



Climate emergencies and net zero:

Turning aspirations into reality

26 April 2022

Who we are & what we do

Fathom is an independent research consultancy based in London and Washington DC, established in 2003

Our clients include UK and overseas government departments, local government, pension schemes and other asset managers

Focusing on the links between the macro economy, financial markets and geopolitics, we provide:

- In-depth research
- Bespoke consultancy projects
- Services tailored to local authorities
- Macroeconomic, climate and financial markets training
- Climate-related services including:
 - Net zero strategy
 - Transition pathways
 - Climate risk data



Brian Davidson
Head of Climate Economics

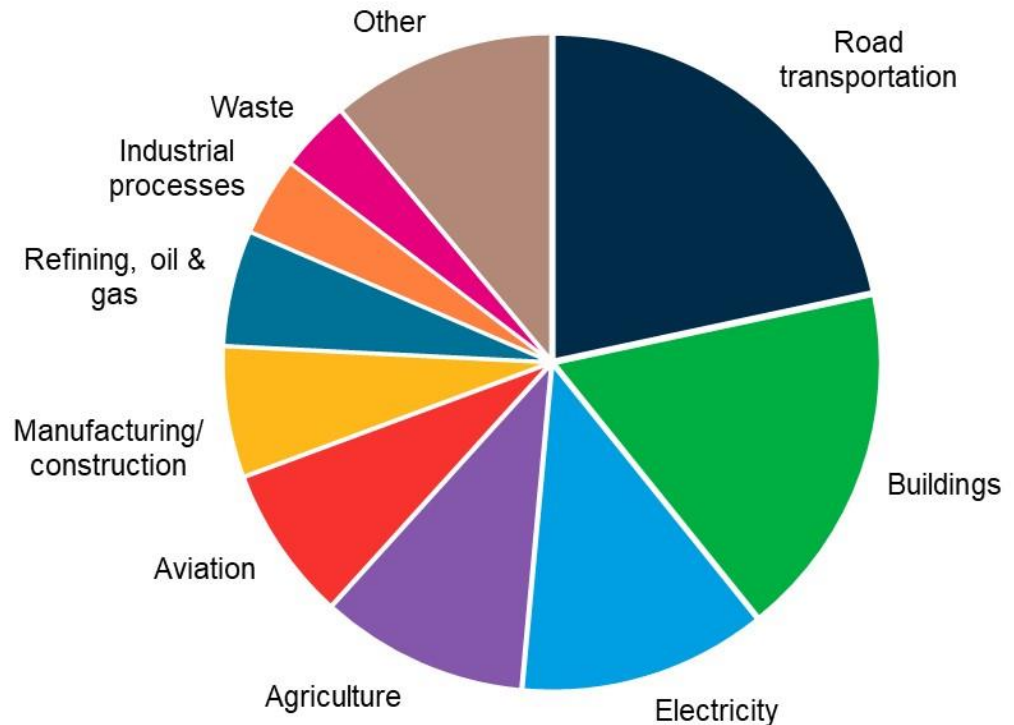
Climate emergencies and net zero

Turning aspirations into reality

- Climate emergency declared ✓
- Net zero target set ✓
- Now what?
- The little things (like cutting out plastic straws or re-introducing beavers) are important, but cutting GHG emissions is key to addressing the climate emergency
- How to do that in the most efficient, cost-effective and politically acceptable way?
- Tackling climate change is often seen as a cost, but doing so creates opportunities (for businesses, investors and taxpayers – creating jobs, reducing costs, etc.)

UK GHG emission breakdown, 2019

Share of total, per cent



Source: Fathom Consulting

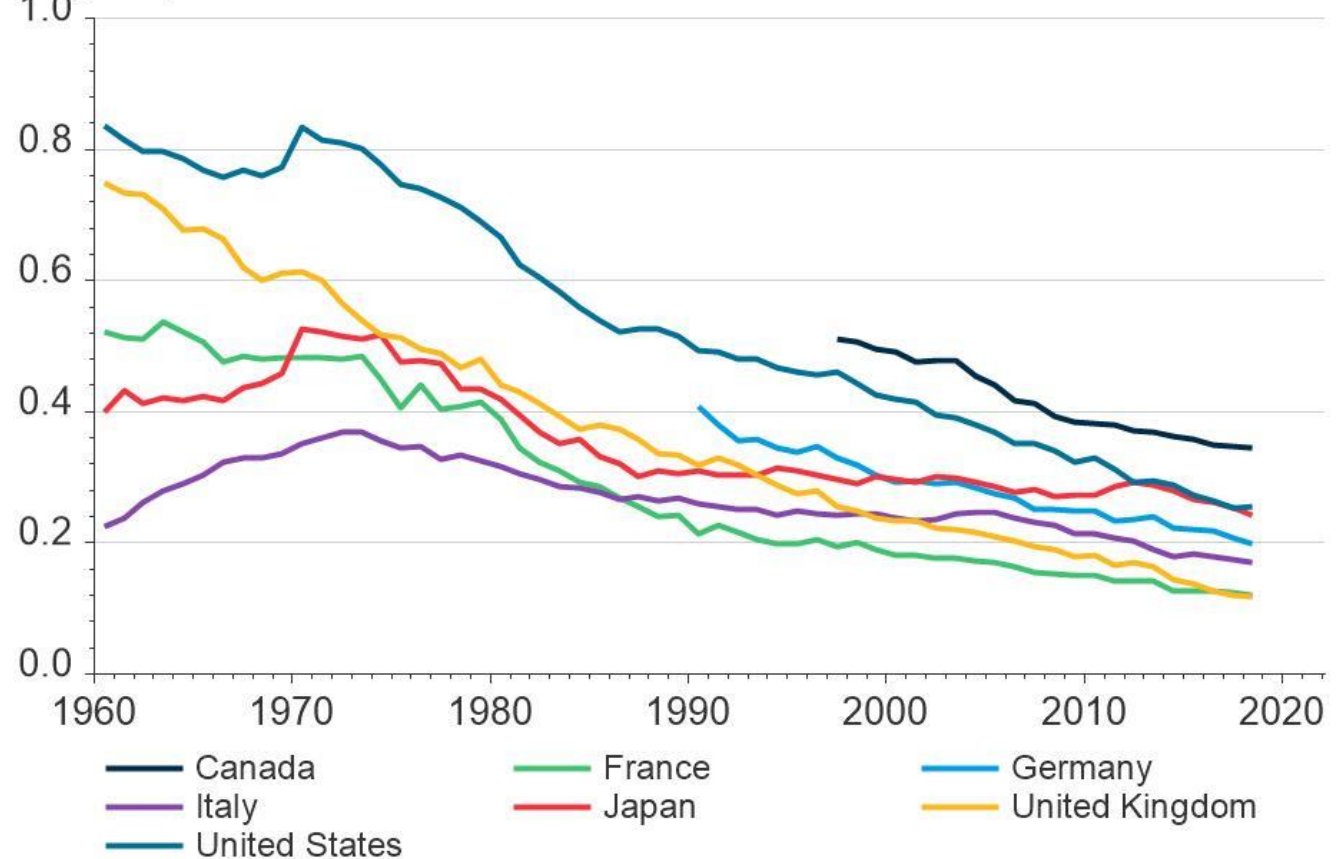
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The UK: so far so good, but...

- The UK is a climate leader and the shift to renewable electricity has been key to achieving this
- Further emissions cuts will be harder, but some low-hanging fruit still remain
- Most GHG-emitting processes can be electrified and most of that electricity could come from renewable sources
- While some of the solutions are simple, they are not always obvious; they get (a lot) more complicated in those hard-to-abate sectors
- Understanding where emissions come from, where they need to go, and the options for getting there are key (and poorly understood)

G7 CO2 emission intensity of GDP

Kilogram per 2010 USD of GDP



Source: Refinitiv Datastream / Fathom Consulting

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Cutting emissions 101

- Our data and tools help us solve these problems in a systematic way
- Transition pathways consider the relative difficulty of decarbonising different economic activities
- We use this to help clients:
 - Allocate their carbon budget
 - Set emission reduction targets
 - Engage with business community
 - Design policy to support transition
 - Maximise efficiency
- Net zero will not be possible without suitable infrastructure – public money should be used to support this

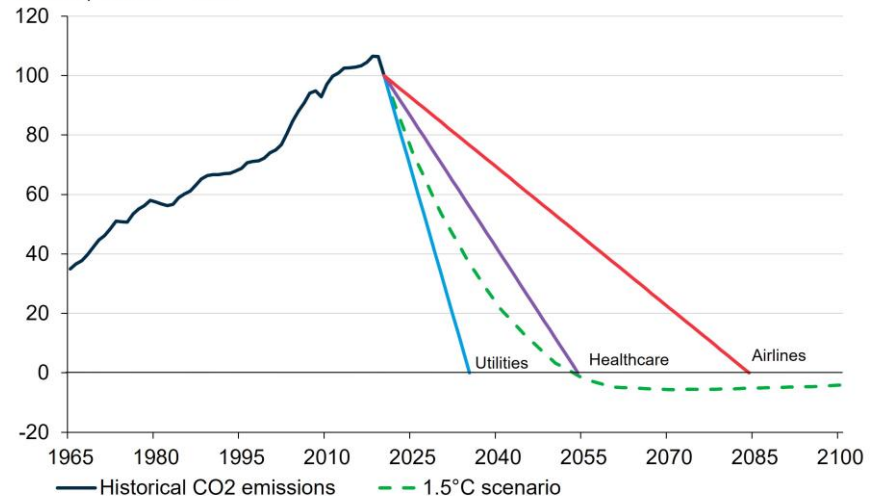
UK GHG breakdown and reduction potential						
Economic activity	Per cent of total, 2019	Cost of low emission alternatives	Level of technology	Carbon capture potential	Recent trends	Overall emission reduction potential
Electricity/heat	21.5	Blue	Blue	Light Blue	White	Blue
Road transportation	21.8	Blue	Blue	Red	Red	Blue
Aviation	7.6	Red	Light Blue	Red	Red	Red
Navigation & other	3.5	Light Blue	Light Blue	Light Blue	White	Light Blue
Manufacturing/construction	6.5	White	Red	Light Blue	Blue	Light Blue
Agriculture	10.2	Light Blue	Light Blue	Red	Light Blue	Light Blue
Industrial processes	3.9	Light Blue	White	Light Blue	Red	White
Buildings	17.6	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Fugitive emissions	1.5	Light Blue	Blue	Red	Light Blue	Light Blue
Waste	3.5	Light Blue	Red	Red	Light Blue	Light Blue
Other fuel combustion	2.3	White	White	Light Blue	Light Blue	White

Easy and/or cheap  Difficult and/or expensive

Source: IPCC / Fathom Consulting

CO2 emission paths, 1.5°C scenario

Index, 2020 = 100



Source: NGFS / BP / Fathom Consulting

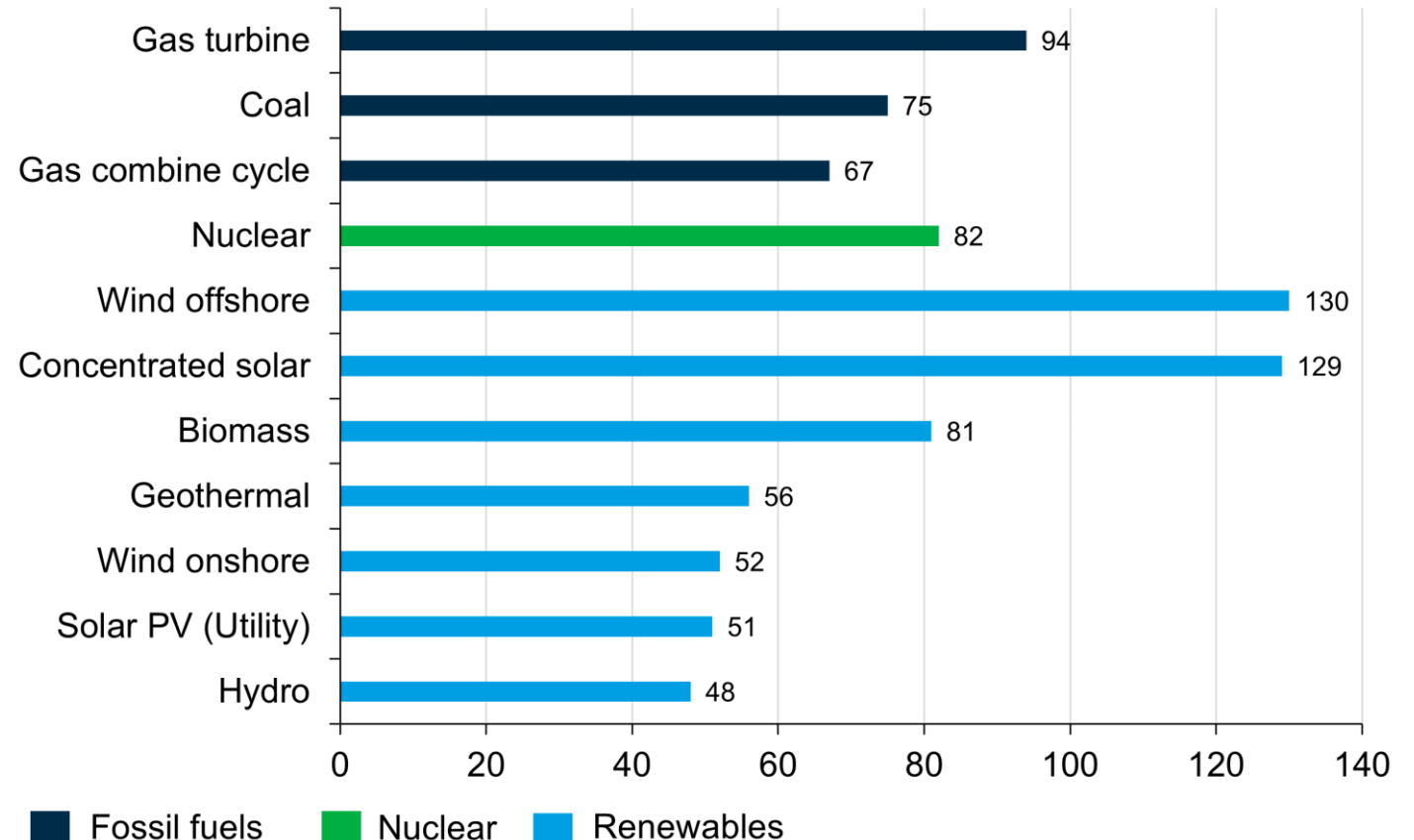
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How much does climate transition cost?

- Costs are falling and tech is advancing
- But challenges remain:
 - Electricity storage
 - Charging/fueling infrastructure
 - Aviation & shipping
 - Managing hydrogen
 - Protecting low-income households
- Public money can also be used to solve these problems (e.g. by supporting demand and investment) and clean up its own footprint
- Bringing further benefits for leaders:
 - Creating more, better-paying jobs
 - Bringing down costs
 - Improving health outcomes
 - Avoiding worst climate impacts
 - Showing leadership
 - Spillovers from advanced R&D

Levelised cost of energy

Median values, USD per megawatt hour, 2020



Source: World Bank / Fathom Consulting

Climate emergencies and net zero

Our services – tailored for local government

Training

- Successfully navigating the transition requires knowledge and training (required by regulators)
- We offer bespoke training solutions for treasurers, elected members and other stakeholders

Training with research

- Our *Training with research* package includes access to Fathom's world-leading climate research

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9 November 2021

Brian Davidson, CFA



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12 January 2022

Kevin Loane
Charts editor



Andrea Zazzarelli



ALLOCATING THE
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HOW TO SPOT
A COP-OUT
AT COP26

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what will it take?

8 October 2021

Helena Gough



The bumpy road to climate transition

10 September 2021

Brian Davidson, CFA



WINNERS
AND LOSERS
FROM COP26

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Our services – tailored for local government

Benefits:

- Save money on fuel/energy
- Consider risks and opportunities (and the effect on public finances)
- Pick low-hanging fruit
- Cut emissions fast
- Show leadership on climate
- Protect and create jobs
- Avoid costly tax hikes
- Avoid lawsuits
- Comply with regulations

Training

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Net zero strategy

- We can help you create, implement and manage your net zero strategy

Bespoke projects

- Advice on new and future regulation (TCFD and others)
- Managing risk
- Spotting investment opportunities



Any questions?

Brian Davidson, CFA brian.davidson@fathom-consulting.com

First principles

Change in society = *Change in your sector's response*

New priorities - *Old problems.*

Good Governance - If you change things, do it properly.

- *Code Guidance*
- *Training (member and officer)*
- *Independent Expert Advice*

Rebalance the balance sheet!

- *Make it work!*
- *Deliver against expectations.*

RP Martin rebalancing

- The growth of Green, Social and Sustainability Bonds - Sub PWLB borrowing.
 - *Issuance doubled in a year as investor appetite targets the sector.*
- Implement revisions to the Prudential and Treasury Management Codes.
 - *Prioritising Training and referencing ESG in investment plans.*
- Investments – Focus on Carbon reduction.
 - *Solar – Hydrogen – Anaerobic Digestion*
- Investments – Regeneration. Adult/Child Services.
 - *Retrofit Housing – Care – Homelessness*
- IFRS 9 – Risk Management (mark-to-market).
 - *Statutory override expires 31st March 2023*

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