



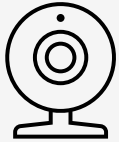
***Building the FDF Narrative on  
Net Zero: Project Introduction***



# Welcome



Please mute during the presentations



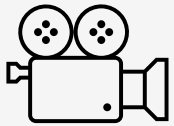
To increase video quality, please turn off cameras



Type a question for our speakers



Raise your hand to ask a question during the Q&A



We are recording the session to feed into the project. Slides will be available after the session



# Agenda

	Session title	Speaker
2:00- 2:10	Welcome & introduction to Ecuity	Sam Crichton & Ilias Vazaios (Ecuity)
2:10 – 2:20	Overview of the challenge	Rory Mathews (Ecuity)
2:20 – 2:30	What other associations are doing to tackle the challenge	Ellie Burkill (Ecuity)
2:30 – 2:40	FDF's work on net zero and decarbonisation to date	Emma Piercy (FDF)
2:40 – 2:45	Rational behind project & objectives	Emma Piercy (FDF)
2:45 – 2:55	How to get involved and shape the vision	Sam Crichton (Ecuity)
2:55 – 3:00	Questions & Answer	Sam Crichton (Ecuity)



# About Us

An award-winning team of communication specialists dedicated to connecting stakeholders in the energy and built environment sector with key issues driving change in the energy system.

Experts in bringing business and government together in a way that makes policy work. We have helped over 250 organisations develop their strategy and engage with the energy & environmental debate.

With a shared drive for sustainable energy, policy making and outstanding customer service, we are proud to deliver success.



# About Us

**250**

**Commercial Partners**

**16**

**Sectors and Sub-Sectors**

**50**

**Regulatory Frameworks**



## **Energy in Buildings**

The built environment plays a pivotal role in our lives and our economy.



## **Future of Mobility**

The desire for more sustainable mobility has given rise to alternative transportation fuels.



## **Energy System Transition**

Innovative smart technologies, control systems and low-carbon solutions are being integrated.



## **Environment**

Supporting the global commitment on climate change, we advocate sustainable solutions.

# Evidence Based Influence

Policy is formed via collaboration between the political world and a wide range of stakeholders. It is important to have your voice heard.

We help organisations identify key decision makers, supporters and alternative perspectives, maximising the impact of influencing activities. We encourage and support collaboration between organisations to build consensus and strengthen the case for change.

Persuasive ideas need to be backed up by evidence before they can become reality. Economic Analysis is invaluable in providing context and credibility to arguments and recommendations.



# Experience and Partners

Low Emission Vehicles

Air Quality

Domestic Heating

Commercial Heating & Ventilation

Energy efficiency

Smart Electricity Systems, IOT and Smart Homes

Retail energy supply

Off-grid energy

Renewable Generation

Hydrogen

Energy Storage

Product and Installation Standards

## Innovation



Johnson Matthey



## Trade Associations



## Fuel Supply and Networks



SHV ENERGY



CALOR



## Public Sector



Department for  
Business, Energy  
& Industrial Strategy



Innovate UK



## Utilities & Financial Services



# Overview of the challenge



# The Net Zero Target

- In June 2019, parliament passed legislation requiring the government to reduce the UK's emissions of greenhouse gases (GHGs) to 'net zero' by 2050.
- The 'net' target recognises the fact that there will be some emissions in harder-to-decarbonise areas and that these will need to be offset through carbon removals.
- There are two ways to reach net zero, which work in tandem:
  1. Reducing existing emissions
  2. Actively removing GHGs
- The CCC report published the month before this date advised the government on how this target should be achieved.

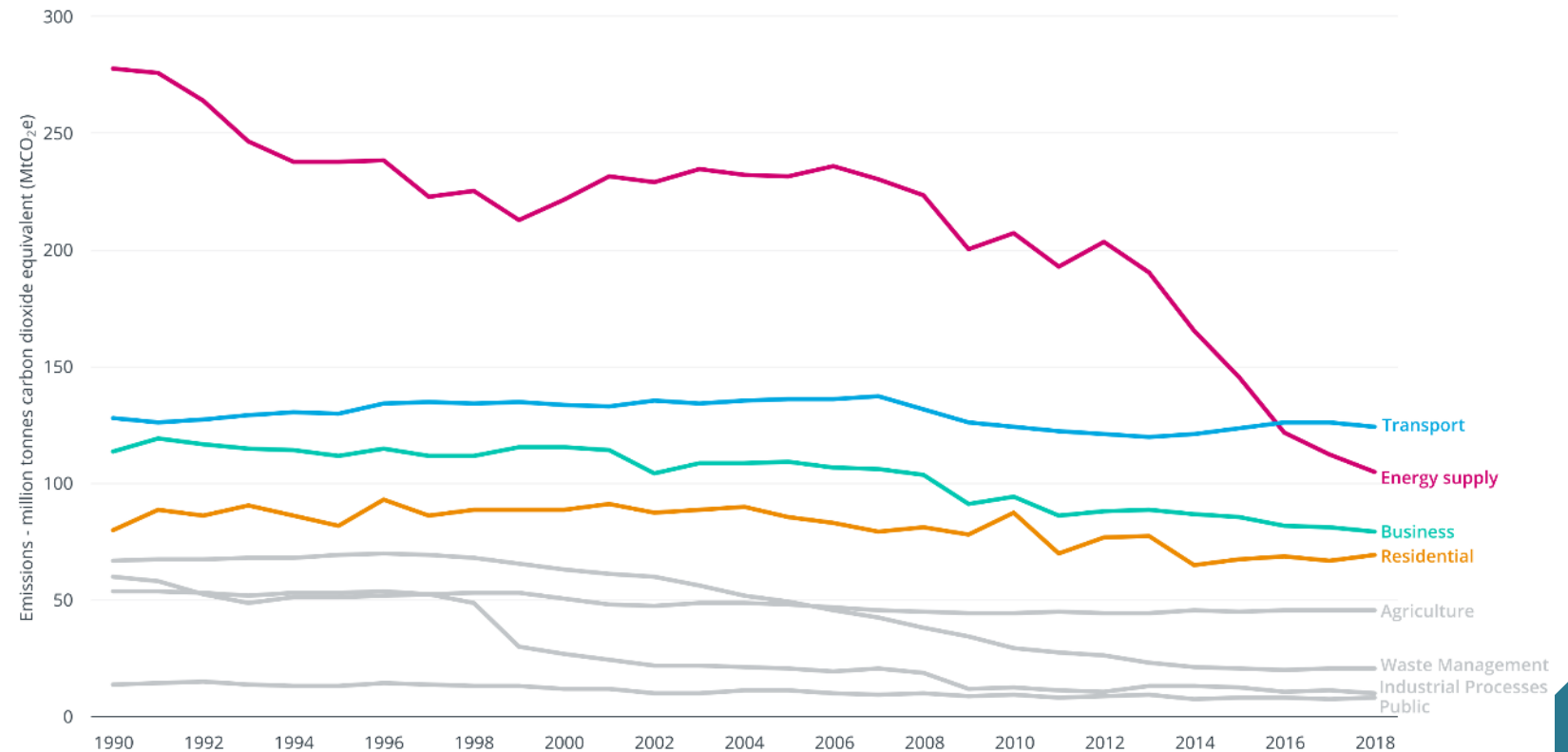


# Where do things currently stand?

- Considerable progress made thanks largely to the increase in renewable electricity generation
- Harder-to-decarbonise sectors largely flat and attention is now firmly focused on these areas of the economy

UK - Emissions by sector, 1990-2018

IfG

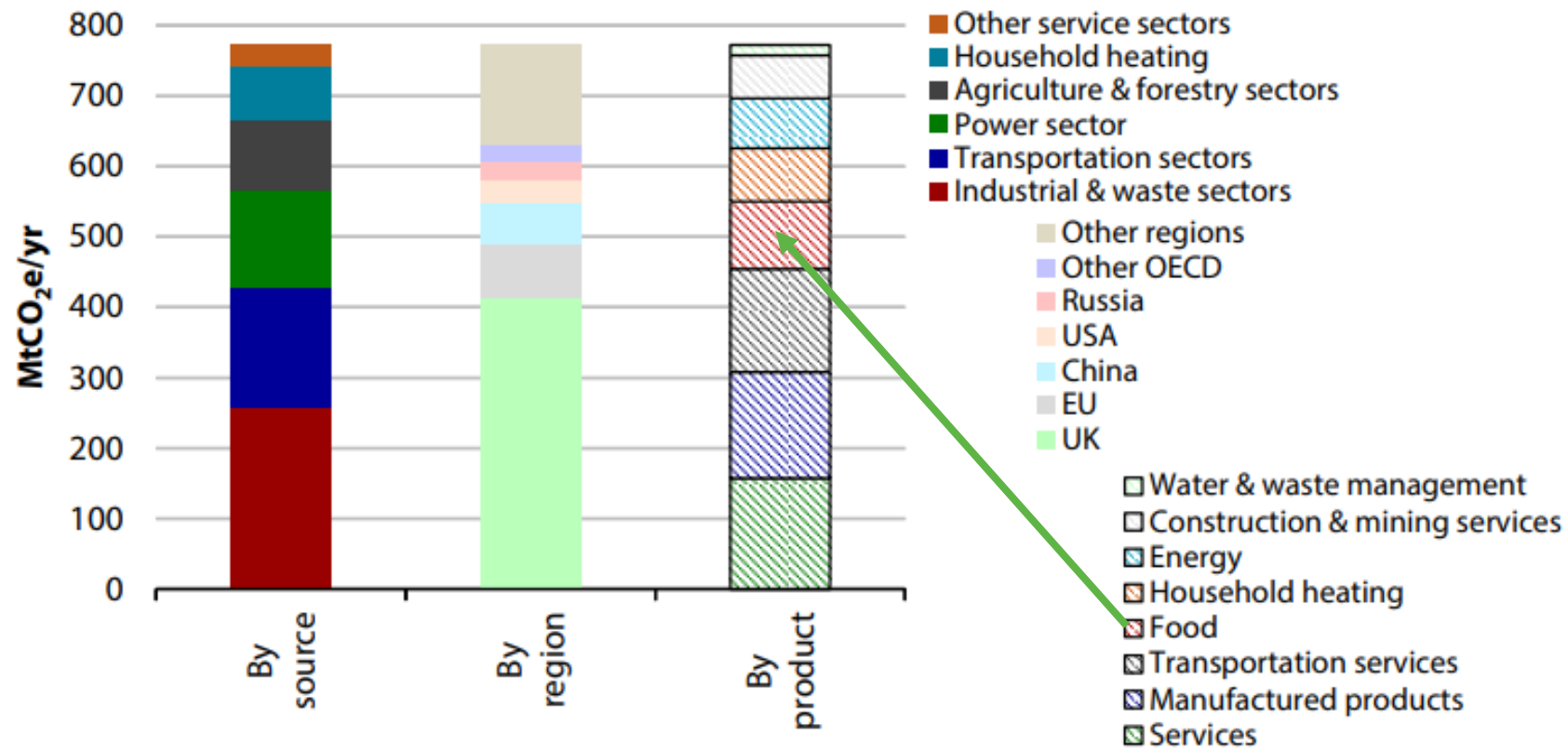


Source: Institute for Government analysis of: *Final UK greenhouse gas emissions national statistics*, BEIS, February 2020

Note: Net negative emissions from LULUCF not shown.

# Where do things currently stand?

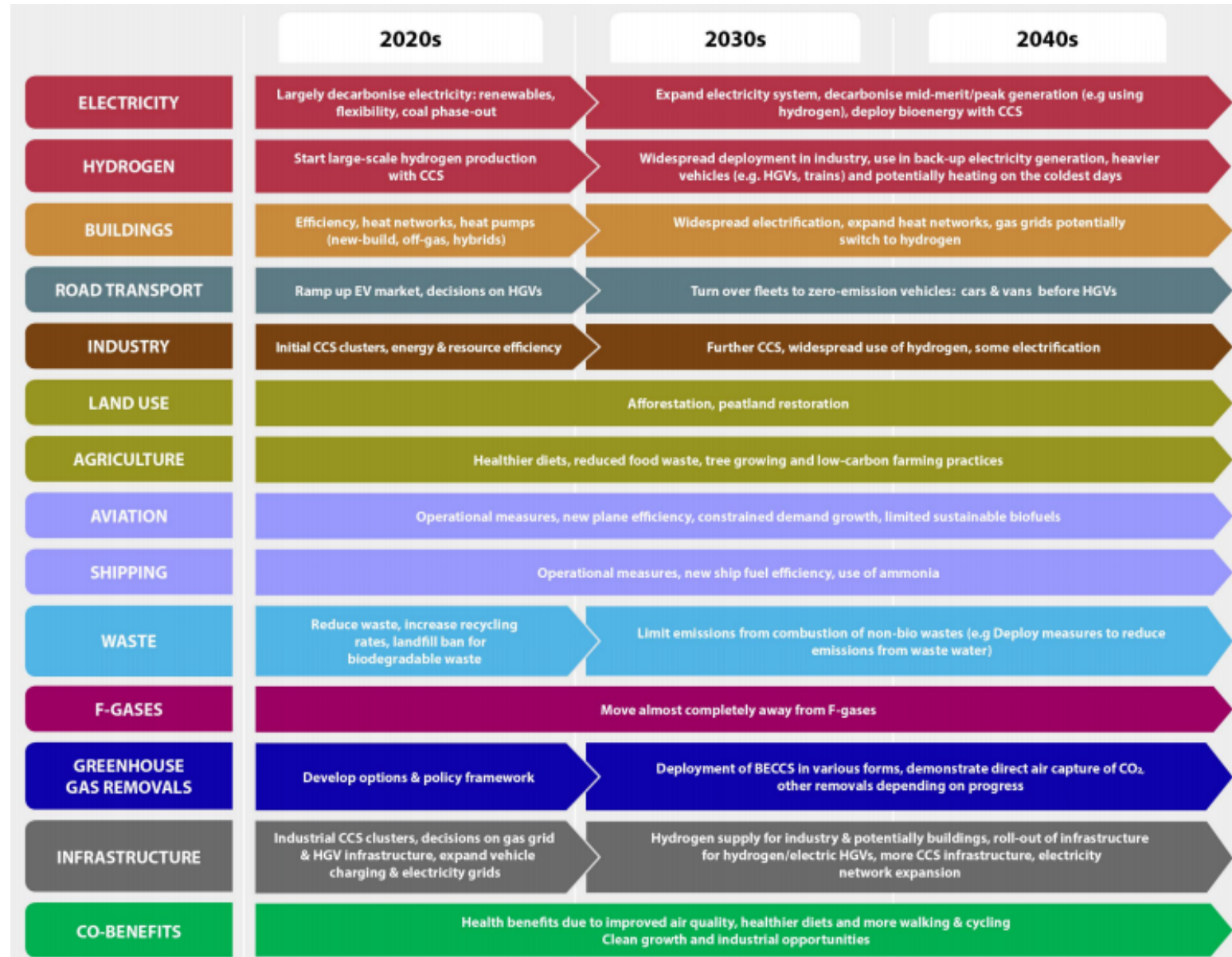
**Figure 2.6.** Decomposition of the UK's consumption emissions footprint in 2017



**Source:** Defra (2019) *The UK's carbon footprint*; CCC analysis.

# What changes are needed to reach net zero?

- Widespread and far-reaching changes are needed to reach the target
- According to the CCC, these changes are largely feasible “because the technologies and approaches that will deliver net-zero are now understood”



# Where do things stand in the food and drink sector?

- The Food & Drink sector is a key consideration for the decarbonisation of industry (see Table).
- As identified in FDF's heat decarbonisation report, the various uses of heat across the industry account for around 37% of these emissions.
- The types of foods being consumed have also increased recently in the national psyche in regards to the association of emissions.

SECTOR	TOTAL ANNUAL CARBON EMISSIONS 2012 (MILLION TONNES CO <sub>2</sub> )
Iron and Steel <sup>1</sup>	22.8
Chemicals	18.4
Oil Refining	16.3
<b>Food and Drink</b>	<b>9.5</b>
Cement <sup>2</sup>	7.5
Pulp and Paper	3.3
Glass	2.2
Ceramic	1.3

Table 1: Energy-intensive industry total direct and indirect carbon emissions in 2012 (data sources include CCA data, EU ETS and NAEI)

# What are the advised changes for the food and drink sector?

- The CCC net zero report advises a few key changes that will likely have implications focusing on the food and drink sector:
1. Indirect heating (e.g. steam use) to switch to solid biomass boilers, hydrogen boilers, electric boilers and heat pumps in limited applications
  2. Reducing food waste in households, food services and hospitality sectors
  3. Eating less carbon intensive foods
- For companies operating within the food and drink sector, this will likely mean a focus on fuel switching, electrification where possible and the adoption of low carbon gasses, such as hydrogen, as they emerge.

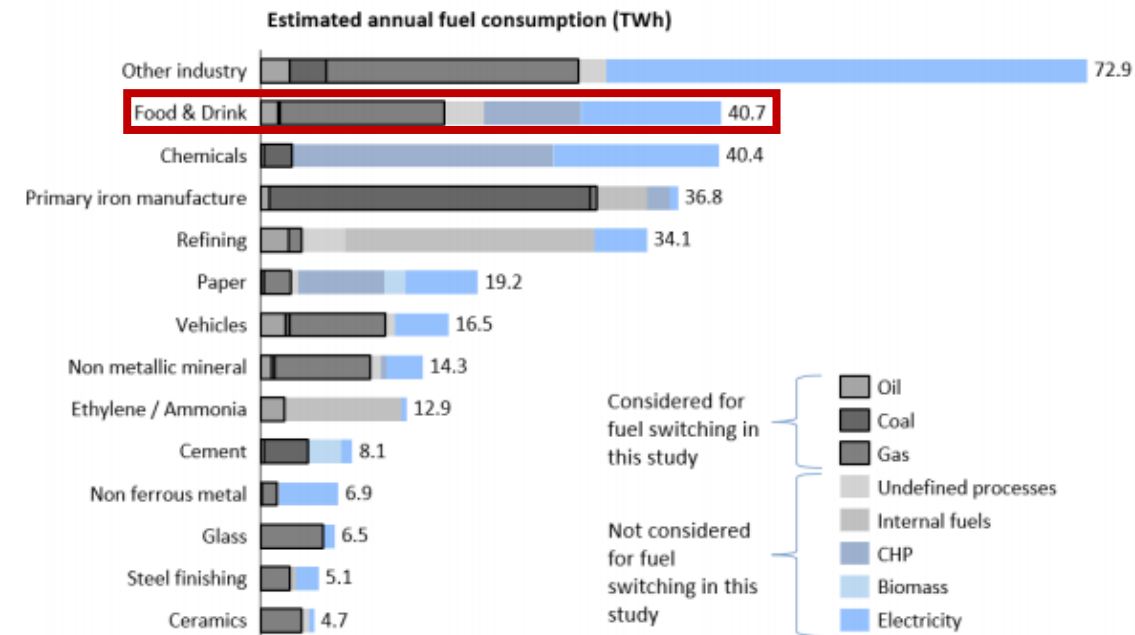


Figure 6: Baseline annual fuel consumption and suitable demand for fuel switching

Source: [Element Energy](#)

# Concluding thoughts

- The net zero target will bring about widescale and far reaching changes for the whole of the economy and will likely require a fundamental shift in many of our current behaviours.
- There is growing recognition and acknowledgement across the population of the need and acceptability for change.
- This is no different for the food and drink sector, which as such a large industry, has a big role to play.
- Outside of consumer behaviour changes, food and drink companies will likely need to take a focus on fuel switching, particularly for the process heating and cooling that is essential to so many of the products across the industry.



What other associations are doing to tackle the challenge



# Food and Drink Sector: Farm to Fork

1

**National  
Farmers Union**



3

**British Retail  
Consortium**



2

**Cold Chain  
Federation**



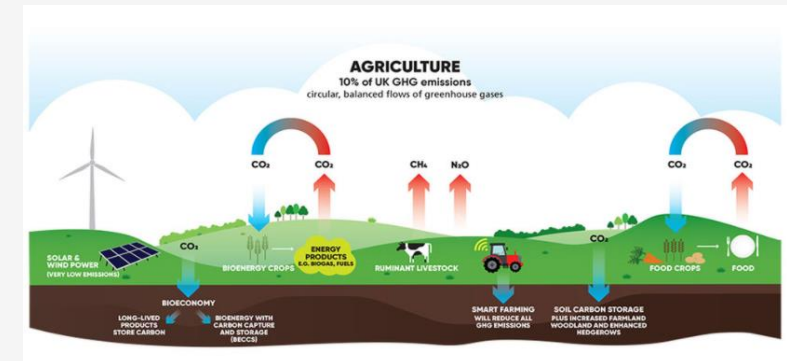
# National Farmers Union

## Net Zero 2040 Ambition

Net zero emissions across the agricultural sector by 2040.

### 3 Pillars of Action

1. Boosting Productivity and Reducing Emissions
2. Farmland Carbon Storage
3. Coupling Bioenergy, to Carbon Capture, Utilisation and Storage.



[NFU. 2019. Achieving Net Zero - Meeting the Climate Change Challenge.](#)  
[NFU. 2020. 26 Ways Farmers are Doing Their Bit for Net Zero.](#)  
[NFU. 2020. Doing Our Bit for Net Zero.](#)



# Cold Chain Federation

## Cold Chain Federation CCA

### Net Zero Project

- Launched as part of the 'Cold Chain Live' virtual event.
- First of a series of reports released to commence the project.



# British Retail Consortium

“Climate change remains one of the biggest threats to the planet...The expectations of society are shifting rapidly. Greater action from businesses is expected. Retail will lead the way.”

**Peter Andrews**  
**Head of Sustainability Policy at the British Retail Consortium.**

## **Climate Action Roadmap Declaration.**

The BRC led a declaration and on-boarded 20 of its members to commit to collaborate, in order to accelerate progress to net-zero within the industry.

**Roadmap Launch: November 2020**



[BRC. 2020. Retailers Collaborate to Combat Climate Change.](#)



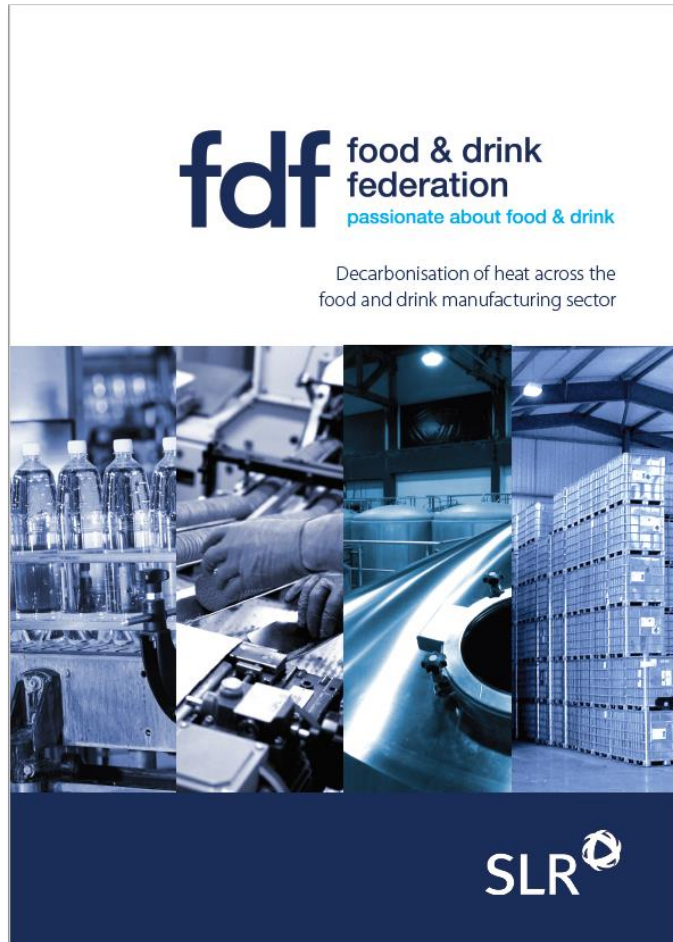
# Final Thoughts

1. Associations are able to initiate collaboration, which is an incredibly important part of the transition to net-zero.
2. Associations have the opportunity to engage stakeholders both within and outside of the industry in the net-zero transition.
3. A range of initiatives are possible, including events, reports, declarations and working groups.



FDF's work on net zero and decarbonisation to date

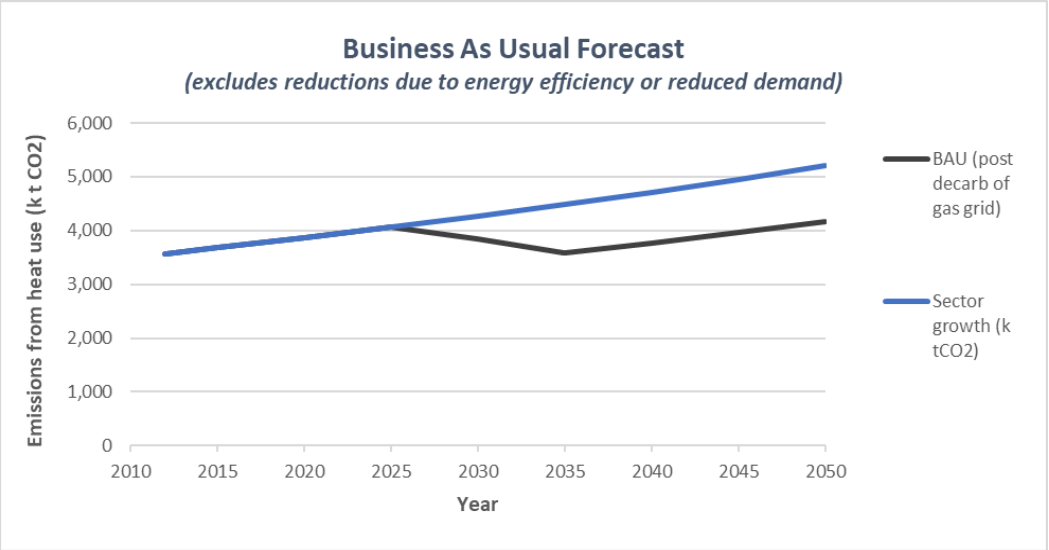
- Industrial Energy Transformation Fund
- Climate Change Agreements – extension & future scheme
- From 1<sup>st</sup> Jan 2021: UKETS / carbon emissions tax?
- FDF/SLR heat decarbonisation report
- Ambition 2025 – mid-term review



- FDF / SLR report on decarbonising heat, published 10<sup>th</sup> June 2020
- [Press Release](#)
- [Final report](#)



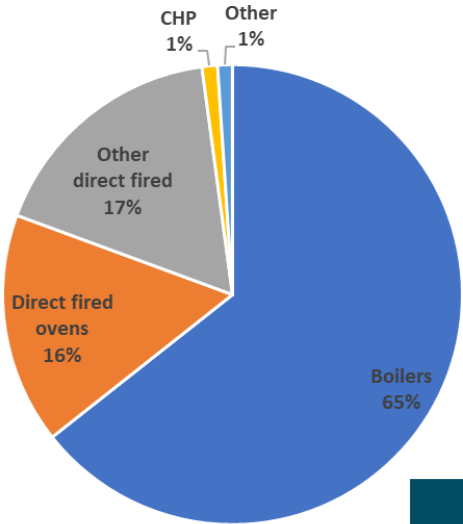
# Business as Usual



A business as usual (BAU) emissions trajectory based on 2012 to 2050 has been established to understand what the emissions from heat are likely to be under normal circumstances. 97% of these emissions come from natural gas.

We have focussed on the emissions from FDF members in the EU Emissions Trading Scheme and all the emissions in the FDF’s food and drink manufacturing Climate Change Agreement (CCA): the ‘FDF sub-sector’.

# Options to decarbonise heat



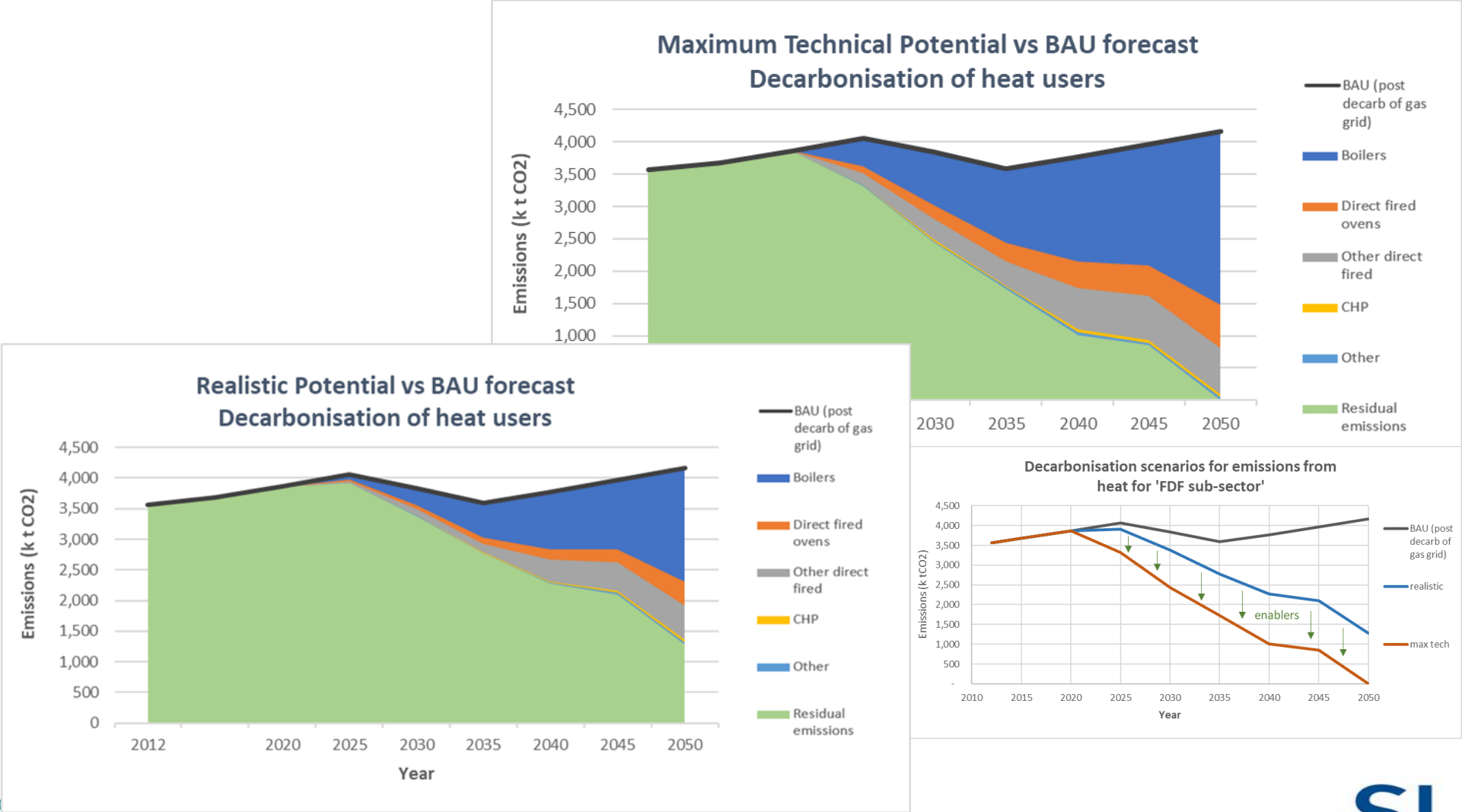
Research undertaken by FDF in 2012 and 2020 identified the equipment and processes that generate and use heat across the ‘FDF sub-sector’.

Boilers and direct fired ovens use over 80% of the energy used to provide heat to the manufacturing processes.

There are a number of technological options for decarbonising heat use from direct and indirect fired users.

	2020	2025	2030	2035	2040	2045	2050
Boilers	Low carbon fuels: renewables. Electrification (boilers or indirect heat users)			Low carbon fuels for boilers: fully decarbonised gas, hydrogen, renewables. Electrification (boilers or indirect heat users)			
Direct fired ovens	Electrification		Renewables, Electrification	Low carbon fuels: fully decarbonised gas, hydrogen, renewables. Electrification			
Other direct fired	Electrification		Renewables, Electrification	Low carbon fuels: fully decarbonised gas, hydrogen, renewables. Electrification			
CHP	Renewables, Electrification (indirect heat users)			Low carbon fuels: fully decarbonised gas, hydrogen, renewables.			
Other	Electrification		Renewables, Electrification	Low carbon fuels: fully decarbonised gas, hydrogen, renewables. Electrification			

# Barriers and Enablers .....



- IDRIC (Industrial Decarbonisation Research and Innovation Centre) and the Industrial Clusters
- Supporting bids for university funding on decarbonising heat in food and drink manufacturing, and on decarbonising the cold chain
- WRAP / Courtauld & supply chain emissions



- Energy White Paper (Autumn 2020)
- Heat and Buildings Strategy (Autumn 2020)
- Interim HM Treasury report on costs of meeting net zero (Autumn 2020)
- Climate Change Committee report on sectoral decarbonisation pathways (December 9<sup>th</sup> 2020)
- Industrial Decarbonisation Strategy (Spring 2021)
- HM Treasury report on costs of meeting net zero (Spring 2021)
- National Food Strategy part 2 (Spring 2021) – to build on (in part) on the CCC's land use and net zero report from Jan 2020?

Rational behind project & objectives

# Next steps ....

- Momentum of government consultations and strategies relating to decarbonisation is increasing
- A green recovery post Covid-19
- Energy costs & costs of carbon – with impacts across the supply chain
- FDF is one of the delivery partners for BEIS SME engagement strategy on net zero for Agriculture, Food and Drink
- COP 26 – role for food and drink sector

 Need for holistic FDF narrative on net zero!

- How do we support our members / influence and respond to these forthcoming publications?
- How can we help the sector prepare? What does a supportive policy framework look like?
- What are the wider implications of net zero?
- Carbon costs will be embedded in supply chain for all inputs – as well as onsite emissions – impacts on competitiveness
- Need for a holistic overview / understanding



- What net zero means to food and drink manufacturing (scope 1, 2 and 3 emissions)
- A baseline view of where the sector is on targets
- Measures to reduce onsite emissions
- Views on policy / regulatory landscape to reduce onsite emissions to net zero → policy asks
- Scope 3 / supply chain emission work to be developed at FDF post Ecuity project

How to get involved and shape the vision

# Project timeline

October

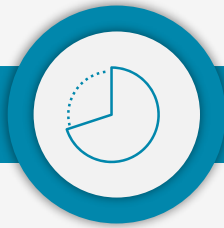
November

December



**Have your say**

- Complete our survey



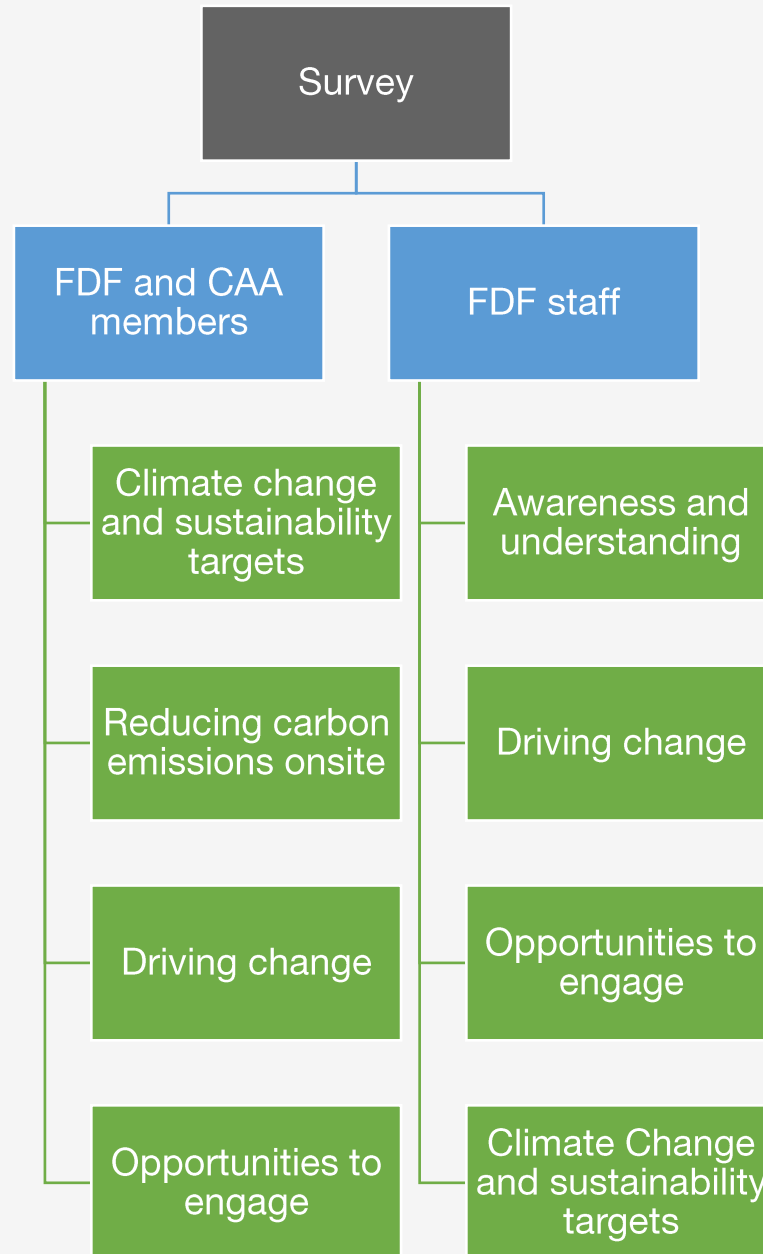
**Analysing results and verifying feedback to support the development of a vision based on the evidence and commentary you provide.**



**Summary report and strategy completed and presented to FDF**

**Webinar to present findings and vision**



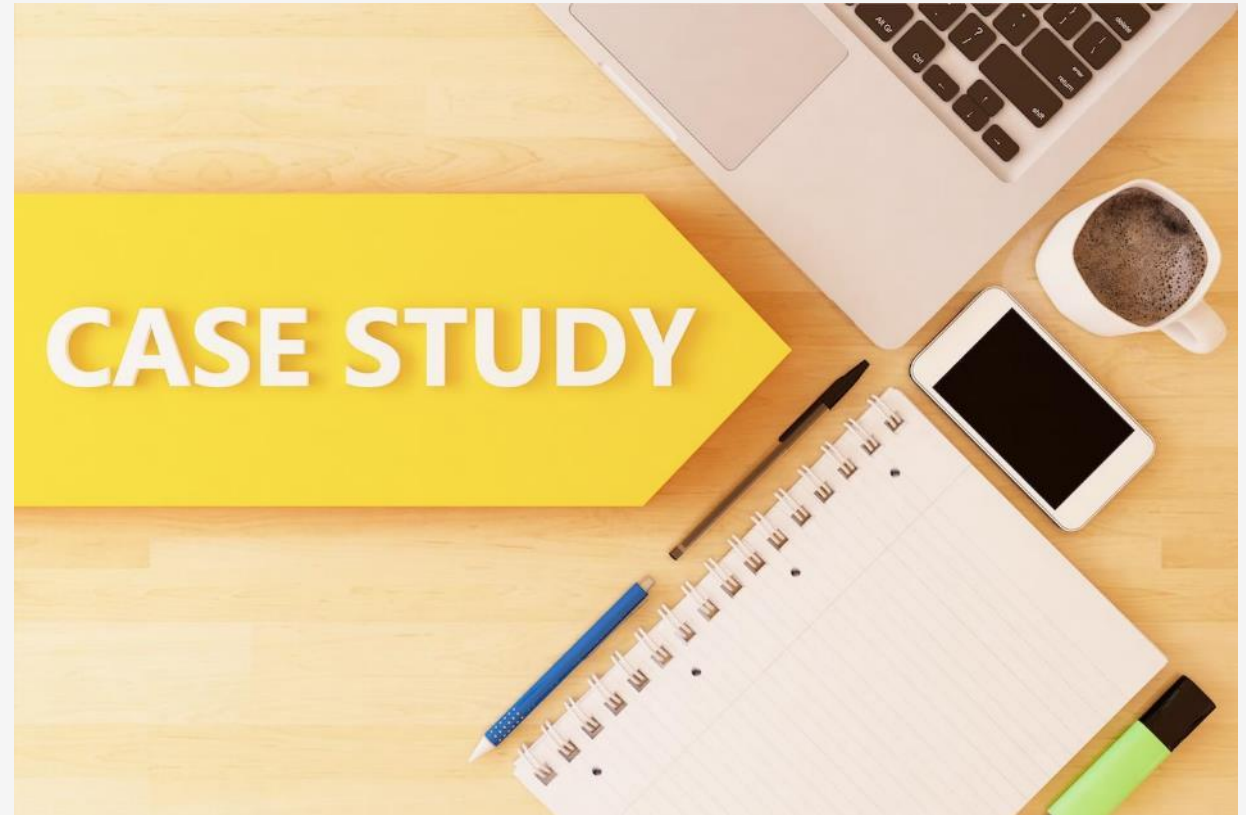


# Share case studies / evidence with us

It is important for FDF to understand better the impact of the green transition, relevant risks/opportunities and develop a position grounded on evidence-based asks.

Your responses to the survey / interviews will help provide that evidence base but could you share more?

We would like to include specific examples of decarbonization activities, low carbon strategies or projects in our summary report so please do share these.



# Check your emails for your invitation

Complete our short survey - it should take you around 10 minutes

Share additional supporting evidence or thoughts via email or through the survey

Contact me at:

[Samantha.Crichton@ecuity.com](mailto:Samantha.Crichton@ecuity.com)  
Subject: FDF Net Zero



Any Questions?

