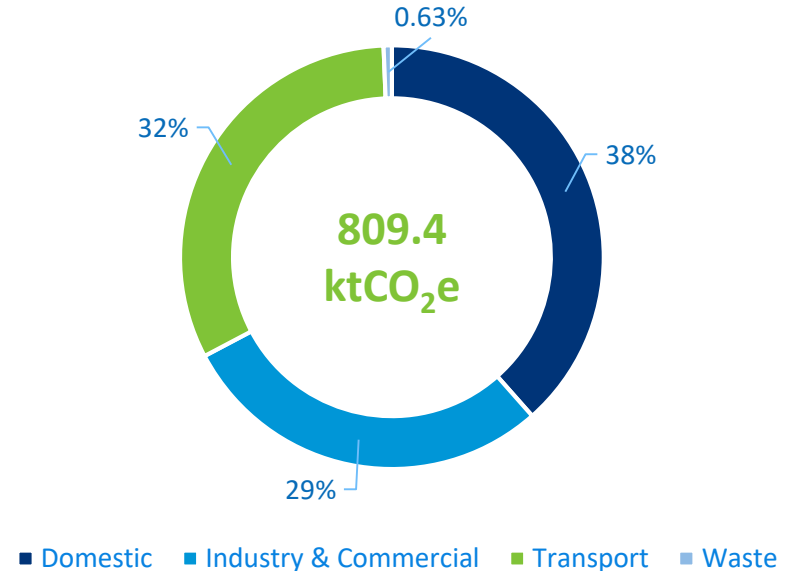
Reduction in energy consumption has flattened over the past decade



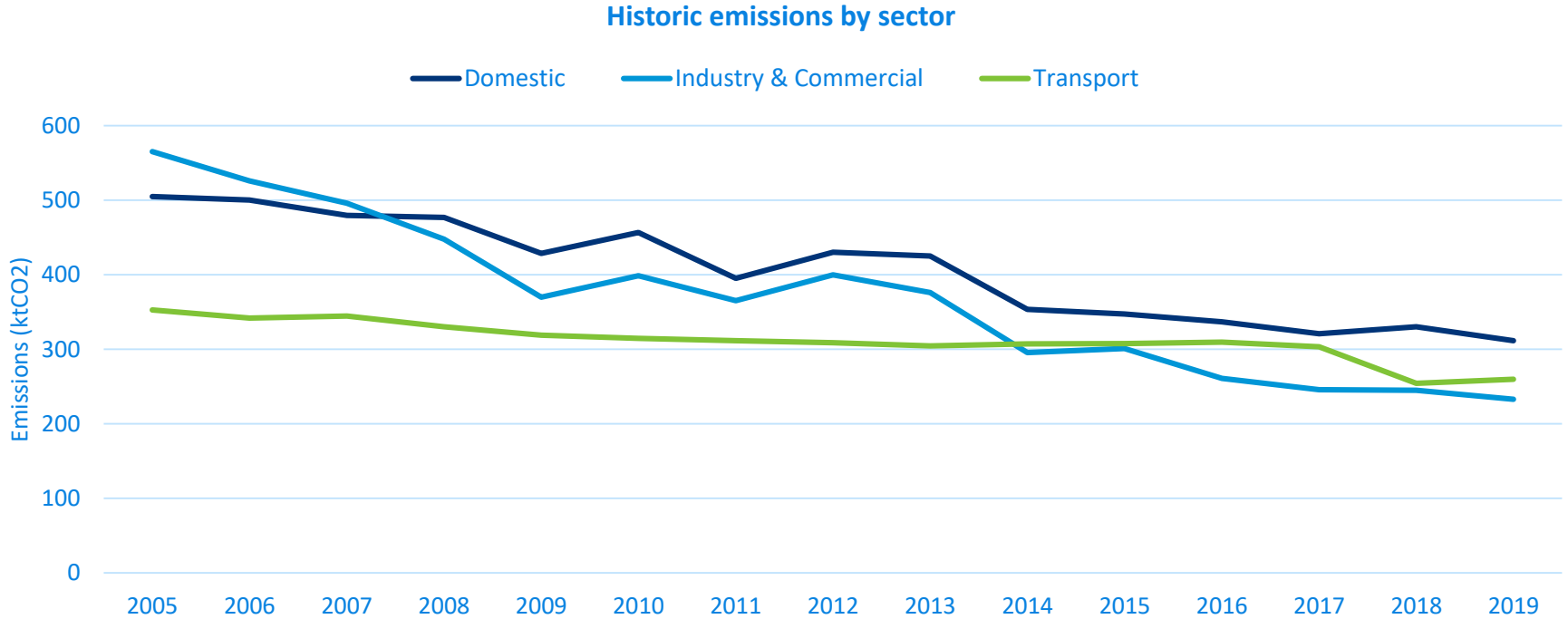
Emissions in North Tyneside appear evenly split by sector

The total carbon footprint for North Tyneside in 2019 is equal to **809.4 ktCO₂e**.

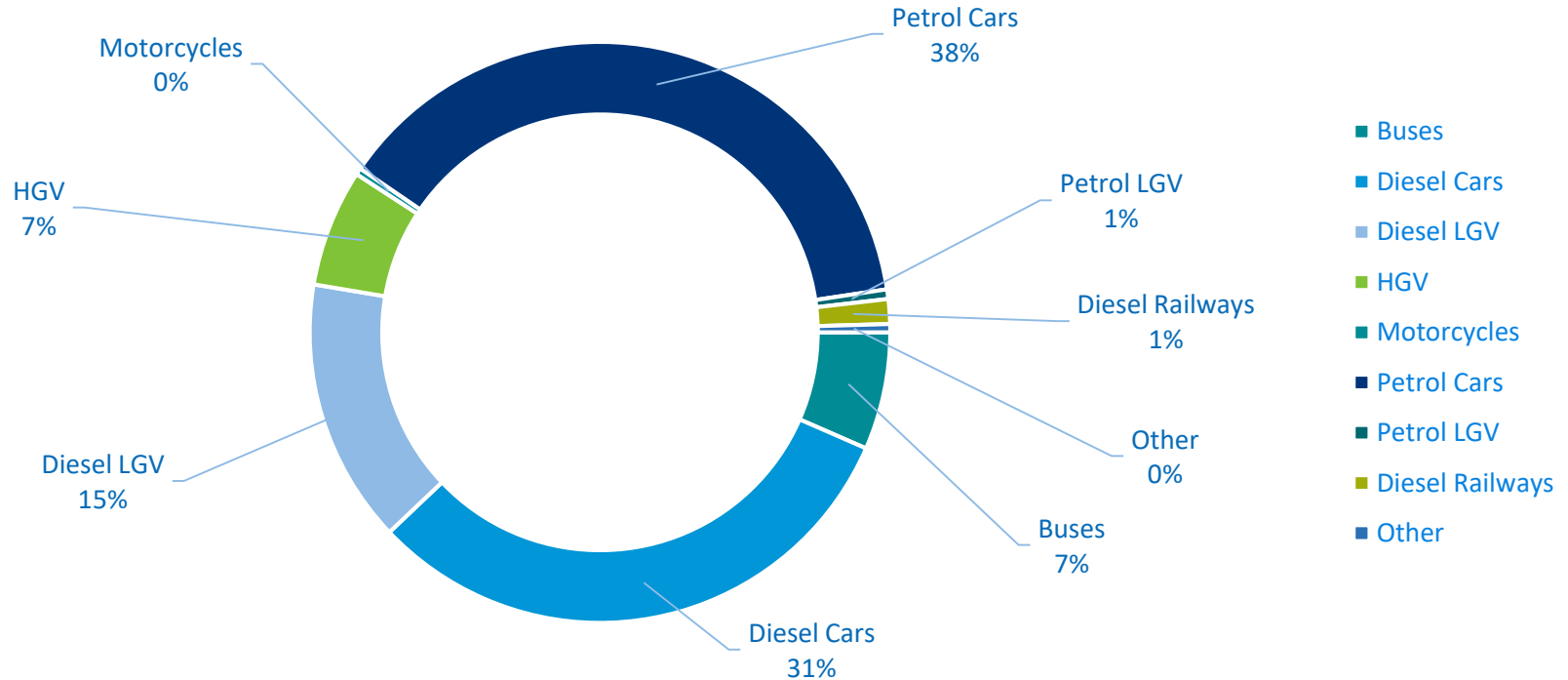
North Tyneside Emissions 2019



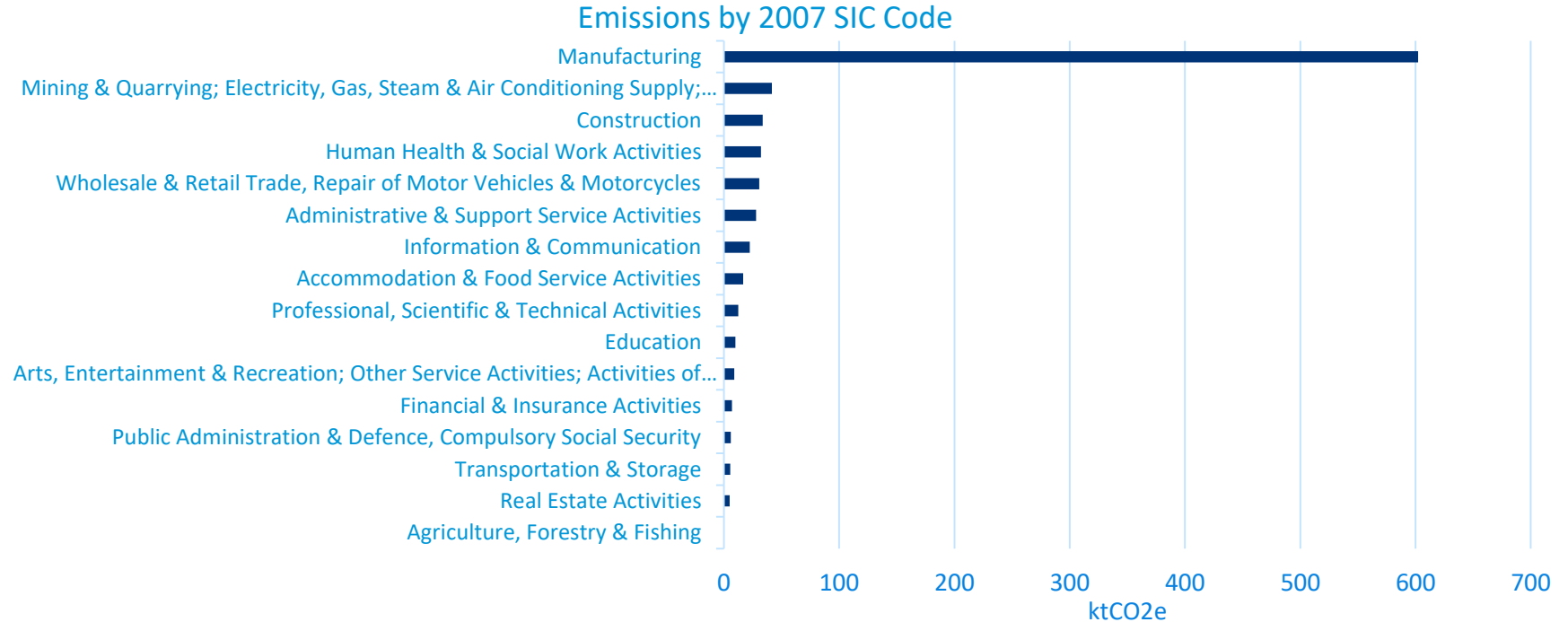
Although energy consumption is stable, emissions have been falling



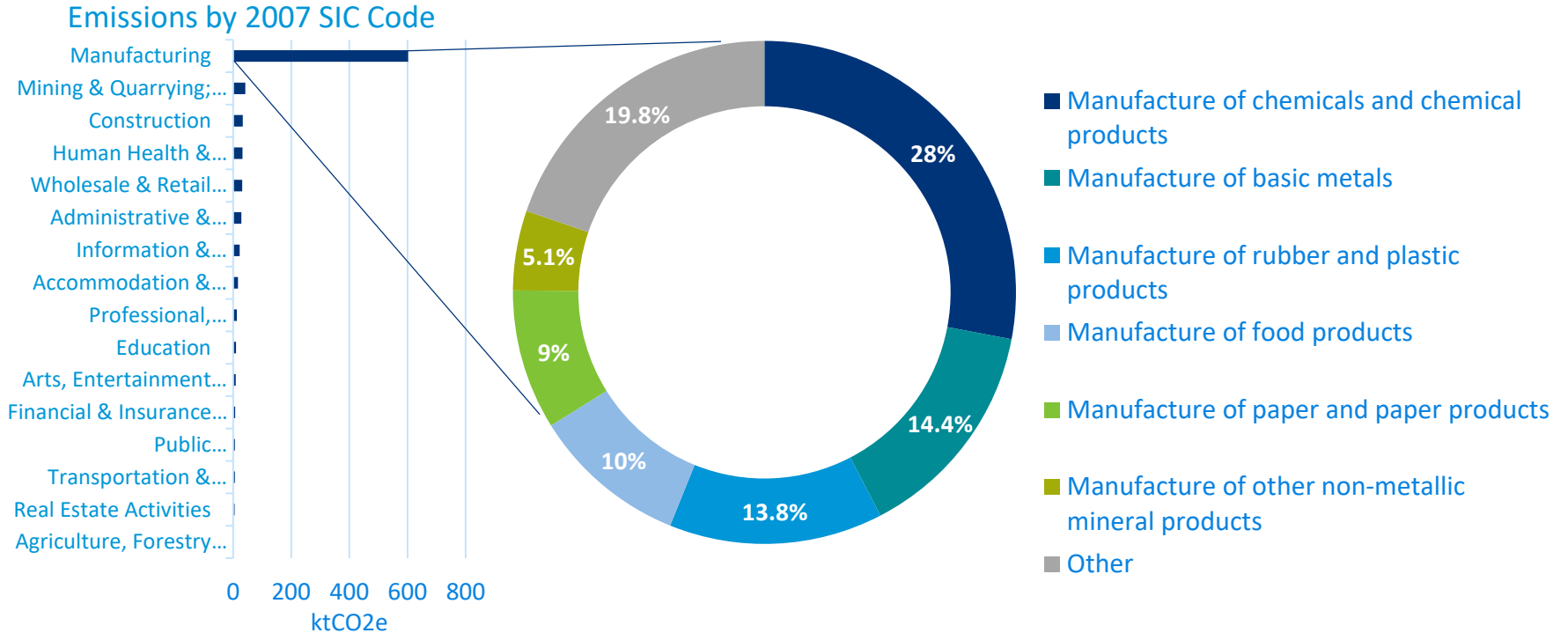
Diesel is responsible for the highest proportion of transport emissions



Manufacturing dominates sub-sector emissions due to associated emissions intensity

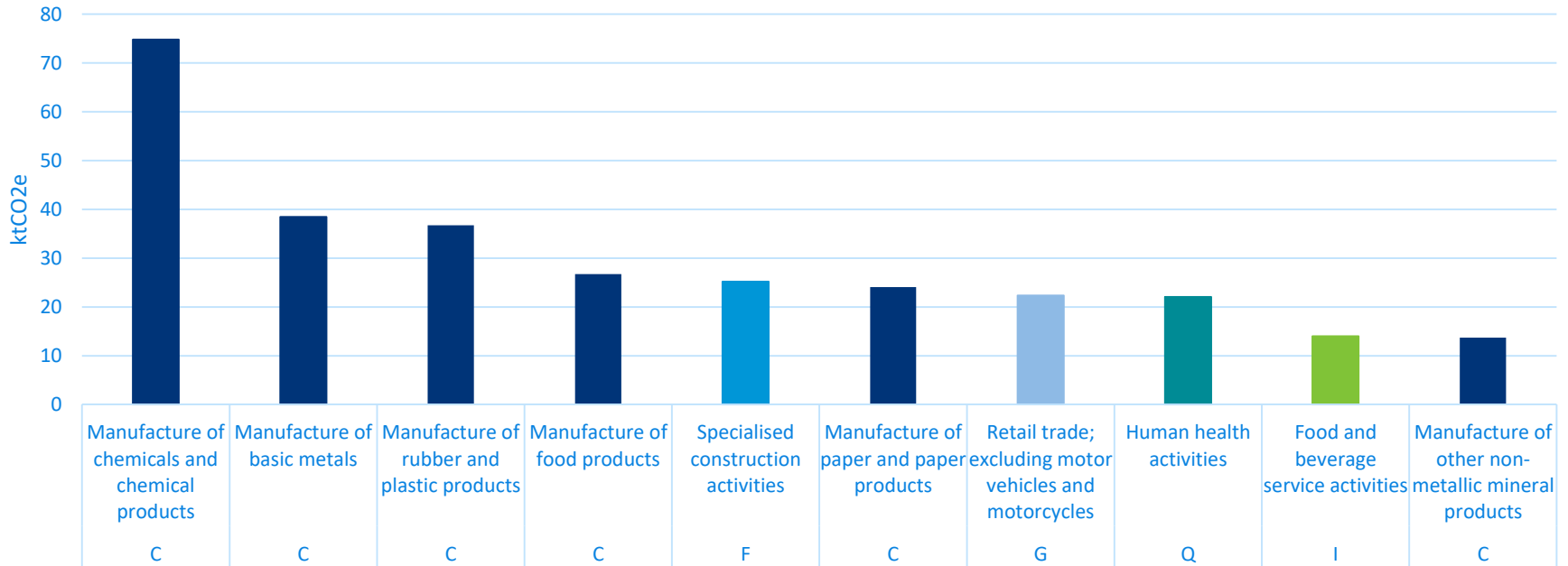


Within manufacturing emissions, chemicals & chemical products is the largest contributor



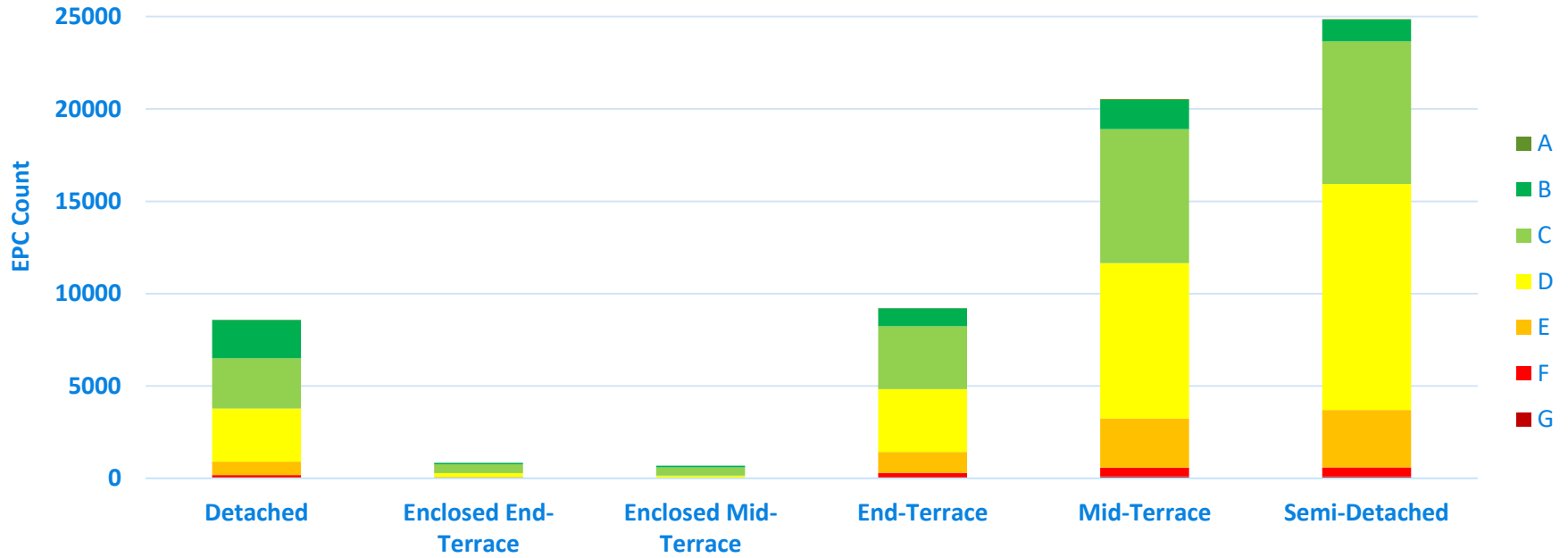
60% of North Tyneside's top-10 emitting sub-sectors are in manufacturing

Top-10 emitting sub-sectors



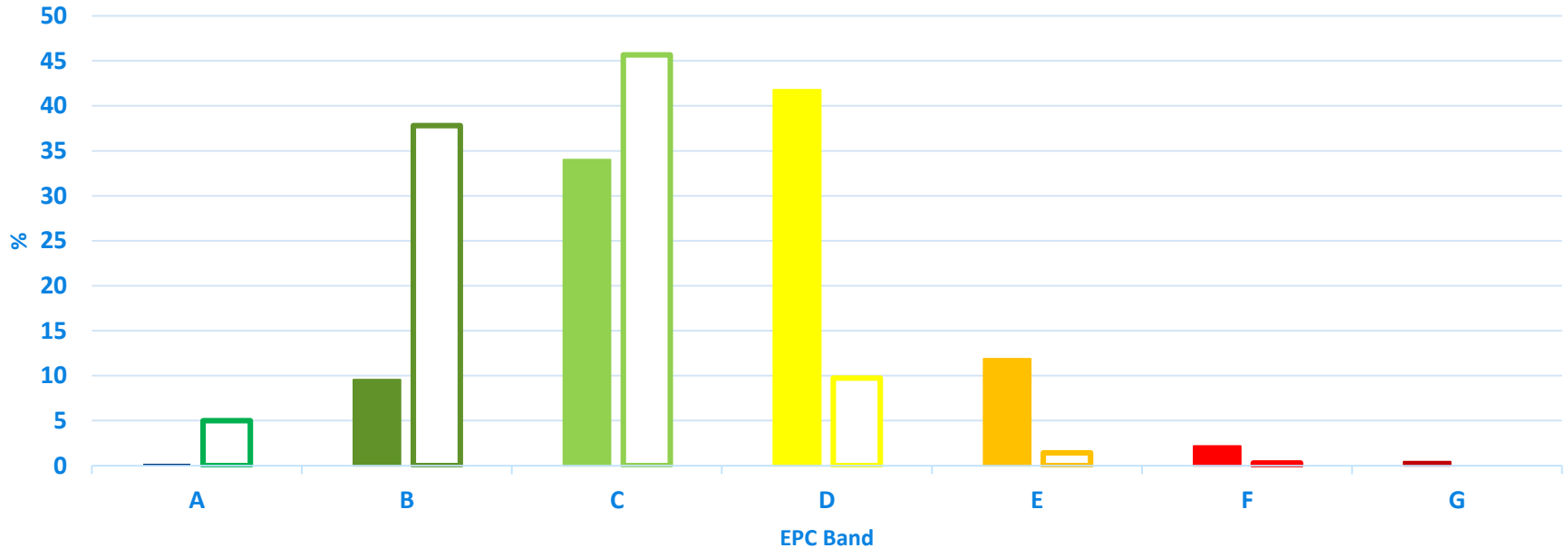
Semi-detached is the most common housing type, and Band D the most common EPC

Breakdown of EPCs in each housing type



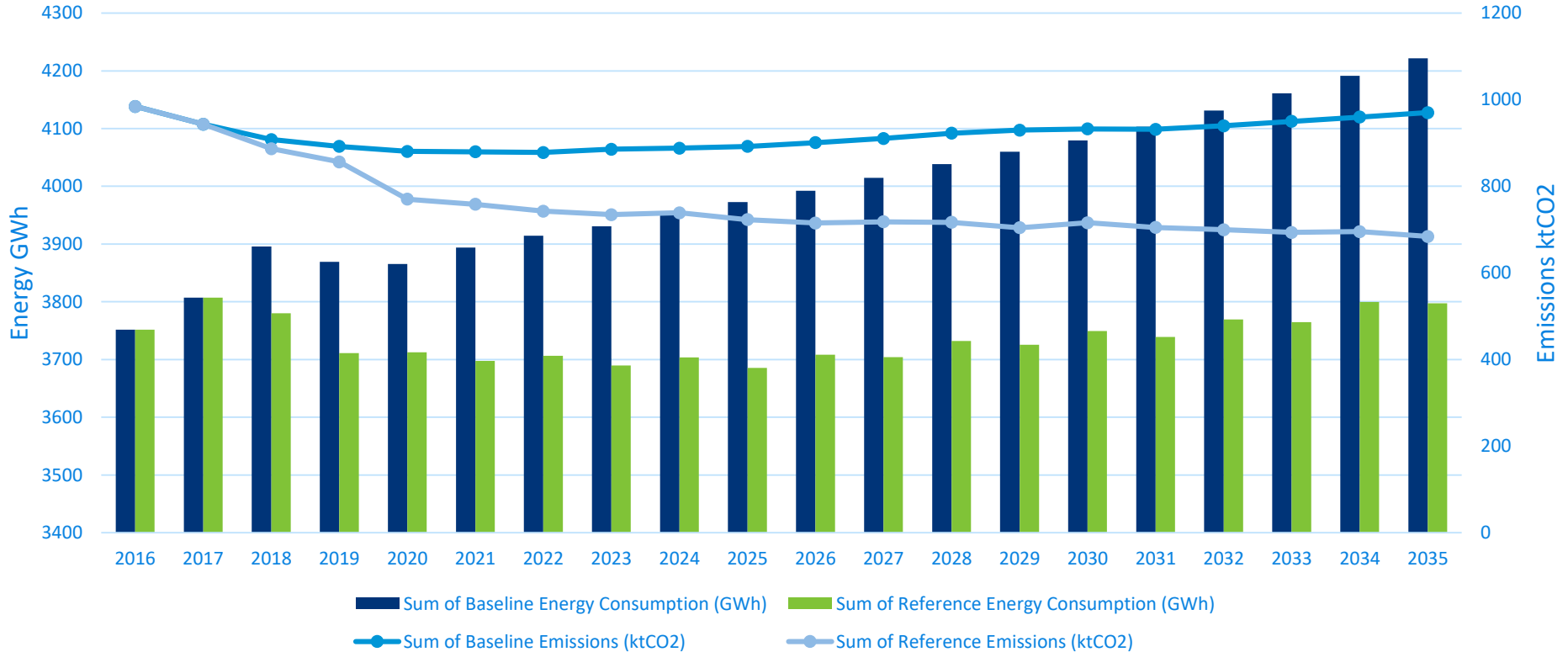
High potential in EPC Band B, however even with retrofit some inefficient properties will exist

Current EPC breakdown vs future potential



BEIS Emissions Projections to 2035


Business as usual emissions projections



3

Strategic vision and objectives

Questions



What would be your 2050 Vision Statement for the North Tyneside Climate Emergency Action Plan? (and what might a 2035 interim look like?)



What are your hopes and concerns for the North Tyneside Climate Emergency Action Plan?



What support could you / your organisation commit to delivering the North Tyneside Climate Emergency Action Plan?



What key priorities should the North Tyneside Climate Emergency Action Plan focus on?



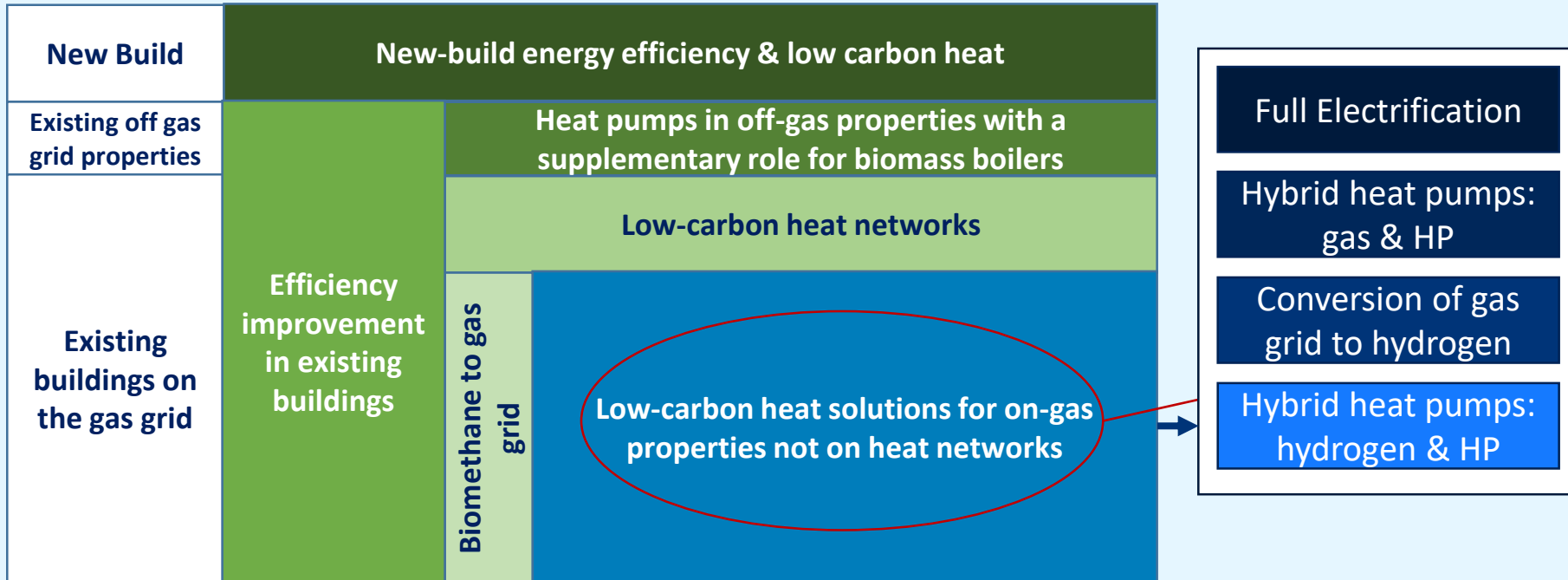
Break

4

Heat: challenges and opportunities

Heat Decarbonisation: Technology options

A 2016 Committee for Climate Change (CCC) report summarised the heat decarbonisation options as:

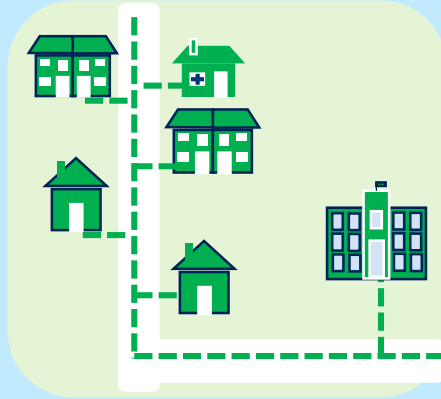


Technologies key to decarbonising heat

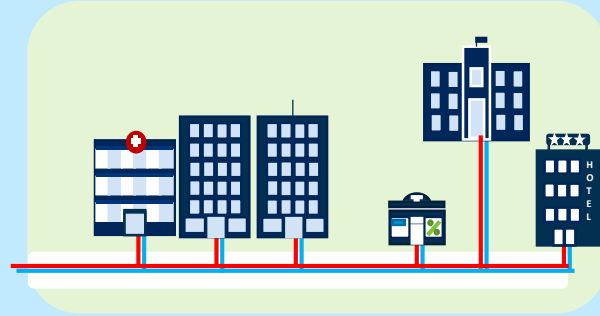
Energy
Efficiency



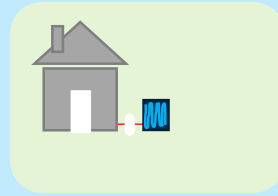
Hydrogen
Grid conversion



Low-Carbon Heat Networks



Heat Pumps &
Hybrid Heat
Pumps



- The pathway to the decarbonisation of heat is uncertain
- Solutions are likely to be place-based
- No one-size-fits-all technology

5

Power: challenges and opportunities

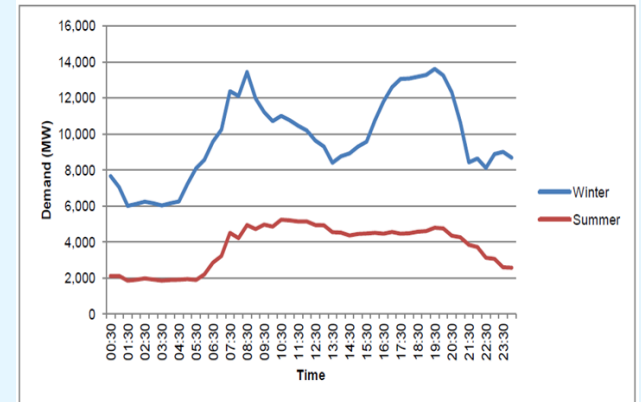
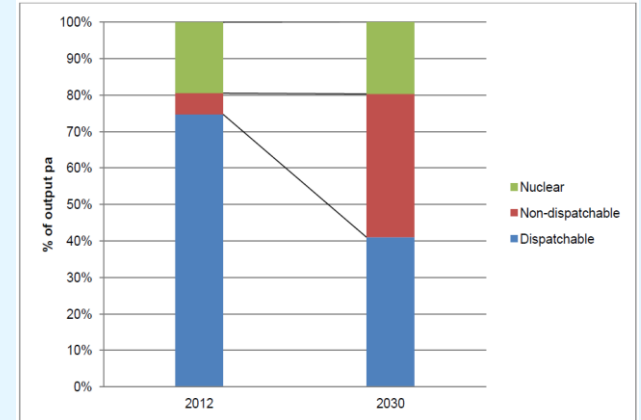
Electricity system

Historically based on **large centralised thermal power generators** feeding consumers through transmission networks (National Grid) and distribution networks (e.g. Northern Powergrid)

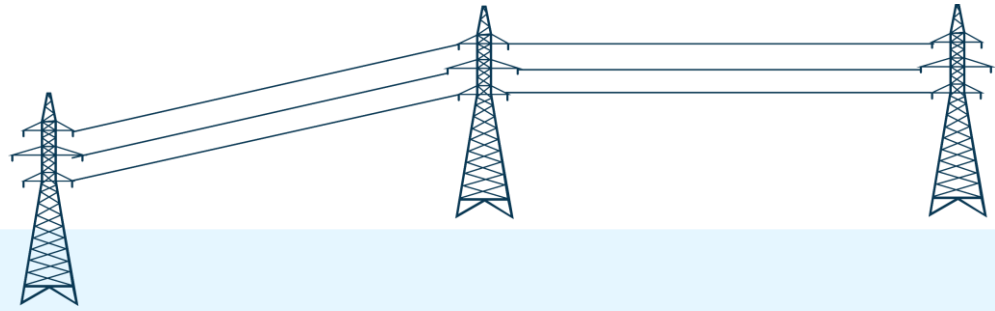
Requirement to decarbonise power generation **increases amount of non-dispatchable capacity** e.g. wind and solar, low carbon nuclear, and a reduced fraction of dispatchable thermal e.g. coal and gas

Different generation technologies have different characteristics:

- Base load
- Dispatchable
- Non-dispatchable



Opportunities



- **Under exploited renewable energy resources** in North Tyneside could allow **further decarbonisation** of electricity generation?
- Opportunity to integrate energy requirements of **regional economic regeneration** with **efficient, low carbon generation**?
- **New demand loads can act as storage** of energy from electricity e.g. heat and EV batteries
- **Demand side flexibility can reduce electricity system costs** and improve efficiency
- Development of **markets to reward flexibility**

6

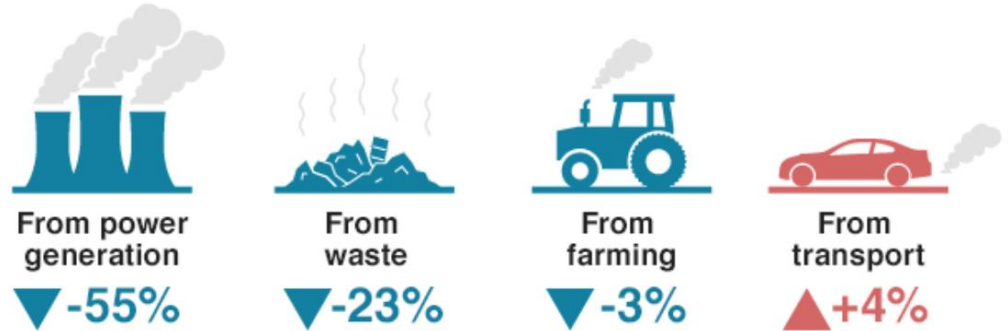
Transport: challenges and opportunities

How we travel

How we travelled [NTS0303]



UK CO2 emissions 2012-2017



Source: Climate Change Committee



Challenges



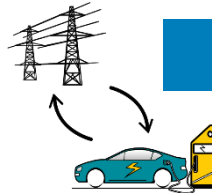
Building EV / hydrogen infrastructure at scale

Modal shift / behaviour change slow



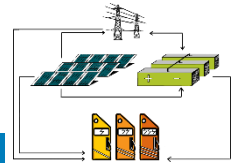
Affordability for end-users

Creating sustainable / local supply options



Grid impact of electrification

Need to continue delivering reliable service



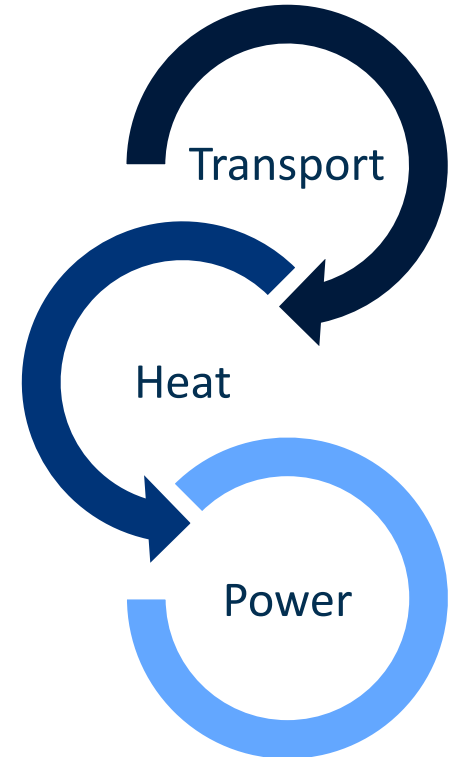
Vehicle performance requirements

7

Roundtables: developing strategic priorities for the North Tyneside Climate Emergency Action Plan

Roundtable questions

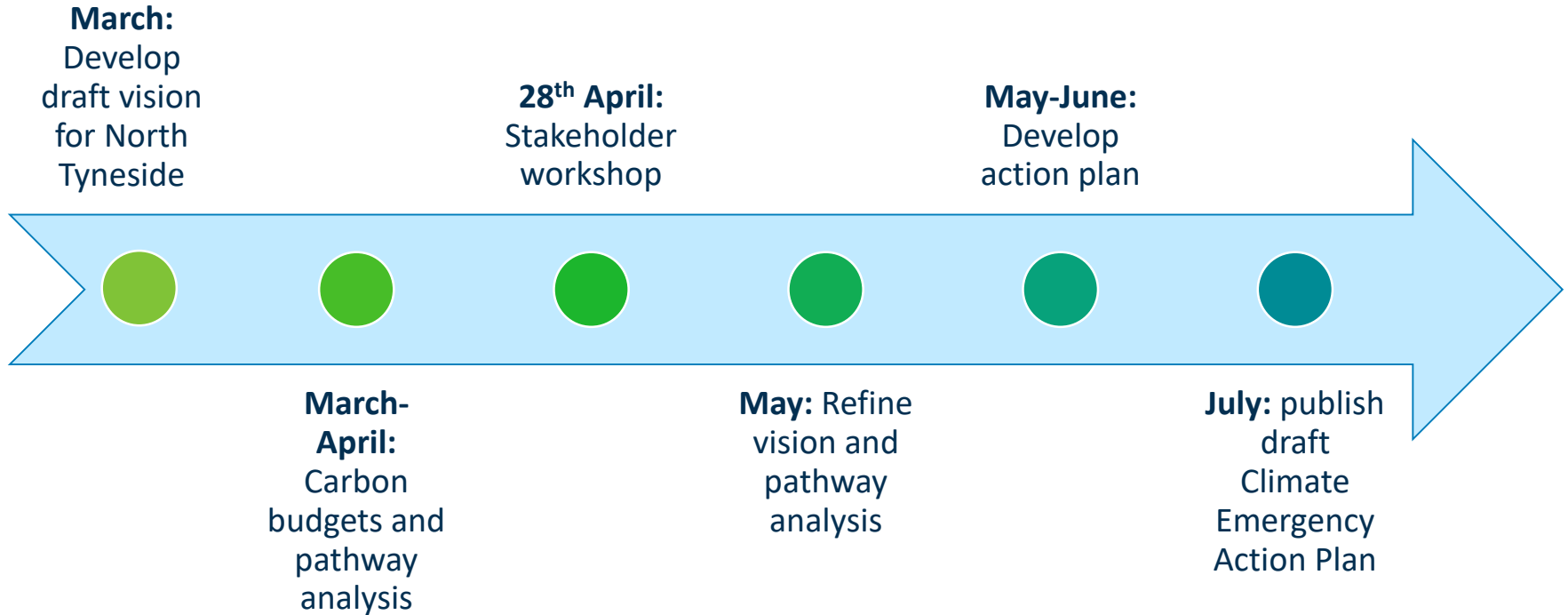
- 1. What are the priorities & key strategic focus areas for North Tyneside?
- 2. What can businesses, public sector, third sector organisations, and households do?
- 3. What are the key local strengths and opportunities?
- 4. What are the key sector weaknesses and barriers?



8
|

Next steps and workshop close

Next steps



Any questions?

Keep in touch

Paul Wedgwood, Associate Director, Cities and Regions



Paul.Wedgwood@CarbonTrust.com



[@TheCarbonTrust](https://twitter.com/TheCarbonTrust)



[Paul Wedgwood](#)