

HOW GOVERNMENT AND INVESTORS CAN DELIVER NET ZERO IN THE UK



INTRODUCTION





Climate change is a financially material issue for investors, and many corporates and investors have publicly stated their commitment to the Paris Agreement and called for more ambitious climate policies. As the PRI's [Inevitable Policy Response](#) project has demonstrated, a delay in implementing the policies necessary to transitioning our economy will result in an eventual policy response that is forceful, abrupt and disorderly, undermining the value of investments and challenging the stability of the financial system.

Next year, the UK is due to host COP 26, the most significant climate summit since the Paris Agreement was signed in 2015. This provides a unique opportunity to mobilise domestic policy efforts aimed at decarbonisation. The UK government will need to showcase leadership on climate change and demonstrate to global governments that it can and will deliver on the ambitious decarbonisation target of achieving net zero emissions by 2050. This starts with an enhanced Nationally Determined Contribution (NDC) by the end of 2020 at the very latest.

The role of private finance is central. Investors need to support these wider efforts with the levers at their disposal: capital allocation, stewardship, and policy engagement. The emergence of tools such as the EU Taxonomy should enable investors to make decisions aligned with a net zero trajectory.

The PRI has partnered with Vivid Economics to develop policy pathways to a net zero economy for the UK. Supplementing existing research, notably by the Committee on Climate Change, we have identified four priority areas for action.

FOUR PRIORITY AREAS

 Light vehicle transport Set intermediate EV penetration targets and provide demand-side incentives for uptake	 Zero carbon power Redesigning the electricity market so that it rewards flexibility and incentivises the provision of storage and demand-side response
 Sustainable land use Create a market mechanism (like ETS) to support afforestation designed to support an increase in tree planting to 30,000ha per year	 Energy efficiency improvements Require new buildings to use zero carbon heating and follow highest standards of energy efficiency, while decarbonising existing stock

These areas align with the global framework of policy levers outlined in the Inevitable Policy Response [Policy Forecasts](#), and have been chosen for meeting a combination of the following criteria:

- There has been a lack of progress in the sector to date.
- Current government policies and targets are insufficient or incomplete.
- There are clear, near-term actions related to the sector which are needed today if the UK is to meet its target of net zero emissions by 2050.
- Technology underpinning transition in the sector has moved beyond the speculative stage to the point where it can attract funding from mainstream investors.

A GREEN COVID-19 RECOVERY

The transition to a net zero economy remains imperative as we rebuild from the COVID-19 crisis. Medium-term prospects will be influenced by structural impacts on the economy, behaviour changes, and the recovery measures taken by the government. Yet the long-term goals of climate change policy are unchanged; the challenge is to identify the new risks and opportunities for the transition to net zero.

The PRI supports the Committee on Climate Change's (CCC) [six principles](#) for recovery, namely:

- Use climate investments to support economic recovery and jobs
- Lead a shift towards positive, long-term behaviours
- Tackle the wider 'resilience deficit' on climate change
- Embed fairness as a core principle
- Ensure the recovery does not lock-in greenhouse gas emissions or increased risk
- Strengthen incentives to reduce emissions when considering tax changes

Recent analysis on the economics of a green recovery published by Oxford University identifies policy interventions in all four priority areas – sustainable vehicles, power, land use, and buildings – as having both a high economic multiplier and a high GHG mitigation impact. Any stimulus package which is to be consistent with the UK's net zero commitment should thus focus on these areas in particular.

Below we set out further information on the current situation within each of these sectors, the key policies that are needed to accelerate progress, and how investors can support the transition.



SUSTAINABLE VEHICLES

CURRENT SITUATION

- Road transportation is among the highest emitting sectors in the UK, contributing 25% of the country's total. Greenhouse gas emissions from this sector have fallen just 2% since 1990.
- Some trends are moving in the wrong direction – as the result of a shift towards larger vehicles the average car sold in 2017 and 2018 was less carbon-efficient than in the previous year.
- The market share of electric cars and vans was 2.5% in 2018, a 35% increase over the previous year, but dwarfed by that in Norway (47%) and Sweden (7.5%)

GOVERNMENT POLICIES AND TARGETS

- The government has set out plans to bring forward a ban on selling new petrol, diesel or hybrid cars in the UK to 2035 at the latest (previously 2040). Scotland has made a similar pledge by 2032.
- By 2030, at least 50% of new car sales and up to 40% of new van sales should be “ultra-low emission” (electric, hydrogen and fuel cell electric vehicles).
- By 2050, almost every car and van should be zero emission.
- The government is discussing making “cleaner petrol” with a higher ethanol content (currently in use in Germany and France) the standard grade at British filling stations from 2021.

KEY POLICIES NEEDED

Accelerating uptake of electric vehicles (EVs) to deliver the 2035 sales ban and increase the feasibility of bringing the ban forward closer to 2030 will require government to focus on boosting sales penetration and supporting the development of charging infrastructure.

- **Target vehicle sales:** To ensure the smooth development of the EV sector, the government should amend its Road to Zero strategy to set intermediate EV penetration targets; for example ¼ of new car sales to be zero emissions by 2025.
- **Demand-side incentives:** In the event of an extension of the recent oil price slump, price parity between EVs and traditional vehicles, which is expected from the mid-2020s, may be delayed a few years. Government should employ a combination of grants and subsidies for EVs, including continued support via the Plug-in Car Grant and Zero Road Tax, as well as taxes for traditional vehicles and fuel to ensure consumers are incentivised to opt for EVs as soon as possible.
- **Charging infrastructure:** Charging and refuelling infrastructure will require over £1bn in investment per year to 2030. While most will be privately funded, public funding will be needed for remote and sparsely populated regions. Public support via schemes such as the Electric Vehicle Homecharge scheme and the On-Street Residential Chargepoint scheme for local authorities should continue, and be scaled up for remote regions.

ROLE FOR INVESTORS

- **Investment:** There are a range of opportunities for private investment. For example, the [Charging Infrastructure Investment Fund](#) seeks to support faster expansion of electric vehicle chargepoints by matching £200m of public money with private sector investment.
- **Automaker engagement:** [Climate Action 100+](#) is engaging the world's largest automakers to decarbonise their business lines; in particular, by aligning their business strategies towards a net zero by 2050 trajectory, and aligning their direct and indirect lobbying practices with the aims of the Paris Agreement.
- **Supply chain engagement:** Lithium-ion batteries used for electric cars contain cobalt, much of which comes from high-risk areas for human rights abuses, such as Democratic Republic of Congo. Investors should engage with automakers to ensure cobalt and other raw materials for EVs are sourced responsibly.
- **Policymaker engagement:** Investors should signal their support for high ambition on the transition to EVs to the Department for Transport and the Office for Low Emissions Vehicles. In particular, investors should respond to the government's open [consultation](#) on bringing forward the ban on petrol, diesel and hybrid cars, which closes on July 31 2020.



SUSTAINABLE POWER

CURRENT SITUATION

- The UK has made substantial progress on decarbonising its energy sources for electricity generation. In 2017, 52% of electricity was supplied from low-carbon sources, up from 23% in 1990.
- The UK is at the forefront of electricity generation through offshore wind. The UK has the most offshore wind generation built anywhere in the world, with 40% of the global capacity.
- Installations of offshore wind and solar PVs have been hampered by the exclusion of these energy sources from the Contracts for Difference Scheme between 2015 and 2020, with only one new onshore wind application in 2019.

GOVERNMENT POLICIES AND TARGETS

- Existing government commitments aim to increase the share of low-carbon generation from 52% in 2017 to 57% in 2030. The government suggests that offshore wind alone could meet around a third of electricity generation in 2030.
- The government's Smart Systems and Flexibility plan is seeking to improve energy market flexibility, with 29 actions across three policy streams: removing barriers to smart technologies, enabling smart homes and businesses and making markets work towards flexibility. Further plans are expected in the government's forthcoming Energy White Paper.

- The government will phase-out the use of unabated coal in electricity production by 2025.

KEY POLICIES NEEDED

- **Increase capacity:** The 2030 target for low-carbon power generation should be increased from 57% to 75-85%, with prioritisation given to cost-competitive forms of low-carbon power generation. This would necessitate expanding the envelope for Contracts for Difference auctions to attain annual deployment targets of 1GW for onshore wind and 4GW for solar PV.
- **Redesign for flexibility:** The electricity market should be redesigned so that it rewards flexibility and incentivises the provision of storage and demand-side response. In particular, government should invest in research and development for technologies such as storage batteries and demand-side response, and deploying these mechanisms in the national electricity system.

ROLE FOR INVESTORS

- **Investment:** Annual investment in the power sector should double to around £20bn to deliver net zero. Contracts for difference help stabilise income streams and, as 15-year private contracts, remove regulatory uncertainty, improving risk profiles and improving attractiveness for investors.



SUSTAINABLE LAND USE

CURRENT SITUATION

- Around 85% of the UK land area is devoted to agriculture and forestry, and farming in particular. The CCC estimates that around 22% of this land needs to support alternative uses, including afforestation, bioenergy production and habitat restoration in order to reach the net zero target by 2050.
- There have been no significant changes in emission levels in agriculture over the last decade and the sector is still likely to produce significant emissions in 2050. In 2017, agricultural emissions were responsible for 9% of total GHG emissions in the UK. Despite a 16% reduction in emission levels since 1990, the share of agriculture in total emissions is the highest since 1990, as other sectors have been able to reduce emissions faster than agriculture.
- The UK is still one of the least wooded countries in Europe, with only 13% tree cover, compared with an average of 42% in Europe, 32% in Germany and 31% in France.
- Afforestation rates in England and across the UK have been around 13,400ha/year during 2018/2019, although the average across the last five years stands below 10,000 hectares planted. Scotland represents an exception across the UK, with higher than average afforestation rates.
- The COVID-19 crisis highlights the importance of urban green space, which has declined in area and quality in recent decades.

GOVERNMENT POLICIES AND TARGETS

- UK farmers are currently paid through the EU Common Agricultural Policy (CAP), which remunerates primarily on the basis of food production. The UK is putting in place the post-CAP remuneration system via the Agriculture Bill. This sets out a number of public goods which farmers can be remunerated for, including managing land/water/livestock to mitigate or adapt to climate change. However, the bill is a framework and contains little detail on how this would be done in practice
- The 2020 Budget pledged to plant 30,000 hectares of trees over the next 5 years. However, the government missed its previous commitment, to plant 11 million trees by 2020, by around 70%.

KEY POLICIES NEEDED

- **A market mechanism for afforestation:** Afforestation of at least 30,000 hectares per year to 2050 is required to meet the UK's net zero commitments, potentially up to 50,000 hectares per year in a high ambition scenario. The government should leverage private investment through the creation of an Emissions Trading Scheme or Contracts for Difference-style market mechanism which would guarantee a fixed payment at the start of the contract. These measures could increase forest cover from 13% to 17% of UK land.
- **Respect biodiversity:** For both government and private sector-led tree planting and management, enshrining respect for the “right tree in the right place” principle in policy design is a prerequisite. There is a need for effective oversight to ensure biodiversity and to create opportunities for other forms of landscape-based sequestration.

ROLE FOR INVESTORS

- **Investment:** Investors should consider increasing their exposure to forestry as an asset class. Forestry can be a source of stable and uncorrelated returns, and has the potential to generate positive impact in relation to climate change mitigation and the Sustainable Development Goals. Increased demand from investors will likely stimulate an increase in forestry supply. There are a number of ESG factors to consider when investing in forestry as set out in this [introductory guide](#).
- **Policy design:** Given the role that private investment must play in delivering afforestation in the UK, investors with experience in forestry investment or related asset classes should engage with policymakers to help co-design policies that will unlock private finance support for afforestation while respecting biodiversity and local communities.



SUSTAINABLE BUILDINGS

CURRENT SITUATION

- Energy use in homes accounts for about 14% of UK greenhouse gas emissions.
- The UK cannot meet its target for net zero emissions by 2050 without near-complete decarbonisation of the UK housing stock. These emissions need to fall by at least 24% by 2030 from 1990 levels but are currently off-track. In 2017, annual temperature-adjusted emissions from buildings rose by around 1% relative to the previous year.
- Ensuring new homes are designed to deliver ultra-high levels of energy efficiency from the start is around one-fifth of the cost of retrofitting to the same quality and standard. Yet just 1% of new homes in 2018 were EPC A, the highest band for energy efficiency.
- Reducing emissions from heating is the most significant area where progress needs to be made. As of today, less than 5% of energy used to heat buildings comes from low-carbon sources and converting homes to low-carbon heating remains a major challenge.
- Heat pump installation remains at very low levels in the UK, while many other countries in Europe display much higher deployment figures.

GOVERNMENT POLICIES AND TARGETS

- The UK Clean Growth Strategy targets the conversion of all existing homes to EPC C standards by 2035. Interim targets have been set for reaching EPC E and EPC D standards by 2020 and 2025 respectively for the existing building stock. However, no clear details are provided in terms of how these targets will be achieved.
- The Strategy also advocates the phase out of all installations of fossil fuel heating systems in properties off the gas grid in the 2020s, while acknowledging the need to develop a strategy for low-carbon heating in on-gas grid properties within the first half of 2020s.
- A Future Homes Standard, to be introduced by 2025, will require new build homes to be future proofed with low carbon heating and higher levels of energy efficiency.
- The government spent £100 million in 2018 on low carbon heating. The CCC estimates that energy efficiency measures will require an annual expenditure of around £15 billion.

KEY POLICIES NEEDED

- **Low carbon new buildings:** The government's Future Homes Standard should require that all new buildings from 2025 onwards be (i) disconnected from the gas grid; (ii) use zero carbon heating (e.g. heat pumps or other); and (iii) follow EPC A standards of energy efficiency.
- **Decarbonising existing buildings:** A package of policies is needed to decarbonise the existing building stock, which should include (i) large-scale government subsidisation programmes for specific technologies (e.g. a one-off payment for heat pump installations) and (ii) gradual phased-

in ban of gas boilers. A major retrofit programme could generate jobs nationwide and stimulate local economies.

ROLE FOR INVESTORS

- **Investment:** The government is currently seeking to leverage £1 billion in private investment, supported by government loans and grants, to develop heat networks across the UK as part of the government's [Heat Network Investment Project](#). Longer-term, the government estimates the full private investment potential to be between £16.5 billion and £22 billion.
- **Sector engagement:** Investors should support the upskilling of the building sector. Equipping building inspectors with the adequate skillset is key to support a transition to low-carbon heat. Tailored training opportunities for building inspectors on new low carbon technologies and updated standards need to be designed, financed and adequately promoted.
- **Develop standards:** A sustainable housing label, as proposed by the Green Finance Institute, should be developed for retrofit projects in particular to stimulate investment in quality green housing improvements. This should be aligned with the performance thresholds set out in the EU Taxonomy.
- **Policy engagement:** While the consultation on the Future Homes Standard has now closed, investors can signal their support to the Department for Business, Energy and Industrial Strategy (BEIS) and the Ministry of Housing, Communities & Local Government (MHCLG) for an ambitious standard ensuring new homes will be in line with a net zero by 2050 scenario.

NEXT STEPS

KEY DATES

- **July 1-3 – [London Climate Action Week](#)** – LCAW seeks to bring together climate leadership from across London to generate and scale-up solutions to the climate emergency. Following the first ever LCAW in July 2019, this year there will be a digital-only event in July followed by a second instalment in November.
- **July 31 – [Consultation on sales ban of petrol, diesel and hybrid vehicles](#)** – The government is seeking views on the appropriate date to introduce a ban on new sales of traditional internal combustion engine (ICE) vehicles. The current proposed date is 2035.
- **Autumn 2020 – [Transport Decarbonisation Plan](#)** – This plan will set out in detail what government, business and society will need to do to deliver the emissions reduction needed across all modes of transport in order to achieve carbon budgets and net zero emissions across every single mode of transport by 2050.

- **Autumn 2020 – [Net Zero Review](#)** – This government review, led by HM Treasury will assess how the UK can maximise economic growth opportunities from its transformation to a green economy, and the choices available for how households, businesses and taxpayers can contribute to this transition. The review will also consider how to ensure the UK can cut emissions without seeing them exported elsewhere.
- **December – [Sixth Carbon Budget](#)** – The Committee on Climate Change will publish its advice on the volume of greenhouse gases the UK can emit from 2033-2037.
- **TBC – [Comprehensive Spending Review](#)** – HM Treasury undertakes a spending review approximately every three years to allocate funding to government departments and set multi-year priorities. “Reducing carbon emissions and improving the natural environment” is one of the upcoming review’s priorities. Originally planned for July 2020, postponed due to COVID-19 crisis.
- **TBC - [Energy White Paper](#)** – Led by BEIS, this white paper is intended to set out the roadmap to net zero for the UK’s energy sector. It has been delayed from the summer of 2019.
- **TBC – [National Infrastructure Strategy](#)** – The NIS will set out the government’s vision on infrastructure spending and priorities over the next 30 years. Having been delayed for several months, most recently due to the need to align with the government’s net zero plans, the proposed publication in May is likely to be pushed further back.
- **November 2021 – [COP 26](#)** – The annual climate summit, postponed due to the COVID-19 outbreak, will be hosted by the UK in Glasgow during 2021. This will be the first opportunity for many countries to revise their Nationally Determined Contributions (NDCs) since ratifying the Paris Agreement in 2015. This will also provide a marshalling point for governments’ plans on climate-related policies. An [agenda for private finance](#) is a dedicated track of COP 26.

HOW TO GET INVOLVED

If you are interested in keeping updated on the PRI’s work in this area, learning more about relevant engagement opportunities as they arise and/or collaborating with the PRI and investors on policy engagement, please join our collaboration group [here](#).

The PRI further recognises that, beyond policies that directly mitigate the UK’s emissions, additional policy frameworks will be required to counteract some of the effects of this shifts, notably with regard to ensuring trade policies prevent the exportation of emissions, and securing a just transition. Further research will be done on these issues.

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FURTHER READING

Aldersgate (2019), [Time to deliver: Building a competitive and inclusive green economy](#)

Committee on Climate Change (2019), [Net Zero, the UK contribution to stopping global warming](#)

Committee on Climate Change (2019), [UK housing: Fit for the future?](#)

Committee on Climate Change (2020), [Land Use: Policies for a Net Zero UK](#)

Green Finance Institute (2020), [Financing energy efficient buildings: the path to retrofit at scale](#)

HM Government (2017), [The Clean Growth Strategy](#)

HM Government (2017), [Upgrading our Energy System: Smart Systems and Flexibility Plan](#)

HM Government (2018), [The Road to Zero](#)

HM Government (2019), [Green Finance Strategy](#)

PRI (2018), [Drilling down into the cobalt supply chain: how investors can promote responsible cobalt sourcing practices](#)

PRI (2019), [An introduction to responsible investment in forestry](#)

PRI (2019), [An introduction to responsible investment: Real estate](#)

PRI, Vivid Economics and Energy Transition Advisors, [The Inevitable Policy Response](#)

University of Oxford (2020), [Will COVID-19 fiscal recovery packages accelerate or retard progress on climate change?](#)