

# North Tyneside Climate Emergency Action Plan

*Workshop 1 – vision and strategic priorities*

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March 2020

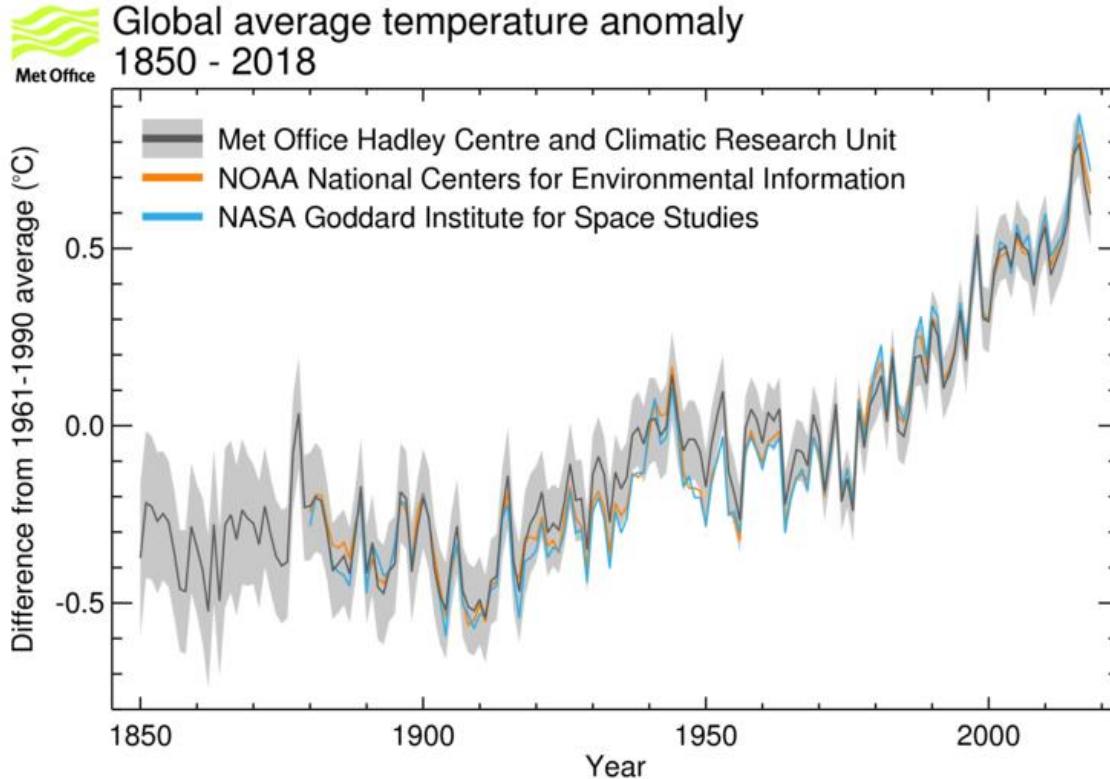
# Agenda

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
<b>Brunch</b>		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

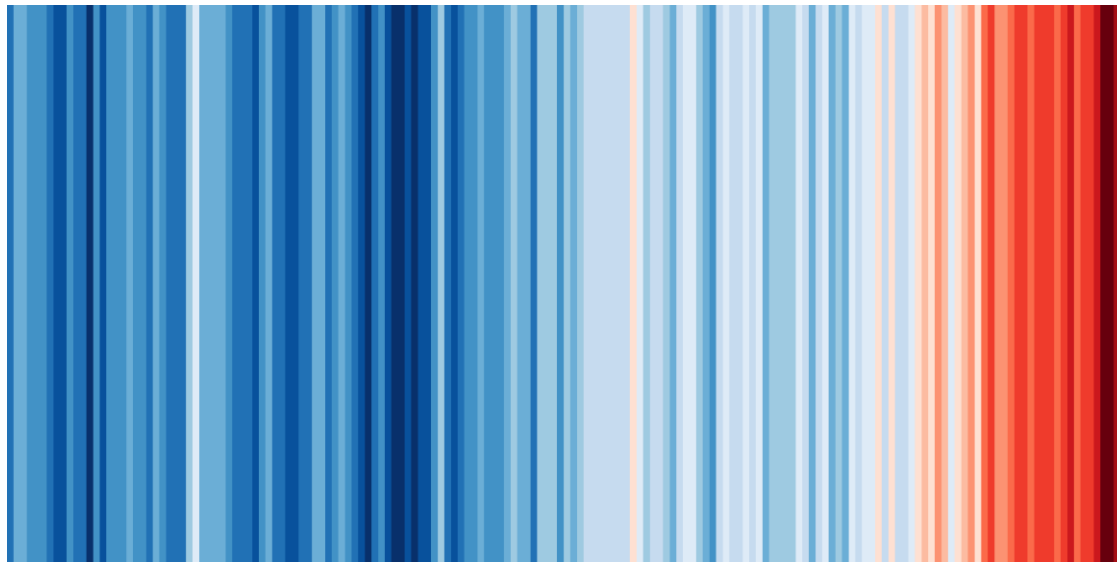
## Developing a Climate Emergency Action Plan for North Tyneside

# We are in a climate emergency



## ...or in colour

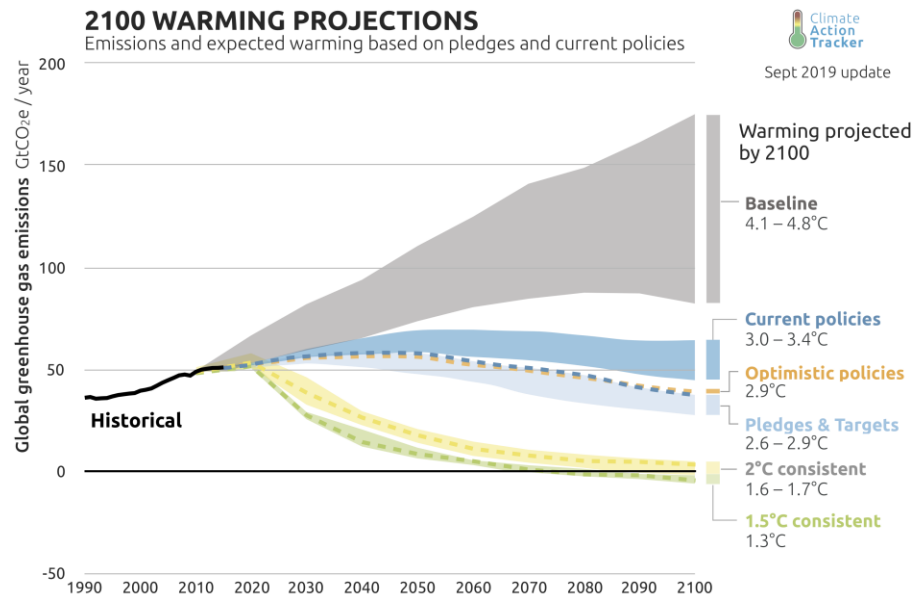
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- Each stripe represents a year
- 1850-2018
- @ed\_hawkins

# Temperature projections for 2100

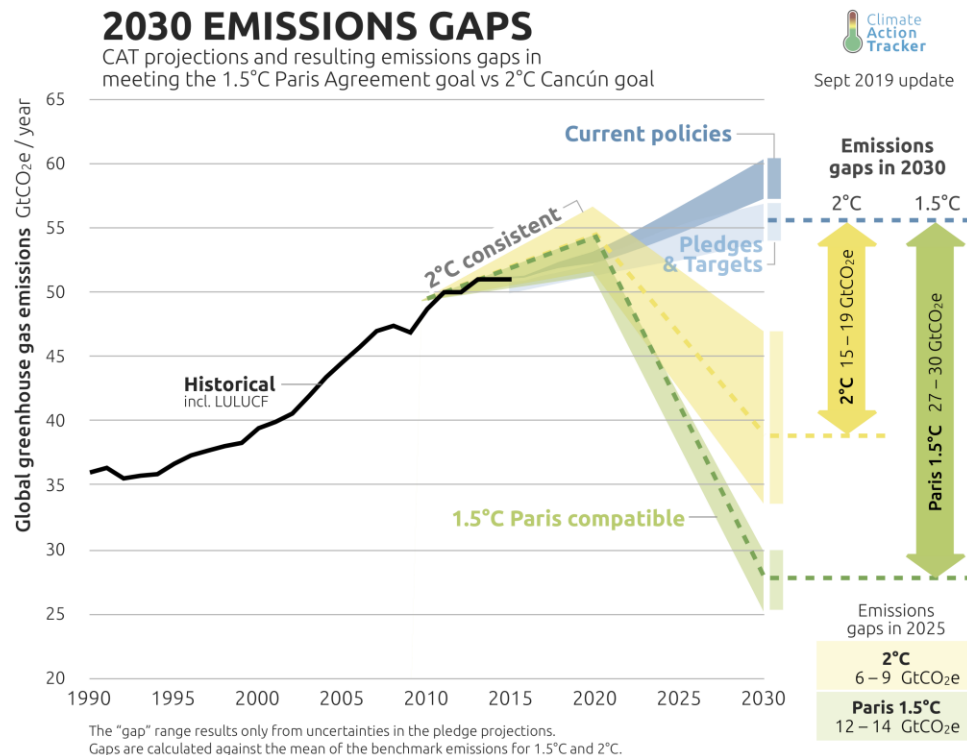
- Current global policies on track for 3.3°C temperature rise
- Current global government pledges result in 2.7°C rise



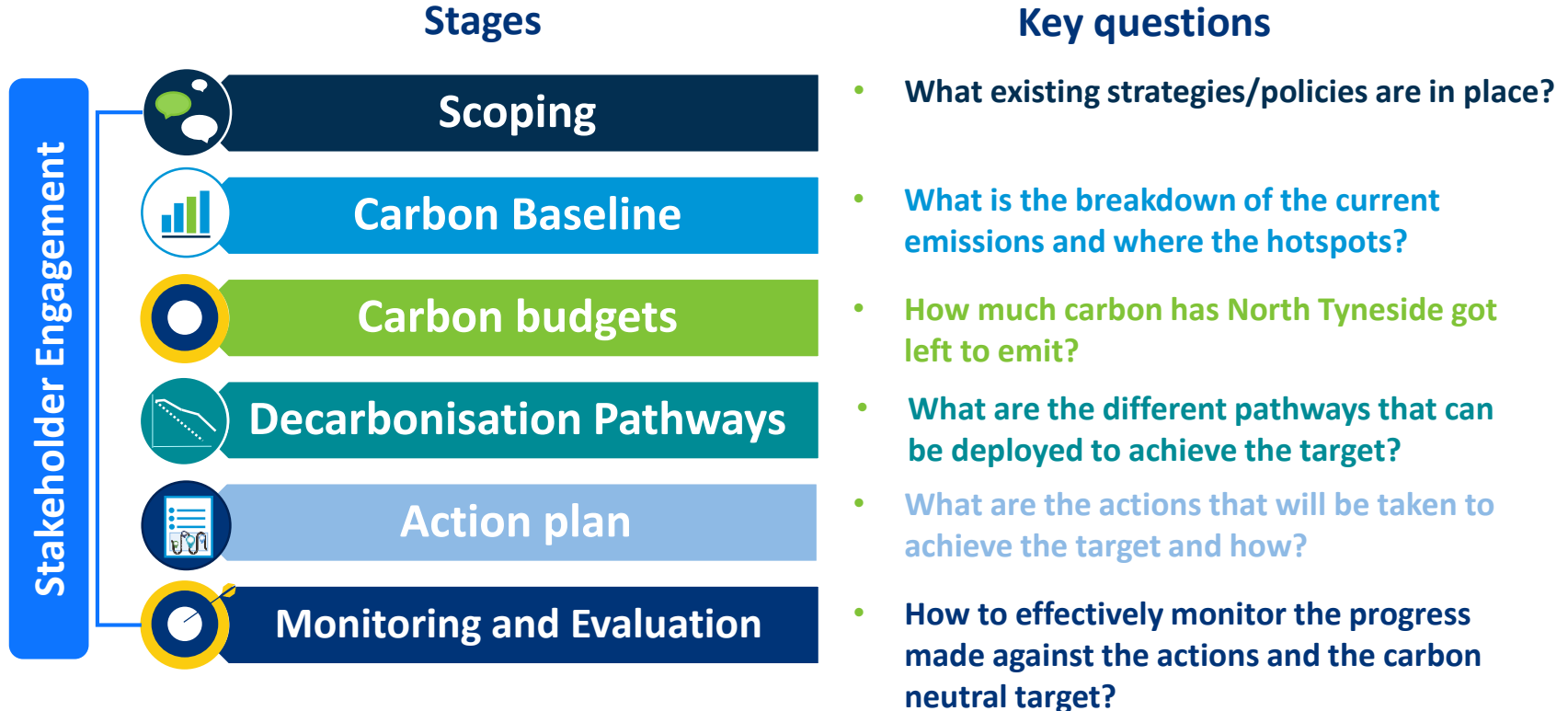
Source: Climate Action Tracker

# 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

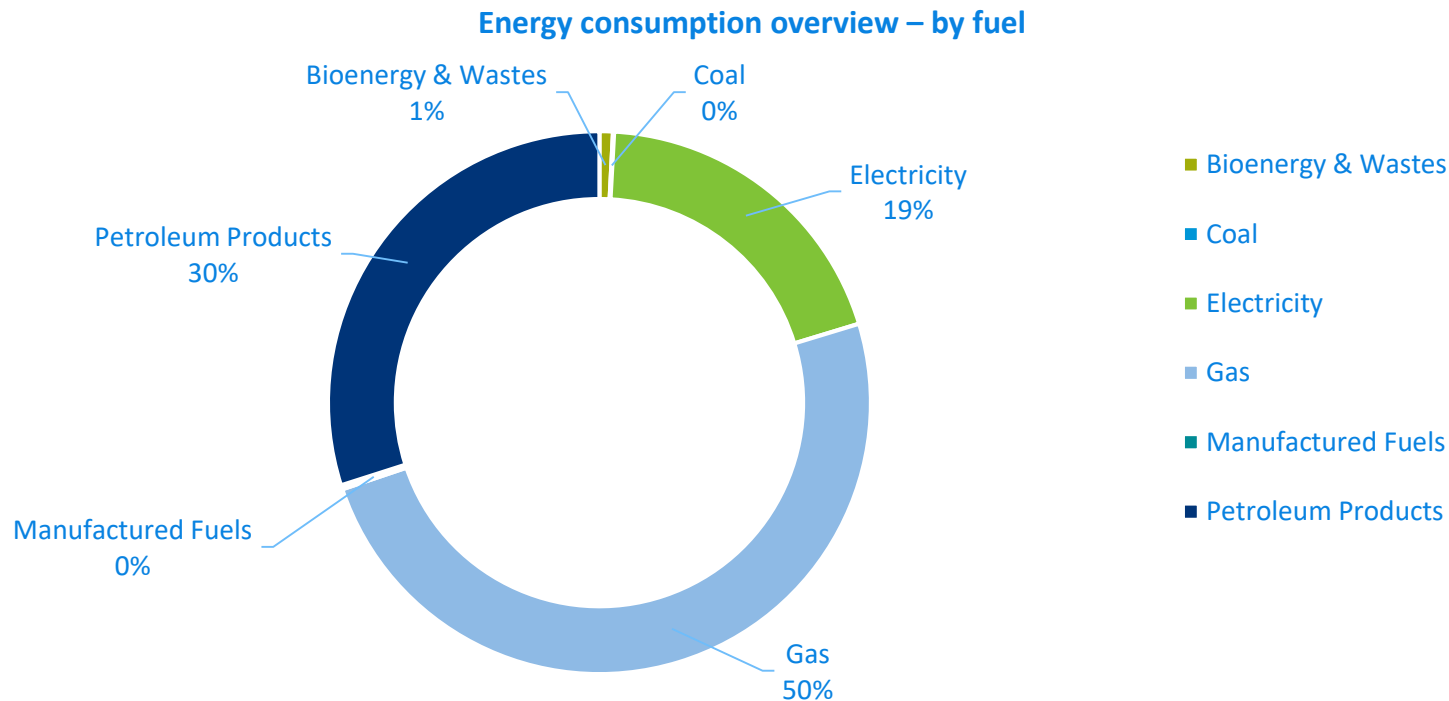




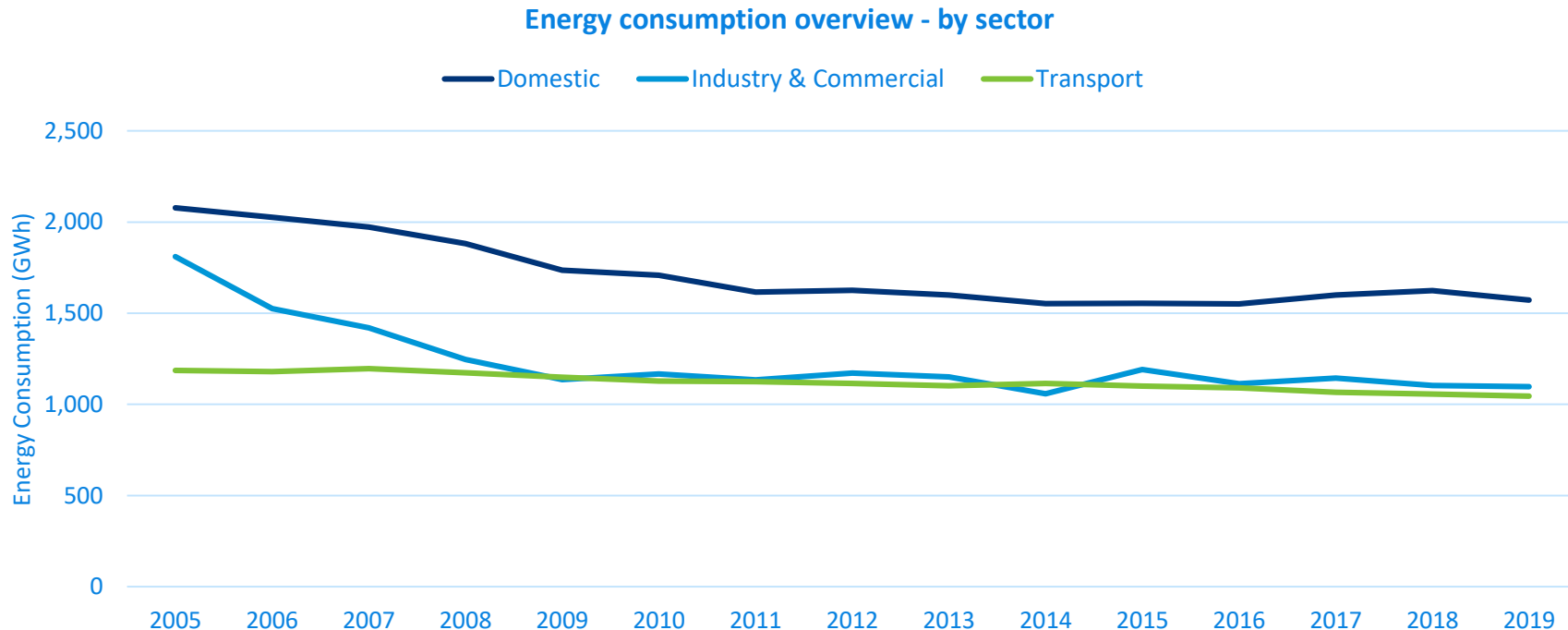
# 2

## Insights from the North Tyneside baseline analysis

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



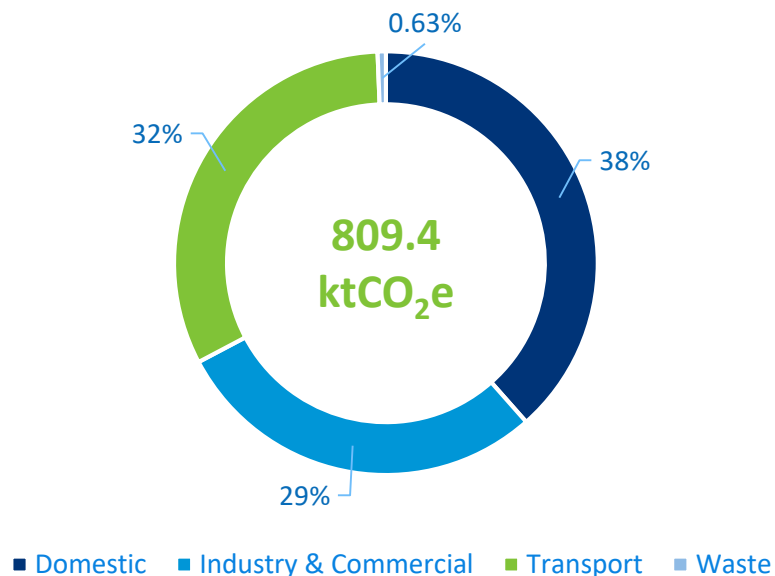
# Reduction in energy consumption has flattened over the past decade



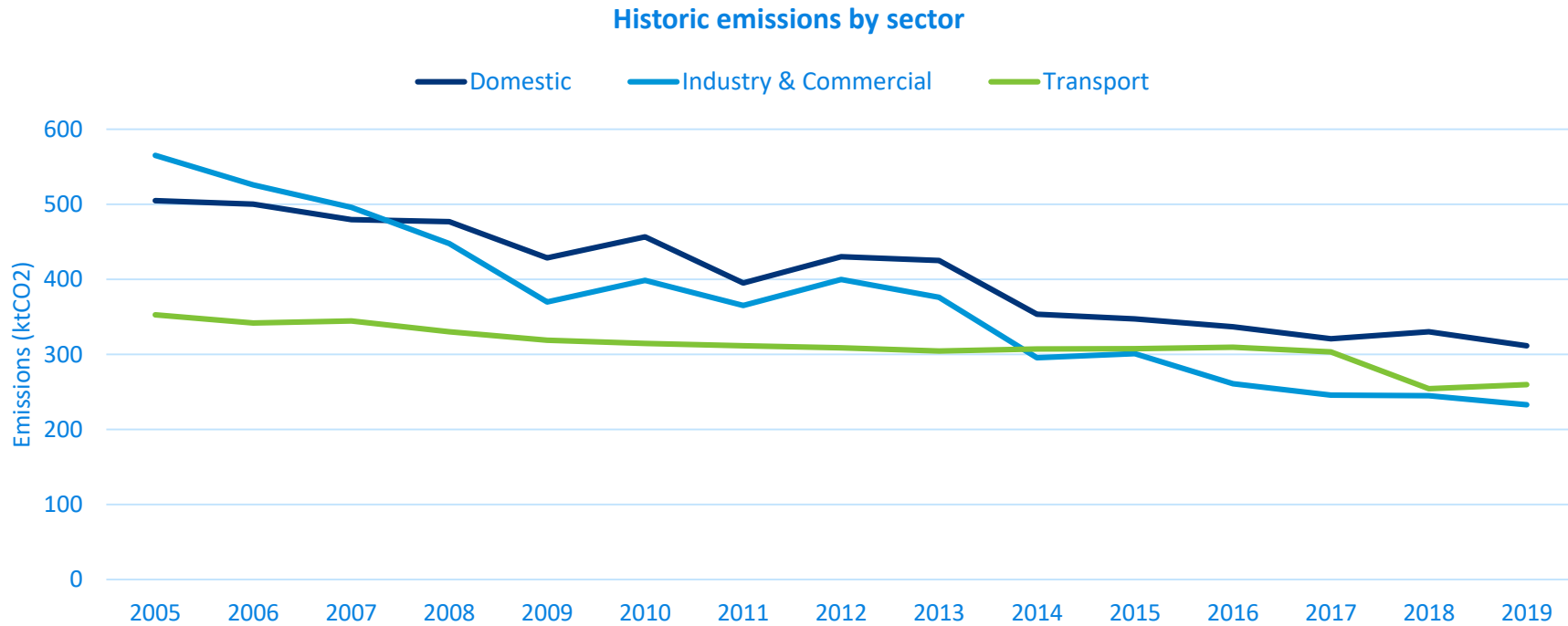
## Emissions in North Tyneside appear evenly split by sector

The total carbon footprint for North Tyneside in 2019 is equal to **809.4 ktCO<sub>2</sub>e**.

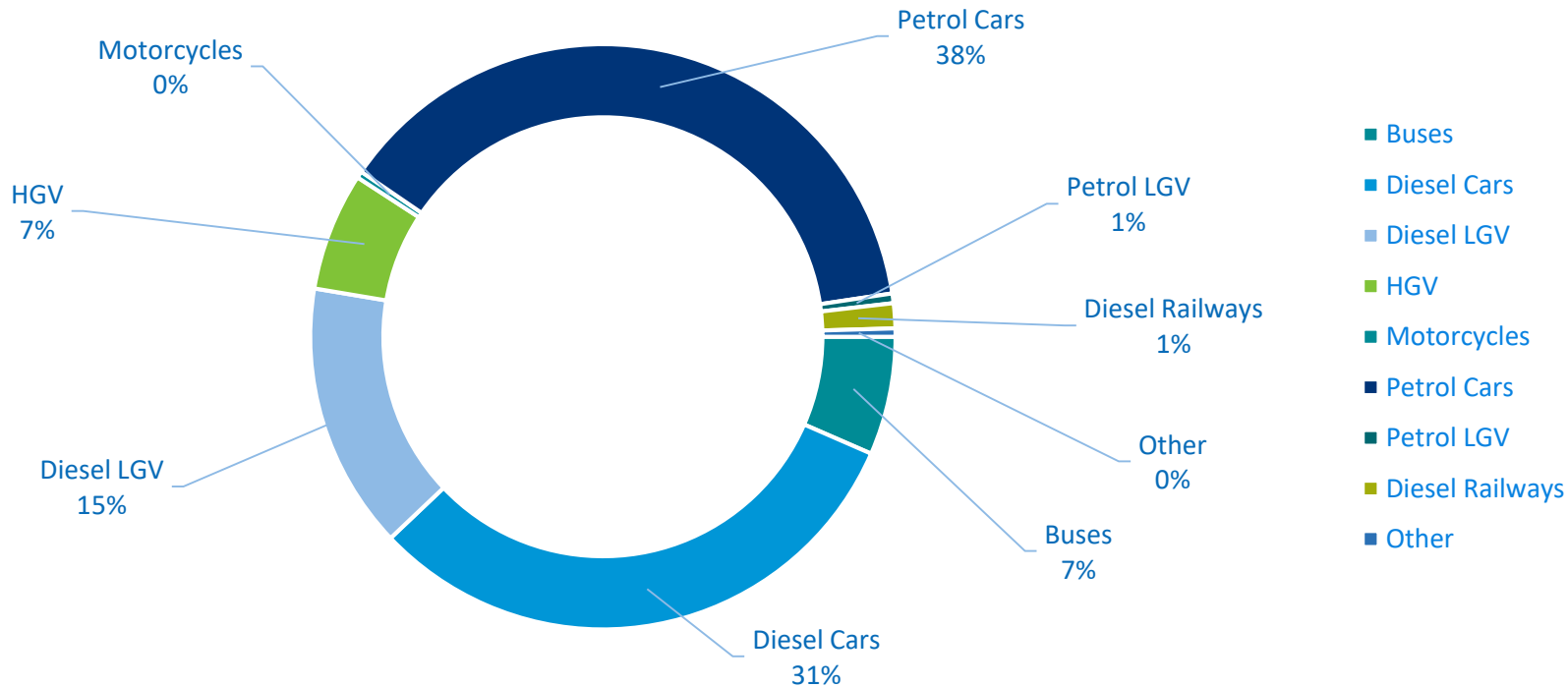
North Tyneside Emissions 2019



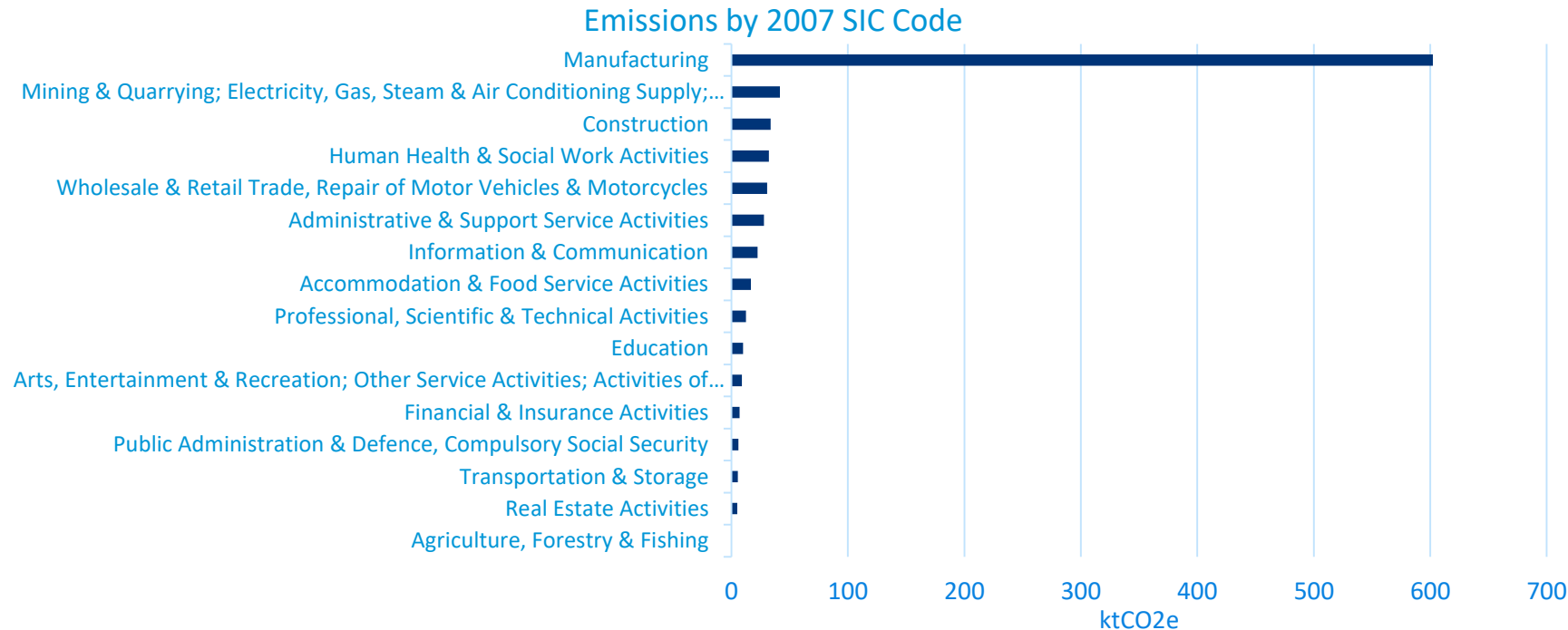
# Although energy consumption is stable, emissions have been falling



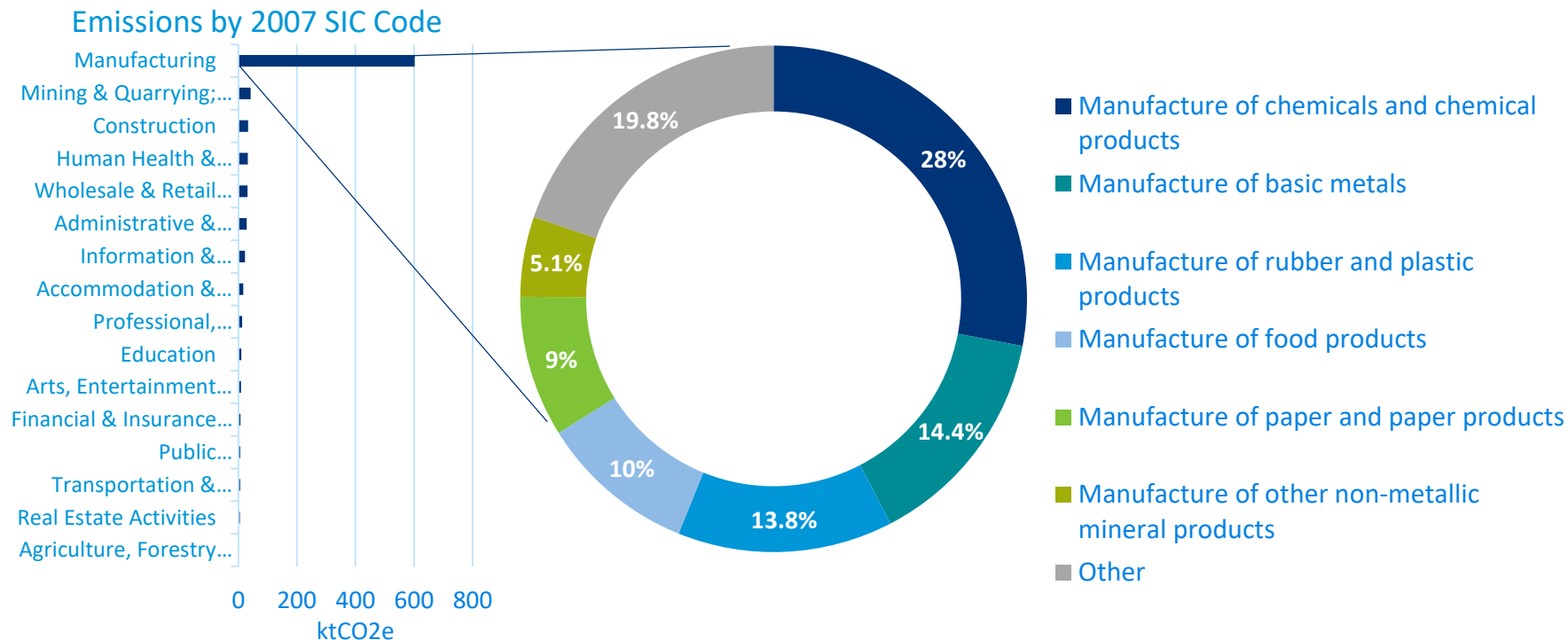
# Diesel is responsible for the highest proportion of transport emissions



# Manufacturing dominates sub-sector emissions due to associated emissions intensity



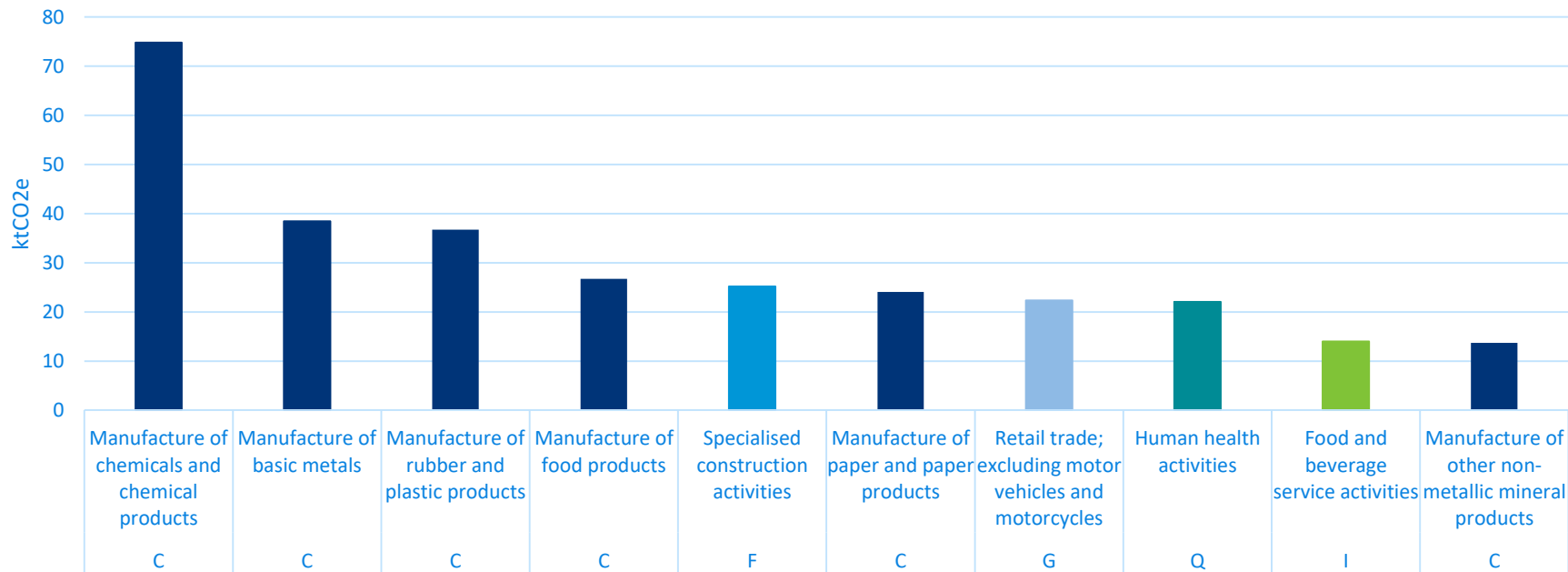
# Within manufacturing emissions, chemicals & chemical products is the largest contributor





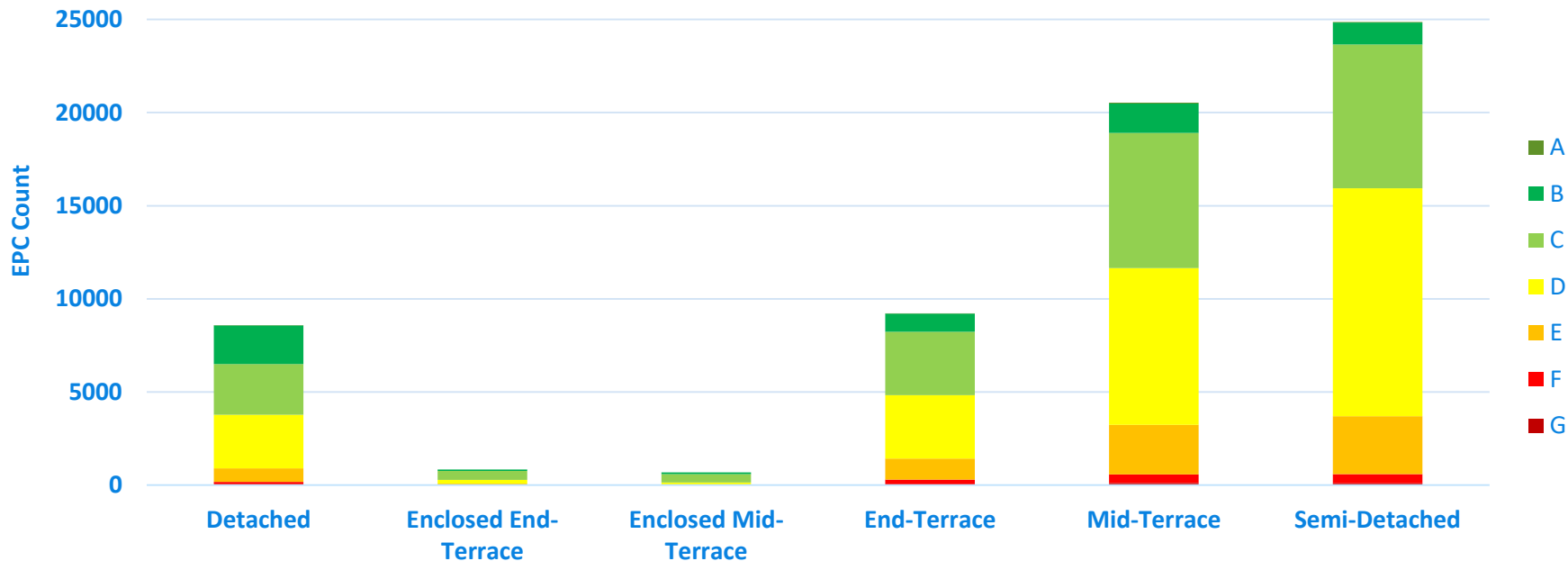
# 60% of North Tyneside's top-10 emitting sub-sectors are in manufacturing

Top-10 emitting sub-sectors



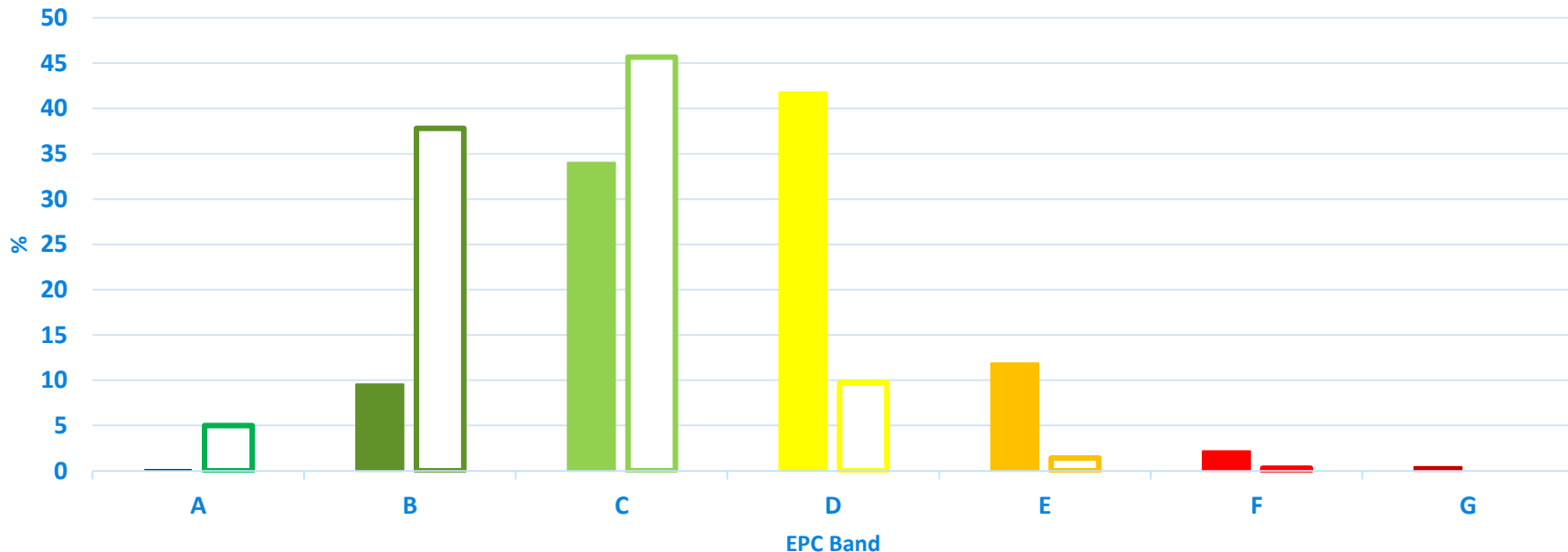
# Semi-detached is the most common housing type, and Band D the most common EPC

Breakdown of EPCs in each housing type



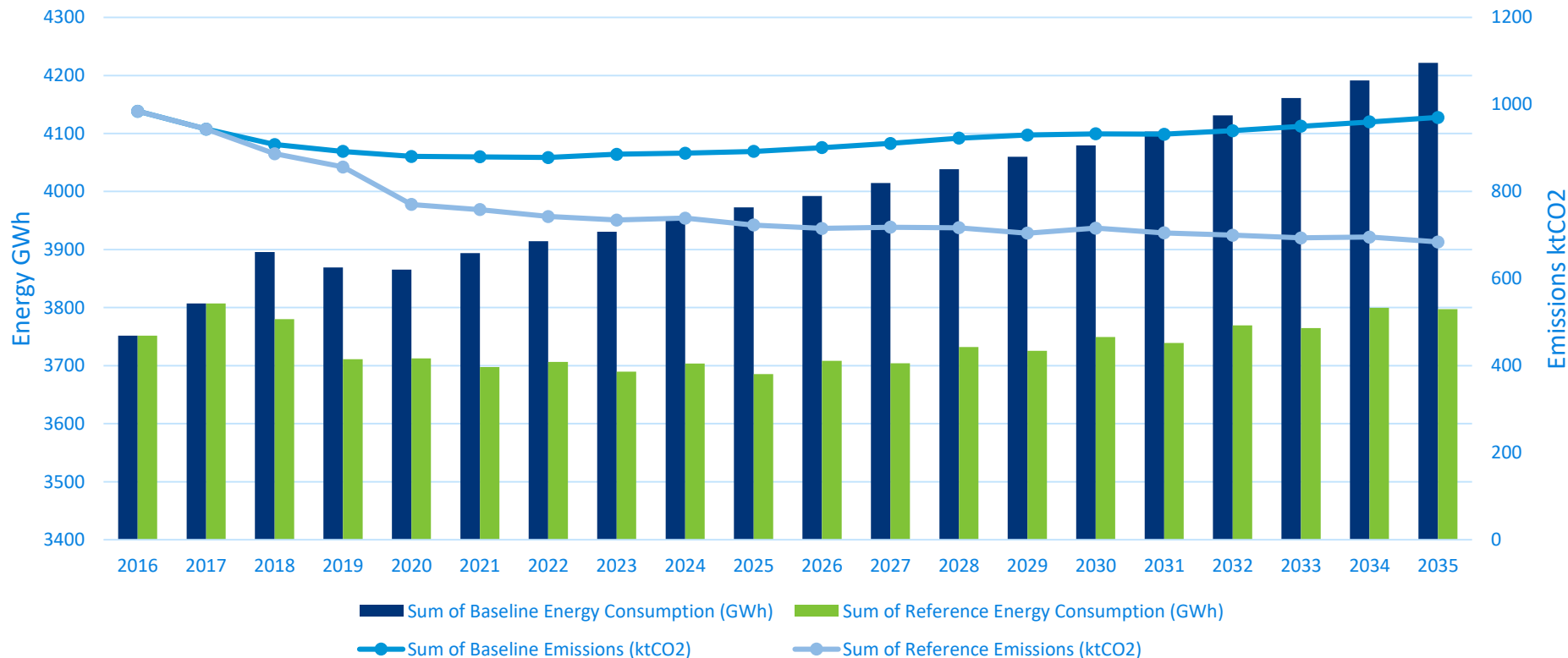
# High potential in EPC Band B, however even with retrofit some inefficient properties will exist

Current EPC breakdown vs future potential



# BEIS Emissions Projections to 2035

## Business as usual emissions projections




# 3

## Strategic vision and objectives

## Questions

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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**

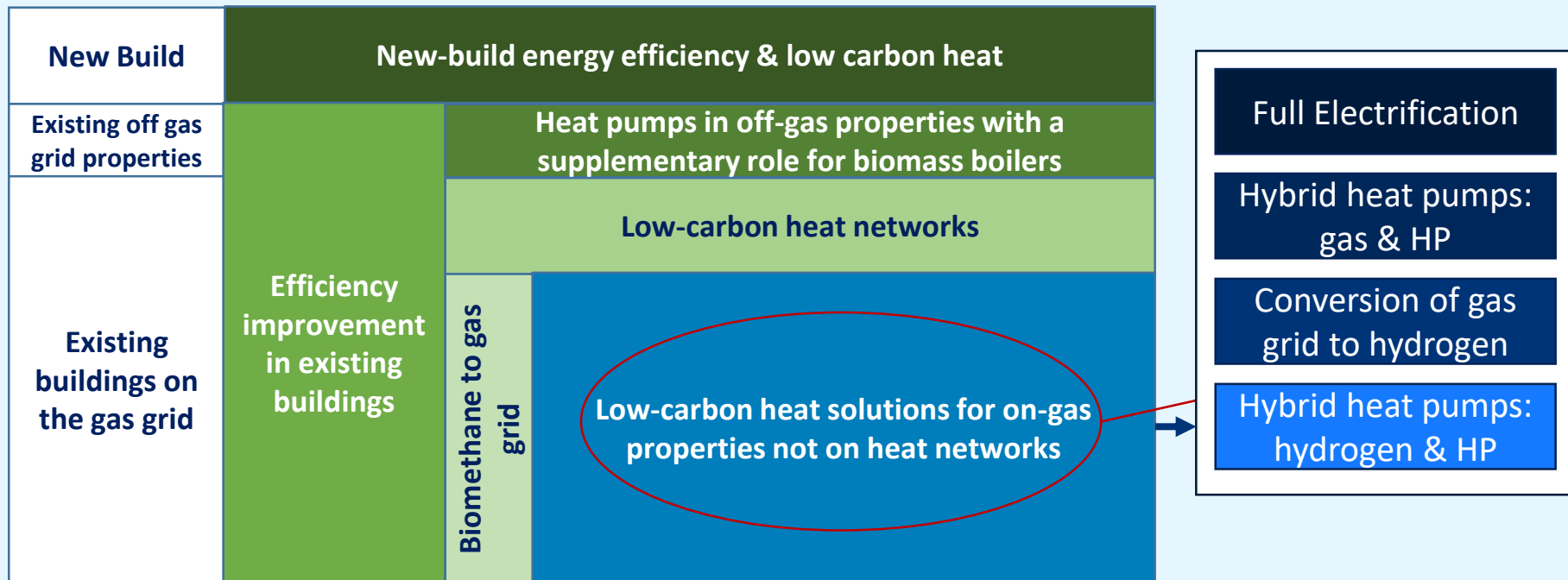
# 4

## Heat: challenges and opportunities



# Heat Decarbonisation: Technology options

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

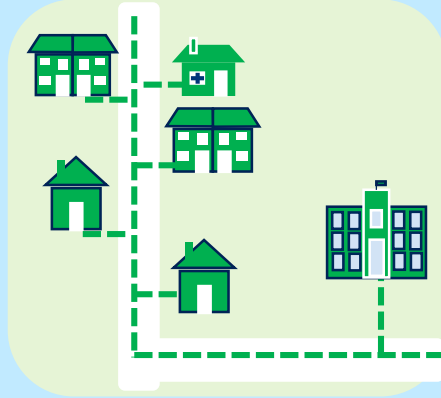


# Technologies key to decarbonising heat

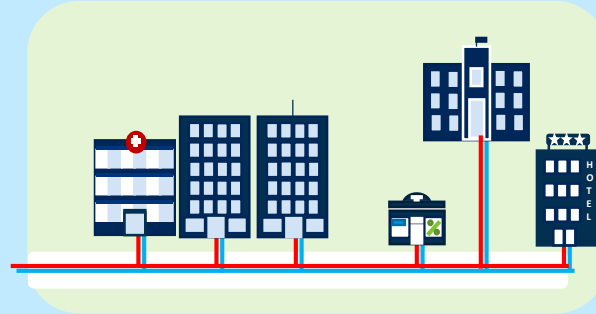
Energy  
Efficiency



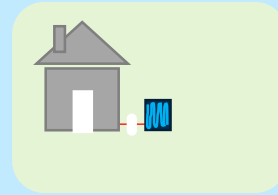
Hydrogen  
Grid conversion



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

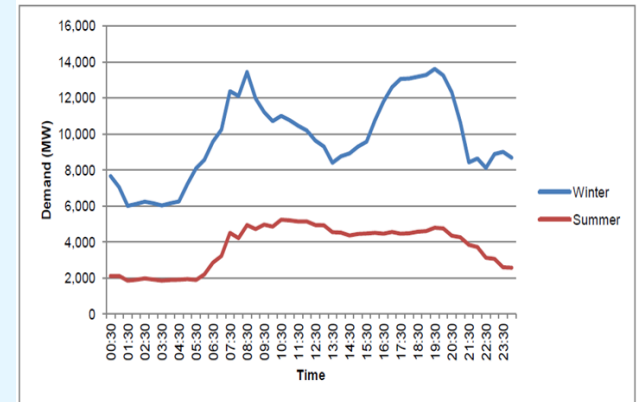
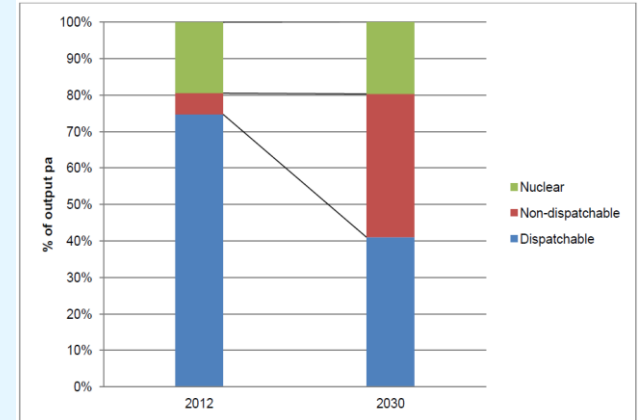
# Electricity system

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

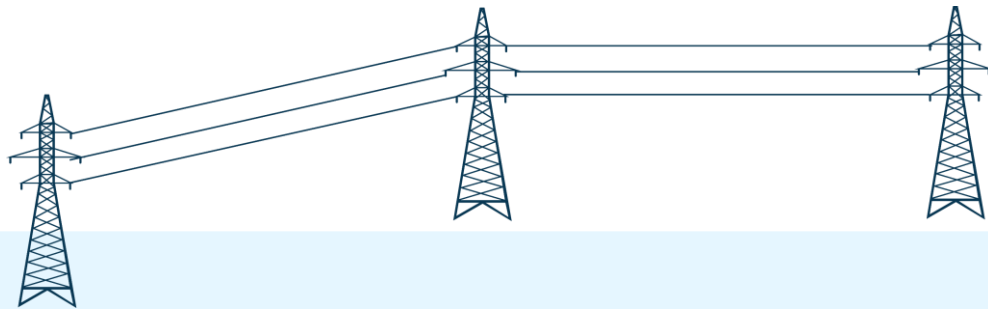
**Different generation technologies have different characteristics:**

- Base load
- Dispatchable
- Non-dispatchable



# Opportunities

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- **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

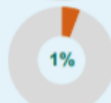
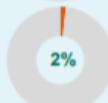
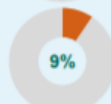
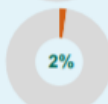
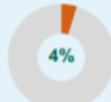
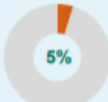
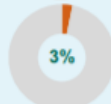
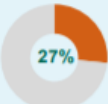
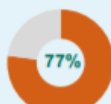
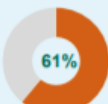
# How we travel

How we travelled [NTS0303]

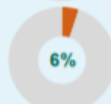
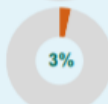
Modal share

Trips

Distance



Other



## UK CO2 emissions 2012-2017



From power  
generation

▼ -55%



From  
waste

▼ -23%



From  
farming

▼ -3%



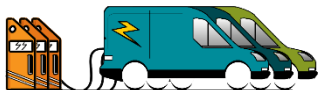
From  
transport

▲ +4%

Source: Climate Change Committee

BBC

# Challenges



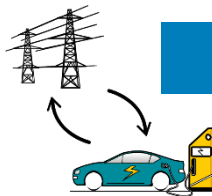
Building EV / hydrogen infrastructure at scale

Modal shift / behaviour change slow

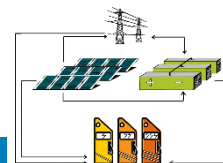


Affordability for end-users

Creating sustainable / local supply options



Grid impact of electrification



Need to continue delivering reliable service

Vehicle performance requirements

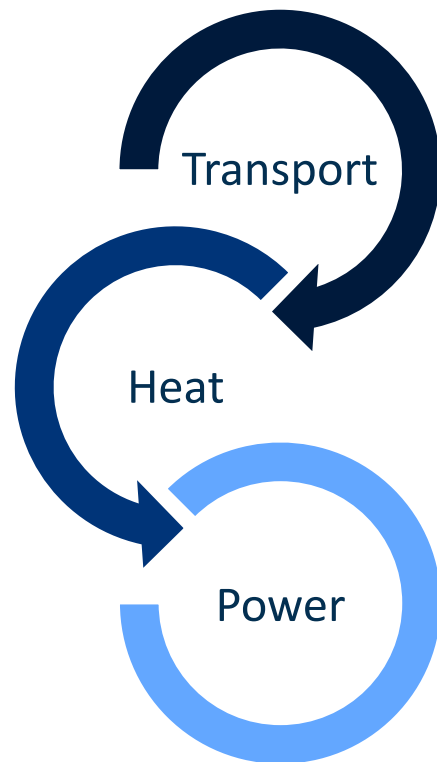


# 7

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

## Roundtable questions

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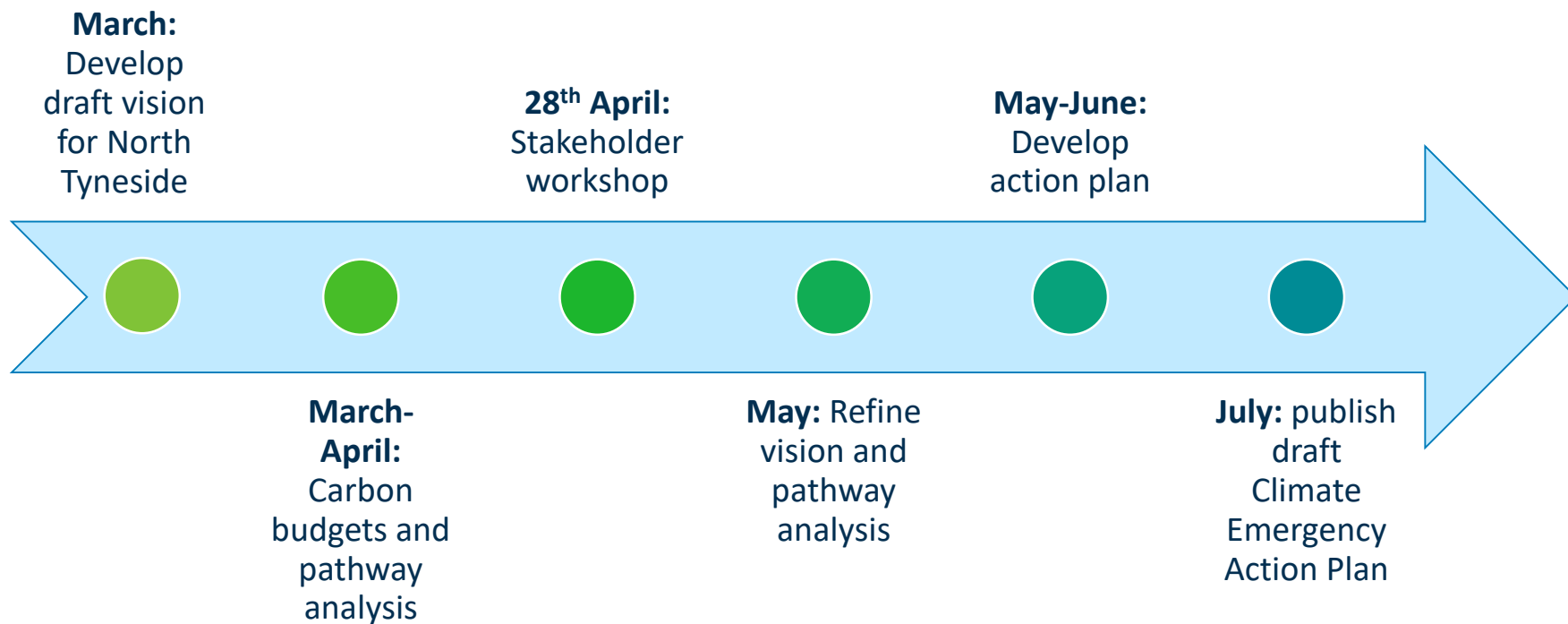


# 8

**Next steps and workshop close**

## Next steps

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# Any questions?

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## Keep in touch

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[Paul Wedgwood](#)