OCTOBER 2021

POLICY BRIEFING

NET ZERO STRATEGY POLICY TRACKER – KEY ANNOUNCEMENTS AND NEXT STEPS

The Net Zero Strategy (NZS) is the first blueprint from any major economy on how to reach net zero. It is developed on the basis of a clear recognition of the benefits the net zero transition can bring to the UK economy, through job creation, innovation, growing exports and improved productivity. Publishing a detailed pathway to net zero that is endorsed by the Prime Minister ahead of COP26 sends a positive signal to other countries and provides an example of how climate targets can be delivered in practice.

As Aldersgate Group has previously argued,[1] developing sector-by-sector pathways for cutting emissions is key to providing long-term certainty to businesses and investors, which will ultimately accelerate the mobilisation of private finance, lower risk and cut the cost of investment. In addition, finalising the cross-cutting framework that underpins sectoral transitions is equally important, which is why including measures for accelerating skills development, mobilising innovation funding and using the UK Infrastructure Bank to crowd in private investment is a welcome addition to the NZS.

In this briefing, Aldersgate Group takes stock of the key announcements in the Strategy, identifies areas for improvement, and considers what needs to come next in terms of policy and spending decisions to enable the UK to reach net zero.

1 Aldersgate Group (October 2020) *Building a net zero emissions economy: next steps for government and business*

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This policy briefing is one of a series published by Aldersgate Group, an alliance of major businesses, academic institutions and civil society organisations that drives action for a competitive and environmentally sustainable economy.

THE STRATEGY AT A GLANCE

As the first detailed decarbonisation plan for the UK economy since the Clean Growth Strategy, the NZS provides a pathway to meeting the fourth and fifth carbon budgets, which the Clean Growth Strategy did not. **Without the policies in the NZS, the UK was set to overshoot its sixth carbon budget by 1bn tonnes of CO_2 equivalent – more than the entire budget for five years.**[2] However, in its current form, the Strategy will still only serve to keep us 'on track' for meeting the sixth carbon budget – so further policy action will be needed in the near future to actually meet it.

Whilst the Strategy majors on the opportunities afforded by the transition, highlighting the job creation and innovation potential on a sector-by-sector basis, it also acknowledges the costs that need to be met and puts forward a set of principles that are designed to determine how they will be met:

- **working with the grain of consumer choice;**
- ensuring the **biggest polluters pay the most for the transition** through fair carbon pricing;
- ensuring the most **vulnerable are protected** through measures like energy bill discounts;
- working with businesses to **deliver deep cost reductions for low carbon technologies.**

However, there are some question marks on whether the Strategy will be able to deliver on these fronts and rapidly cut emissions as required by the carbon budgets at the same time. For instance, while the commitment to align the UK ETS with net zero is reiterated, this will only be delivered by January 2024, with little detail on implementation. This could potentially see unhelpful fluctuations in the levels of carbon pricing in the meantime, which would damage market confidence and send mixed signals to businesses and investors.

Likewise, the Strategy has little to say on areas where **behaviour change will be required to meet climate obligations.** For example, cutting emissions from aviation is almost wholly reliant on developing and deploying sustainable aviation fuels (SAF), rather than reducing plane use in favour of lower carbon transport modes. As in strategies like the Transport Decarbonisation Plan, **there seems to be an overreliance on technology silver bullets running through the Strategy.**

2 Carbon Brief (21 October 2021) "In depth Q&A: The UK's Net Zero Strategy"

Another important aspect of the NZS is the chapter on **supporting the transition across the economy, looking at the cross-cutting elements and the need for a systems approach.** It does a good job of considering key elements like the need for skills investment across the economy, working with Devolved Administrations and local authorities on delivering solutions around infrastructure, and the crucial role of embedding net zero across government. However, there remains some way to go in showing how these will be implemented, particularly on ambitious measures like ensuring each governmental decision is considered in relation to its impact on net zero. It is also still unclear whether a separate body will be created to oversee this coordination and deliver a whole systems approach.

In other areas, the NZS features a helpful narrative, but little detail on how government will use standards, regulation or fiscal intervention to drive change across the economy. An example in this sense is around **achieving greater resource efficiency** across the economy. Here, a set of concrete next steps is needed to clarify how these goals will be achieved. For instance, a clear timeline for implementing the measures in the Resources and Waste Strategy and the Waste Prevention Programme for England will be essential, including the development of eco-design standards and lifecycle assessments or the rollout of Extended Producer Responsibility Schemes.

However, overall it is very welcome to see the government produce a clear framework, which touches on the majority of the elements required for the UK to reach net zero and deliver economic benefits in the processalthough certain areas will need to be backed up by more ambitious commitments and the resources needed to deliver them. In addition, the commitment from government to publish annual reports against key indicators for achieving the UK's climate goals is particularly encouraging, representing an important mechanism to drive accountability and transparency.

What the Strategy delivers and what next?

Beyond the framework for delivering the net zero target, the NZS proposes a set of policy and spending commitments across a range of sectors, with indicative pathways up to 2037. Whilst some of them have been announced before, there is a selection of new commitments, including a mandate for zero emissions vehicles and the ambition for no new gas boilers to be sold after 2035.

Below we summarise the key announcements made against each sector and consider the next steps for implementation, the policy gaps that remain, and how to address them effectively.

POWER

This sector has seen higher rates of decarbonisation relative to others in the UK economy, and now must deliver even further to **provide all low carbon electricity by 2035.** The Strategy considers how, irrespective of the scenario assumed to get to 2050, electricity supplies should double to support increased electrification as other sectors decarbonise.

Whilst the policy and investment foundations are in place (especially through an increase in frequency for CfD auctions and resumption of Pot 1 auctions), more clarity on **how the planning and consenting system will evolve to support more rapid infrastructure deployment is needed.** The Strategy is also light on details around boosting interconnection capacity, cross-border electricity contracting or restoring participation in the day-ahead electricity markets, which are essential for reducing wholesale prices and improving system security.

Key NZS commitments:

- **by 2035, all electricity will come from low carbon sources,** an increase in the level of ambition in the Energy White Paper.
- review of the **frequency of CfD auctions** to accelerate deployment of low cost renewables.
- deliver 40GW of **offshore wind** and 1GW of floating offshore wind by 2030, and the deployment of first-of-a-kind CCUS plant.
- Adopt a **new approach to onshore and offshore electricity networks** to incorporate new low carbon generation and demand in the most efficient manner, taking account of the environment and local communities.
- Provide **£380m for the offshore wind sector,** investing in supply chains, infrastructure and early-coordination of offshore transmission networks.
- Deliver fair, affordable prices for **consumers.**
- Deliver the *Smart Systems and Flexibility Plan and Energy Digitalisation Strategy* to maximise system flexibility.
- Ensure the **planning system can support the deployment** of low carbon energy infrastructure.

Further detail needed on implementation:

- Provide clarity on the **frequency and volumes** for future CfD auctions, with clear support for Pot 1 technologies.
- Rapidly finalise the review of the **Energy National Policy Statement** to allow for quick deployment of renewables capacity to meet existing renewable targets and deliver greater system security through flexibility measures.
- **Consult on the coordination of the awarding of offshore leases** with consent for onshore infrastructure development under the planning framework to avoid unnecessary delays in deploying key infrastructure.
- Continuing to invest in **key port infrastructure,** essential for allowing supply chains for offshore wind to continue developing. Ensuring market access for onshore wind is essential for supporting the offshore wind industry: in other European countries like Germany and the Netherlands, simultaneous investment in both industries helped leverage skills and supply chains, which are quite similar.

POWER

Remaining policy gaps:[3]

- Establish a **market for long-term, zero carbon and tradable electricity contracts,** with standardised structures made available to business consumers. This could be facilitated through a 'green power pool', operated in parallel to the electricity spot market. Consumers holding these contracts would thereby avoid the indirect costs of carbon prices, and the volatility of fossil fuel prices.
- Facilitate **cross-border electricity contracting incorporating UK carbon prices,** by establishing a new structure for direct cross-border industrial electricity purchases, charging UK carbon prices on purchased electricity to avoid carbon-intensive generation in other markets having an unfair advantage in the UK market.
- Support the **continued growth of interconnection** (through Ofgem's cap-and-floor revenues system) and offshore grid development, and reduce friction in electricity trade. Each 1GW of interconnection capacity can reduce UK wholesale electricity prices by 1–2%[4] by making available low cost, low carbon imports from other markets, and can facilitate the balancing of increasingly variable supply and increasing demand.
- **Restore UK participation in the day-ahead electricity markets** with neighbouring EU countries, the absence of which is estimated to result in £45 million in lost trade in 2021. It should also seek to re-engage with the North Seas Energy Cooperation (NSEC) group, to encourage and facilitate widespread expansion of offshore wind in and around the UK's North Sea waters.

3 Further policy recommendations on delivering an integrated grid and lowering industrial electricity prices are available in our latest report: UCL for Aldersgate Group (September 2021) *Delivering competitive industrial electricity prices in an era of transition*

4 National Grid (2014a) *Getting more connected: The opportunity from greater electricity interconnection, National Grid, London*

FUEL SUPPLY AND HYDROGEN

With a target of 5GW of low carbon hydrogen by 2030 using a twin-track approach, it is now essential for government to rapidly finalise the hydrogen business models in a way that enables developers to meet operational costs and creates certainty of supply for big industrial users. Setting a robust hydrogen standard to give confidence to investors and users will be essential, and tightening this over time as the feedstock decarbonises and technology options become more efficient will be key.

Key NZS commitments:

- Delivering **5GW of UK low carbon hydrogen production capacity by 2030.**
- Providing up to £140m to establish the **Industrial Decarbonisation and Hydrogen Revenue Support** (IDHRS) scheme to fund new hydrogen and industrial carbon capture business models, including up to £100m to award contracts of up to 250MW of electrolytic hydrogen production capacity in 2023 with further allocation in 2024.
- Implement the **Net Zero Hydrogen Fund** and finalise the **hydrogen business models** and low carbon hydrogen standard.
- Work with the sector to help develop a **low carbon fuel strategy for transport** for publication in 2022, as announced in the Transport Decarbonisation Plan, and deliver commitments on sustainable aviation fuels.
- Work with stakeholders to **address barriers to the electrification of oil and gas production** by Q4 2022 and continue to drive down routine flaring and venting.

Further detail needed on implementation:

- **Finalise the hydrogen business models** and provide certainty of supply and a clear timeline for when low carbon hydrogen will be available, using CfDs and government matchmaking.
- **Finalise the low carbon hydrogen standard,** setting the bar very high for blue hydrogen (with capture rates of >95%) to limit the application of greenhouse gas removals (GGRs), and a standard that tightens over time for green hydrogen, to account for a gradually declining carbon intensity of electricity.
- Finalise the **Net Zero Hydrogen Fund,** ensuring that the decarbonisation benefits of new hydrogen supply are maximised by establishing a hierarchy of use prioritising end users with no viable alternative to reduce their emissions.

Remaining policy gaps:

- Consider supplementing the business models policies by directly **legislating hydrogen production targets,** in order to provide a clear signal as to what infrastructure will be available by a given date and to provide further certainty of supply.
- Through the 2022 Biomass Strategy, develop clear criteria and standards to ensure **biomass** is sustainably sourced and the whole lifecycle emissions are included in carbon accounts. Prioritise use of waste biomass and direct its applications to sectors without alternative fuel switching options.
- Develop **infrastructure plans** in partnership with local authorities and local enterprise partnerships to link industrial users outside of clusters to hydrogen production sites developed in clusters, enabling them to have clarity on fuel switching options.

INDUSTRY

The NZS displays higher levels of ambition for industrial decarbonisation than the Industrial Decarbonisation Strategy, with **higher volumes of carbon capture proposed** (doubled to 20–30 $MtCO_2$ by mid-2030s relative to the Ten Point Plan), higher levels of emissions savings delivered through resource and energy efficiency and a plan to prioritise the HyNet and East Coast Clusters to deploy low carbon technologies and create jobs in the process.

These are important areas of progress, but further clarity is needed, particularly around connecting industries located off-cluster to the necessary low carbon infrastructure needed to enable them to decarbonise cost-effectively.[5] In addition, securing affordable and low carbon fuel switching options (as outlined above) is essential to enabling industries like steel, cement or glass to meet their decarbonisation targets. Finally, ambitious **timelines for running technology trials, particularly for novel production techniques like the use of hydrogen DRI in steelmaking,** will be key in enabling industry to learn by doing and to deploy tested technologies well ahead of 2050.

Key NZS commitments:

- Following Phase 1 of the Cluster Sequencing process, the **HyNet and East Coast Clusters have been confirmed as Track 1 clusters,** set to capture 20–30 $MtCO_2$ per year by 2030.
- Support the **increased requirement for fuel switching to low carbon alternatives,** with an ambition to replace around 50 TWh of fossil fuels per year by 2035.
- Consider the implications of the recommendation of the Climate Change Committee to set **targets for ore-based steelmaking** to reach near-zero emissions by 2035, and the business environment necessary to support the transition.
- Develop several **Resource and Energy Efficiency (REEE) measures** with ambition of achieving the anticipated requirement of 11 $MtCO_2$ e worth of savings by 2035, including up to 3 $MtCO_2$ e of potential abatement in the Iron and Steel sector.
- Consulting on **aligning the UK ETS with a net zero cap.**
- Explore opportunities for faster decarbonisation of dispersed sites in the 2020s.

Further detail needed on implementation:

- Set clear targets for **ore-based steelmaking** to reach net zero by 2035 and confirm trials for low carbon production methods such as hydrogen DRI steelmaking.
- Provide clarity on how **the UK ETS will align with net zero,** including through a gradual reduction in the number of free allocations and interim competitiveness support through the introduction of Carbon Border Adjustments.
- Simplify access to funding through **resource and energy efficiency policies,** especially for manufacturers in dispersed sites, and allowing applications on a rolling basis.

Remaining policy gaps:

- Develop **demand-side measures** to grow the market for low carbon industrial goods, including by creating public procurement mandates to buy low carbon and developing product standards that gradually drive down the permissible level of embodied carbon and lifecycle emissions in industrial products.
- Develop **a clear roadmap for decarbonising dispersed sites,** working with local authorities and local enterprise partnerships to ensure these locations are over time connected to CCS infrastructure and hydrogen production sites.
- Implement key measures to **reduce industrial electricity prices,** which are between 25%–44% above the EU average (see the Power section for further details).

5 Further details on how both types of locations can be decarbonised effectively are included in our recent report commission: Frontier Economics for Aldersgate Group (September 2021) *Accelerating the decarbonisation of industrial clusters and dispersed sites*

HEAT AND BUILDINGS

This is an area that has seen significant steps forward following the publication of the NZS and the Heat and Buildings Strategy (HABS) earlier last week. However, the sector has seen minimal progress over the past few years, so delivering quick emission cuts here is essential. This section examines the commitments delivered through both strategies, which includes welcome next steps on phasing out fossil fuel boilers, making low carbon heat alternatives more effective and cheaper and supporting consumers to meet the upfront cost through grants. A key area that remains underdeveloped is **energy efficiency, where the government has set some targets but stopped short of pursuing these through regulatory levers** like the enforcement of minimum energy efficiency standards.

Key NZS commitments:

- Aiming to **phase out the installation of new and replacement natural gas boilers by 2035** once costs of low carbon alternatives have come down.
- Working with industry to **reduce the cost of heat pumps** by at least 25–50% by 2025 and to parity with gas boilers by 2030 at the latest and supporting 600,000 installations per year by 2028.
- £450 million **Boiler Upgrade Scheme** providing £5,000 capital grants and a new market-based incentive for heating system manufacturers, whilst investing £60 million in heat pump innovation.
- Consulting on **phasing out the dirtiest and most expensive fossil fuels first** – new oil, coal and liquefied petroleum gas heating – and replace with low carbon alternatives in non-domestic buildings from 2024 and homes from 2026.
- A set of **tentative measures to bring more homes to EPC band C,** but stopping short of consulting / introducing regulation in support. For new homes, the Future Homes Standard will be implemented from 2025.
- **Large-scale trials of hydrogen for heating** to take decisions in 2026 on the role of hydrogen in decarbonising heating, and consult on the case for enabling or requiring hydrogen-ready boilers.

Further detail needed on implementation:

- Clarity on how and over what time UKIB will **support the development of financial products to mobilise green finance for home improvements.**
- **Engage consumers** to facilitate the transition to low carbon forms of heating and setting up a reliable system of certification for technologies unfamiliar to consumers, such as heat pumps and hybrid systems. This could be achieved through the Each Home Counts Quality Mark scheme, and by harnessing trusted voices and organisations, for example, by expanding the role of the Energy Savings Trust to share information on technologies and respond to any concerns.
- **Invest in skills** and build on the recommendations of the Green Jobs Taskforce to address skills gaps in the sector and ensure the workforce, from architects to engineers and tradespeople, is equipped with suitable knowledge to recommend, service and maintain low carbon heating systems. This will be crucial maintain public trust.

Remaining policy gaps:

- **Implement and properly enforce energy efficiency standards** for existing buildings. Regulatory drivers include a tightening of the Minimum Energy Efficiency Standards (MEES) for privately rented domestic buildings and for commercial properties to achieve EPC band C by 2035. These standards should eventually be rolled out to privately owned homes and social accommodation as a priority to ensure that the transition to low carbon homes also benefits the whole of society and those facing fuel poverty.
- To make energy efficiency competitive on upfront cost and incentivise the rapid adoption of necessary measures, **consider introducing targeted fiscal incentives,** including VAT and stamp duty rebates for homes adopting energy efficiency measures, which will deliver immediate savings to businesses and consumers and help strengthen the link between efficiency levels and property value.

TRANSPORT

With the recent publication of the Transport Decarbonisation Plan (TDP) alongside the NZS, concrete measures for decarbonising the sector have been put in place, including proposals to phase out heavy goods vehicles (HGVs) by 2035, further support to develop a joined-up EV charging network with funding allocated to on-street chargepoints and a mandate for zero emissions vehicles aimed at manufacturers.

This Strategy, along with the TDP, delivers a welcome view of an **integrated transport system, looking to cut emissions across all transport modes** and encourage modal shifts and active travel when possible. It is now essential to ensure the development of a good charging network across the country, offer support for meeting the upfront cost of switching to EVs and support the development of a strong battery manufacturing sector in the UK, to minimise reliance on imports. Beyond road transport, it will be essential to continue support for low carbon technology solutions (including sustainable aviation fuels), whilst at the same time lowering demand for flying and **encouraging modal shifts to lower carbon alternatives, especially for domestic journeys.**

Key NZS commitments:

- Introduce a **zero emission vehicle mandate** setting targets for a percentage of manufacturers' new car and van sales to be zero emission each year from 2024.
- Publish an **EV infrastructure strategy,** setting out the government's vision for infrastructure rollout, and roles for the public and private sectors in achieving it.
- Provide an additional £620 million to support the rollout of charging infrastructure, with a particular **focus on local on-street residential charging,** and targeted plug-in vehicle grants.
- Take action to **increase average road vehicle occupancy by 2030** and reduce the barriers to data sharing across the transport sector.
- Maximise carbon savings from the **use of low carbon fuels,** including by increasing the main Renewable Transport Fuel Obligation (RTFO) target.
- Support decarbonisation by investing more than **£12 billion in local transport systems** over the current Parliament.

Further detail needed on implementation:

- Deliver an **EV infrastructure Strategy** which includes national coordination of infrastructure deployment to avoid the 'postcode lottery' as EV market penetration increases and ensure chargepoints are also deployed where market conditions are more difficult, such as in rural areas or residential areas without off-street parking.
- Beyond plug-in grants, deliver **support for the upfront cost** of EVs by growing the second hand EV market and boosting consumer confidence in previously owned vehicles, including through battery health certificates or standardised tests, and delivering the expansion of battery swap and repair schemes.
- Further support for **growing the battery production sector,** including through financial assistance through UKIB, investment in skills for production, repair and reconditioning.
- Clarify the next steps for **increasing road vehicle occupancy,** by adopting measures including incentives for pooled mobility and car sharing models or mobility hubs to support a shift from private vehicle ownership towards mobility as a service.

TRANSPORT

Remaining policy gaps:

- **Simplify the approval process for installing chargepoints in rented properties and areas without off-street parking,** as the process can take in excess of one year. This will be particularly important for fleet drivers who are more likely to rely on chargepoints in these locations.
- **Facilitate cooperation between chargepoint installers** whenever an expansion of grid capacity is required, to overcome the first mover disadvantage where the first one to apply for additional capacity has to cover the entire cost, even if the spare capacity can then also be used by others. Working with Ofgem to amend this regulatory approach through the Access and Forward-looking Charges Significant Code will likewise be key.
- Implement **stronger incentives and fiscal measures** to stimulate the recycling and remanufacturing market for batteries, including VAT rebates and fee modulations for batteries with higher recycled content or EPR schemes.

NATURAL RESOURCES AND WASTE

The NZS acknowledges the crucial role of the natural environment and resources in meeting net zero, with agriculture, land use and resource efficiency being highlighted as particular areas of priority. While this is welcome, **the Strategy is light on what further measures will be put in place to support the achievement of net zero emissions by 2050.**

For example, on resources, the NZS highlights the importance of the Resources and Waste Strategy, but it does not address the slow progress to date on implementing existing measures within the Strategy. On agriculture, there are no new specific policy measures on how the farming sector can support net zero beyond specific investment funding and the future environmental land management schemes (ELMs).

Similarly, the Environment Bill offers significant opportunities to join up mitigation, adaptation and nature restoration, which is not satisfactorily addressed by the Strategy. The Environment Bill should be used to set a broader and more ambitious set of nature restoration targets, underpinned by ambitious environmental improvement plans, to help the UK adapt to climate change and deliver much needed negative emissions.

Key NZS commitments:

- 75% of farmers in England will be engaged in **low carbon practices by 2030,** rising to 85% by 2035. Industry-led R&D will also be encouraged, including through the Farming Innovation Programme.
- **Treble woodland creation rates** by the end of this Parliament and explore a long-term statutory tree target in England within the public consultation on Environment Bill targets.
- Boost the existing £640 million **Nature for Climate Fund** with a further £124 million, targeted at peat restoration, woodland creation and management.
- **Restore approximately 280,000 hectares of peat** in England by 2050, including via funding from the new environmental land management schemes.
- Mobilise private investment into tree planting, including through the **Woodland Carbon Code,** with the support of government's Woodland Carbon Guarantee.
- Develop a **policy roadmap to increase the use of timber in construction** in England, and create a cross-government and industry working group tasked with identifying key actions to safely increase timber use and reduce embodied carbon.
- Bring forward £295 million of capital funding which will allow local authorities in England to prepare to implement **free separate food waste collections** for all households from 2025.
- Through the Environment Bill, government will legislate for **Local Nature Recovery Strategies** – a new system of spatial strategies that will map proposals for improving or creating habitat for nature and wider environmental benefits.
- Ensure that **biodiversity co-benefits and other environmental objectives are maximised** alongside decarbonisation.
- Allocate £75 million on **net zero related R&D** across natural resources, waste & F-gases, to inform the UK's pathway to 2037.

Further detail needed on implementation:

- Urgently implement the policy proposals first set out in the **Resources and Waste Strategy** of 2018, by prioritising eco-design standards and rolling out Extended Producer Responsibility schemes.
- Publish further details on how the **environmental land management schemes** (ELMs) will contribute towards the achievement of net zero in agriculture and the land use sector.
- Clarity on how the upcoming **Net Zero Systems Tool** can be used to gain better understanding of dependencies and trade-offs within the land use system, as well as knock-on impacts in other areas.
- Carry out the public consultation on **the forthcoming long-term targets under the Environment Bill,** to offer clarity on how these can support not only nature restoration but also the net zero transition.

NATURAL RESOURCES AND WASTE

Remaining policy gaps:

- Further information on **how Local Nature Recovery Strategies will work alongside other evolving initiatives,** such as biodiversity net gain, planning reform and environmental land management schemes (ELMs).
- Develop a strategy for ensuring resources and waste policy becomes a **cross-government priority,** with BEIS, HMT, DfT, Cabinet Office and MHCLG all proactively contributing to policy development in this area.
- Develop criteria for the £290 billion a year spent by the UK on **public procurement** to drive demand for products and services with higher resource efficiency standards.
- Working collaboratively with the **devolved administrations** on how progress on natural resources, circularity and land use can be accelerated across the UK.

GREENHOUSE GAS REMOVALS (GGRs)

The NZS sets a welcome ambition in relation to GGRs to trial and deploy these technologies, whist offering support to accelerate cost reductions. It also includes a high-level commitment to improve oversight and ensure the integrity of GGRs in a way that could boost investor confidence.

However, further clarity is needed on how this will be delivered and how **businesses, NGOs and civil society organisations will be able to feed into and scrutinise these verification mechanisms.** In addition, the NZS proposes amending the Climate Change Act to enable engineered removals to contribute to UK carbon budgets, **which is contrary to the advice of the Climate Change Committee and could see lower ambition on mitigation and heavier reliance on technologies which are not yet proven at scale.**

Key NZS commitments:

- Set the ambition of **deploying at least 5 $MtCO_2$ /year** of engineered removals by 2030, in line with CCC recommendations.
- Deliver **£100 million innovation funding** for DACCS and other GGRs.
- Consulting on **business models for GGRs** in 2022.
- Consult on the **role of the UK ETS as a potential long-term market for GGRs,** as part of our upcoming consultation on the UK ETS.
- Explore options for regulatory oversight to provide robust monitoring, reporting and verification (MRV) of GGRs.
- Seek an amendment to the Climate Change Act to **enable engineered removals to contribute to UK carbon budgets.**

Further detail needed on implementation:

- Facilitate **at-scale trials for GGRs** to enable a learning-by-doing approach in relation to deployment of complex GGRs and their additional benefits for other parts of the economy.
- **Consult and finalise business models** to create clarity on future revenue streams for developers and investors, and develop these together with an ETS that can create a market for GGRs. A clear price on stored carbon, as implemented in the US through the 45Q scheme could serve as an example.

Remaining policy gaps:

- **Create a strategy to communicate and encourage acceptability** and rapid adoption of GGRs, to ensure public concerns are addressed from the start. A successful example of this is the management of communications during the UK's transition from town gas to natural gas, where time and resources were dedicated to address consumer concerns through initiatives including the Conversion Strategy handbook and the 'Guaranteed Warmth' campaign.
- **Ensure that GGRs are not counted as contributions to carbon budgets.** Mitigation efforts need to be prioritised across all sectors, GGRs should only play a limited role to avoid overreliance on expensive technologies that are yet to be proven at scale.

GREEN FINANCE

The publication of the government's new strategy *Greening Finance: A Roadmap to Sustainable Investing* one day ahead of the NZS provides significant detail on the plans to embed sustainability and climate change into the decision-making of businesses and financial institutions. The Green Investment Chapter sets out the actions the UK has already taken on green finance, including the introduction of a new UK Infrastructure Bank, the first issuances for the Green Gilt; the development of a UK green taxonomy and updating Bank of England and other financial arms bodies' remits to include net zero.

Together, the two documents provide a clear overview of existing policies and the planned next steps for financing green and greening finance, but further detail is needed on how disclosures and publication of net zero transition plans will be made mandatory over time and rolled out across the economy.

Key NZS commitments:

- **Introduce a new framework to integrate existing disclosure requirements,** based on the same framework as the Taskforce for Climate-Related Financial Disclosures (TCFD), called the Sustainability Disclosure Requirements (SDR).
- Intention for **businesses to publish transition plans that align with the government's net zero commitment,** on a comply or explain basis as part of the new SDR.
- Require companies to disclose which proportion of their **activities are aligned with the new UK Green Taxonomy.**
- **Publish an updated Green Finance Strategy** in 2022 which will focus on financing green.

Further detail needed on implementation:

- **Publish a timeline** detailing when the SDR will be put in place for businesses and investment products, when businesses will be required to publish net zero transition plans, and when businesses will be required to disclose alignment of activities against the new UK Green Taxonomy.
- **Ensure interoperability between the UK SDR and UK Green Taxonomy and equivalents in the EU** – including the EU's Sustainable Finance Disclosure Regulation (SFDR) and the EU Taxonomy – and internationally, to ensure that businesses operating in several jurisdictions are not subject to multiple reporting requirements that may be incompatible.
- **Provide further details on when it will become mandatory for businesses and financial institutions to publish transition plans to meet net zero,** including the scope of businesses included and a clear timeline.
- **Ensure the Green Gilt is scaled up to meet to demand,** which was 10:1 for the first issuance round.

Remaining policy gaps:

- Clarify when elements of **disclosures which are currently voluntary,** such as scenario analysis and Scope 3 emissions reporting, **will become mandatory** under the new SDR.
- **Provide clarity on the scenario as the UK decarbonises** (i.e. clarifying whether this be largely led by electrification, or how other technologies like green hydrogen may play a role) as soon as possible. This will ensure private sector is consistently being updated with new developments and can invest as strategically and rapidly as possible.

SKILLS

Ensuring the UK's skills and knowledge supply can meet the demand from employers and support the growth of new sectors as low carbon markets grow is vital to meeting the UK's climate and net zero targets. The inclusion of a section on green skills and jobs in the Net Zero Strategy is welcome, and it recognises the significant challenge required to meet the government's target of delivering 2 million green jobs in the UK by 2030.

Outside of the Net Zero Strategy, a line has been added to the Skills and Post-16 Education Bill, for consideration to be given as to whether future skills, capabilities or expertise align with the UK's net zero target. **This line must remain in the Bill through to Royal assent.** This, combined with further actions building on the policies set out in the Strategy and the Green Jobs Taskforce's final report, can ensure educators, businesses and government are collaborating to prepare both the current and future workforce with the necessary skills to meet net zero.

Key NZS commitments:

- Deliver a **Lifetime Skills Guarantee and grow key post-16 training programmes** (such as apprenticeships, Skills Bootcamps and T levels) in line with the needs of employers in the green economy.
- Introduce a **sustainability and climate change strategy for education and children's services** which will include a focus on equipping children and young people with the knowledge and skills they need to contribute to the green economy.
- Implement some of the ideas generated by the Green Jobs Taskforce, which were used in the development of the Strategy.

Further detail needed on implementation:

- **Respond directly to the Green Jobs Taskforce** and set out a plan to deliver the recommendations of their final report.
- Clarify when the Sustainability and Climate Change Strategy for education and children's services will be published.

Remaining policy gaps:

- **Publish a Net Zero Skills Strategy** that builds on the recommendations of the Green Jobs Taskforce which have not been addressed in the NZS, including those under Theme 2 'Building pathways into good green careers' and Theme 3 'Ensuring a just transition for workers in high carbon sectors'.
- Ensure **Further Education and Higher Education institutions all around the UK can play a leading role in developing local skills and deliver green jobs.** Government should work with businesses and investors to accelerate the creation of partnerships with universities, advanced manufacturing institutes, and with government research institutions all around the UK. Many areas in the Midlands and the North of England have strong education institutions, established during the industrial revolution, and these will need adequate funding to ensure they can play their crucial role in skilling and reskilling as part of a coherent levelling up and net zero agenda.
- Continue building on the NZS to **set clear regulations, standards and fiscal incentives to accelerate the decarbonisation of key sectors, which are key in providing businesses with confidence to invest in the skills of the future.** This has already been observed in sectors like waste and automotive – in the waste sector, environmental regulation has led to job creation through the development of entire new business models and markets related to material recovery and recycling.[6] It is vital that the benefits of policy and regulatory certainty are at the core of future policy making to support a sustainable economic recovery. Regulation can act as a market signal for training providers, who can then be certain of the direction of travel and offer training that is more in line with the needs of a low carbon economy.

6 Buro Happold for Aldersgate Group (March 2021) *Fostering prosperity: driving innovation and creating market opportunities through environmental regulation*

The Aldersgate Group is an alliance of major businesses, academic institutions, professional institutes, and civil society organisations driving action for a sustainable and competitive economy. Our corporate members, who have a collective turnover in excess of £550bn, believe that ambitious and stable low carbon and environmental policies make clear economic sense for the UK.

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