AG NET ZERO

THE NET ZERO STRATEGY

What's new & what's our verdict?

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MORE IMAGINATION MORE IMPACT

INTRODUCTION

The Net Zero Strategy sets out ambitious goals for reducing UK emissions from power, industry, heat and buildings, transport and waste. But it's not clear how all this will be funded.

WHAT'S NEW & WHAT'S OUR VERDICT?

On 19 October 2021 the UK Government published a raft of documents. The most important was a Net Zero Strategy.

This serves two purposes:

1. Setting out how the UK intends to meet its commitment under the Climate Change Act 2008 to reduce emissions to 'net zero' by 2050.

2. Meeting its Paris Agreement commitment to communicate its long term low greenhouse gas emission development strategy ahead of COP26, setting an example to other nations.

The Net Zero Strategy builds on last year's Ten Point Plan for a Green Industrial Revolution and the various strategies promised in that and published since: Industrial Decarbonisation, Bus Strategy, Transport Decarbonisation Plan, Hydrogen Strategy, and finally the Heat and Buildings Strategy, published alongside the Net Zero Strategy.

RESOURCES

- The Net Zero Strategy
- The Paris Agreement
- Ten Point Plan for a Green Industrial Revolution
- Industrial Decarbonisation Strategy
- Bus Strategy
- Transport Decarbonisation Plan
- Hydrogen Strategy
- Heat and Buildings Strategy

TARGETS

The Net Zero Strategy contains some eye-catching targets and ambitions, which the Committee on Climate Change (CCC) has praised in its independent assessment of the strategy.

POWER

2035

All electricity to come from low carbon sources

INDUSTRY

2030

6 $MtCO_2$ per year of industrial CCUS

2035

9 $MtCO_2$ per year of industrial CCUS

GREENHOUSE GAS REMOVALS

2030

At least 5 $MtCO_2$ per year of engineered removals.

WASTE

2028

Near elimination of biodegradable municipal waste to landfill

2030

Halve food waste

FUEL SUPPLY AND HYDROGEN

2023

Decide whether to blend 20% hydrogen into GB gas network

2025

Offshore oil and gas sector 10% absolute reduction in production emissions

2027

25% reduction in offshore oil and gas sector production emissions

2030

50% reduction in offshore oil and gas sector production emissions

2030

5GW of low carbon hydrogen production capacity

2050

100% reduction in offshore oil and gas sector production emissions

HEAT AND BUILDINGS

2027

Reduce direct emissions from public sector buildings by 75% compared to 2017

2028

600,000 heat pumps per year

2030

fuel poor homes to reach EPC Band C

2035

All homes to reach EPC Band C

TRANSPORT

2024

Zero emission mandate introduced on manufacturers' new car and van sales

2030

Aim for half of all journeys in towns and cities to be cycled or walked

2035

100% of new cars and vans sold are zero emission

2040

(Subject to consultation) All new road vehicles sold are zero emission

These targets broadly align with the CCC's suggestions. If they can be met, then the UK is on track to meet net zero by 2050.

ZERO CARBON IS KING

The core of the Strategy is decarbonising the power sector. Decarbonising heat and transport (mainly by switching from fossil fuels to electricity) rests on that. The Strategy contains a pledge, announced a few days earlier, to decarbonise power by 2035 but we don't yet have the detail as to how gas fired power stations will be phased out.

SCENARIOS & WHAT WE KNOW

It's impossible to predict exactly how the UK economy will decarbonise. The Strategy sets out three illustrative scenarios that demonstrate a range of practical ways to deliver net zero with technology and resources known today:

- High electrification – most transport and buildings are electrified, with some green hydrogen being used for industry and transport.

- High resource – this looks at what would happen if hydrogen were used more extensively, particularly blue hydrogen (made from natural gas using carbon capture and storage (CCS) technology).

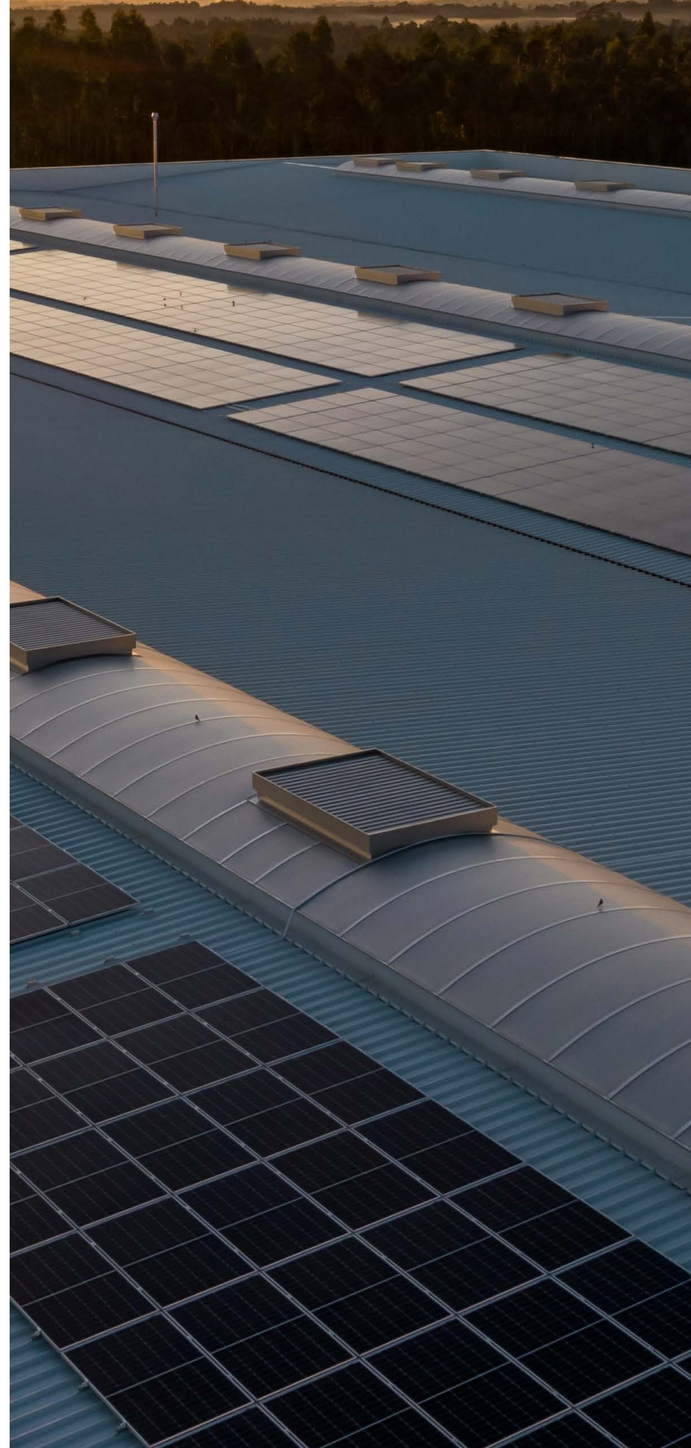
- High innovation – this assumes that hydrogen heats buildings, but relies on significant improvements in aviation, CCS and negative emissions technology, which mean that other sectors don't have to decarbonise as much.

Whilst there will probably be more of an emphasis on green electricity, the reality is that there may be a mix of these scenarious plus others we haven't thought of yet. But what we do know is:

- There needs to be extensive decarbonisation (and energy efficiency improvements) of buildings and transport. Whilst industry demand for electricity and hydrogen may grow significantly, that needs to be very low emission to achieve 2050 targets

- CCS will play a wider role

- Decarbonising heat is key – but will this be through electricity or hydrogen?



ZERO CARBON IS KING

PRINCIPLES

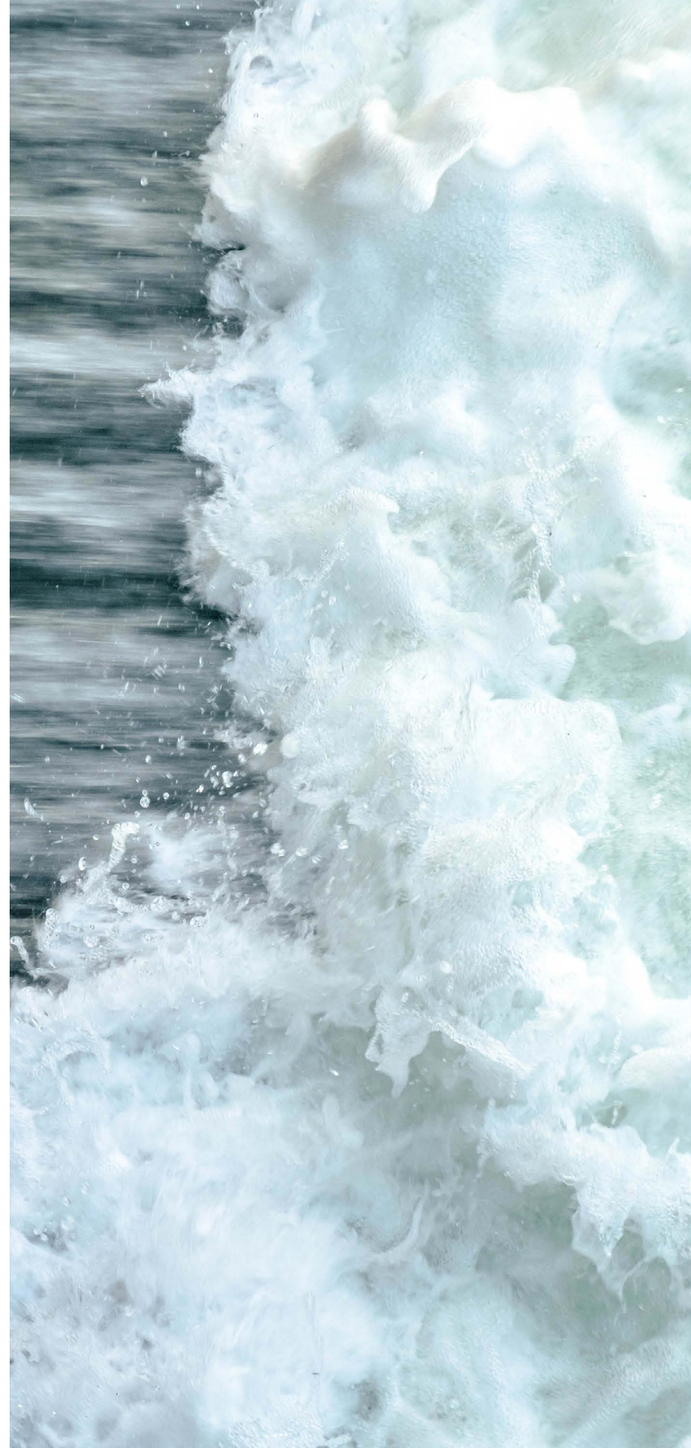
The Strategy is based on four principles, to:

- Work with consumer choice, rather than impose unwelcome requirements.
- Use fair carbon pricing to ensure the biggest polluters pay more for the transition to net zero.
- Protect the most vulnerable through government support, including discounts on energy bills and energy efficiency upgrades.
- Work with businesses to achieve reductions in cost by supporting the newest low carbon technologies.

The first two are particularly interesting. The principle of working with consumer choice chimes with the Transport Decarbonisation Plan, where Grant Shapps the Transport Secretary was at pains to point out that it "*is not about stopping people doing things: it's about doing the same things differently. We will still fly on holiday, but in more efficient aircraft, using sustainable fuel. We will still drive on improved roads, but increasingly in zero emission cars*." In a similar vein, the Strategy says that no one will be required to "*rip out their existing boiler or scrap their current car*", while ensuring that the biggest polluters will pay the most for the transition through fair carbon pricing.

But the Treasury Net Zero Review and the CCC both say that significant changes to how people live their lives is needed. Maybe Government's thinking is that the way to persuade people is through pricing? If a polluting product is more expensive, then we won't buy it. The Strategy mentions moving low carbon levies from electricity to gas bills, which will make gas more expensive than electricity. That might persuade households to take up heat pumps.

The Treasury review states the need to ensure that greenhouse gas emitters face the full cost of their emissions. There needs to be some form of carbon pricing supported by other policies and regulation where necessary. This is something that Professor Dieter Helm advocated in the Helm Review four years ago. Will the Government be brave enough



ZERO CARBON IS KING

to make the UK ETS a true disincentive on carbon emission producers? The Treasury is clear that the cost of inaction is more than the cost of action. What it doesn't say is how the cost of that action will be funded.

THE REVENUE HOLE

There are lots of government funding commitments in the Net Zero Strategy. Very little are new. We have new funding models for nuclear (the RAB), hydrogen and CCUS projects, lots of transport funding and various industry decarbonisation funds. There is a lot of money available for R&D, as the technologies we want to rely on to remove carbon from the atmosphere are not yet fully developed.

But the switch from petrol and diesel to electric transport is going to leave a big hole: fuel duty. The Treasury review recognises this but surprisingly does not suggest how to replace it. That looks like a big policy gap the Government needs to fill.

THE POLICY GAPS

The CCC in their assessment of the Net Zero Strategy looked at the policies and plans for each sector and scored them on how well developed they are. Currently transport and energy are the most developed (see next page):

UK CLIMATE POLICY – STATE OF PLAY

Source: CCC analysis. 1. Includes domestic aviation and shipping. 2. Includes energy from waste. See Annex for further details on the scoring criteria.

WHAT IMPORTANT AREAS REMAIN TO BE RESOLVED?

DOMESTIC TRANSPORT

Implementation (e.g. of ZEV Mandate), clear targets and credible policy to reduce traffic, delivery plans for phase-out of diesel HGV sales and diesel trains.

BUILDINGS

Able to pay energy efficiency funding, standards on owner-occupied homes, funding for heat pumps to allow the market to grow.

INDUSTRY

Electrification, efficiency standards, UK ETS cap, policy for manufacturers not covered by ETS, medium-term carbon leakage approach.

POWER

Strategy for unabated gas phase-out and market design, mechanisms for investment in networks & storage, remove barriers to generation at scale.

AGRICULTURE & LAND USE

Agriculture Strategy, implementation of CAP replacement, ambition for peatlands across the UK. Role of consumers and wide supply chain missing.

OVERALL VERDICT

SO IS THE NET ZERO STRATEGY WORTH THE WAIT?

It reiterates a lot of what's already been said. It does, though, set some ambitious and clear goals and the Government will report on progress each year.

Our verdict: the end goals are clear, the way of reaching them, and how to pay for it all, is still not set in stone and will adapt over time. But the Strategy is ambitious and sets a marker for other countries to follow, as befits the UK's COP26 presidency.

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