BRIEFING - May 2024

Transport briefing for candidates

UK transport's environment and climate impacts and what's needed from the next UK government

Summary

For the next Government, the need to tackle climate change is more pressing than ever and transport is the highest-emitting sector

Transport emissions reduction needed

Transport emissions in the UK are the biggest contributor to the UK's carbon emissions, standing at 29% of the total share. Transport will increasingly be a sector where emissions reductions are needed to stay within legally binding carbon budgets.

The zero emissions vehicle (ZEV) mandate is the biggest single carbon-cutting policy in the government's arsenal but has faced a sustained campaign of opposition from some media. We need to ensure that the policy is delivered, that manufacturers can hit their targets and that the public feels confident in making the transition.

While the ZEV mandate is in place and applies to vans as well, progress on cutting van emissions is not going fast enough. Emissions from vans have increased 62% since 1990.

Trucks comprise just under a fifth of all UK transport emissions. Battery electric HGVs will be able to meet the vast majority of uses but uncertainty about whether hydrogen fuel cell or batteries will meet a few marginal uses has slowed up setting a framework for HGV decarbonisation.

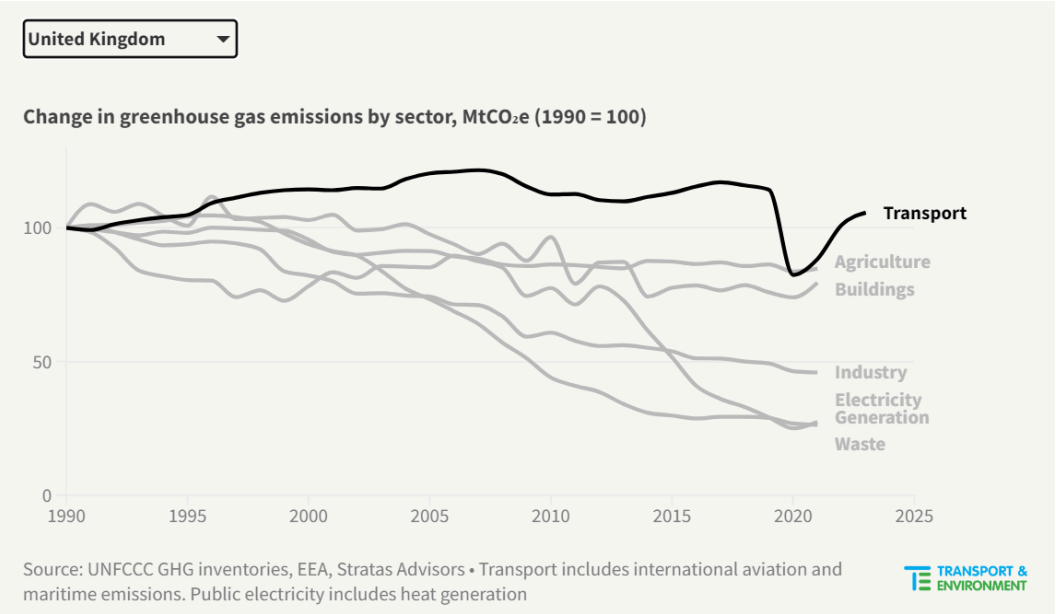
From 2033, carbon budgets will for the first time include international shipping and aviation (as well as for the first time being set in line with the 2050 net zero target). In part this will require a shift to fuels based on hydrogen and the policy framework for this needs to be set in the next parliament. If shipping and aviation emissions are not reduced, other parts of the economy will need to cut their emissions more quickly.

Decarbonising transport provides huge opportunities for UK industry. Already, UK leadership and policy certainty on electric vehicles has meant the UK has attracted the most investment in electric vehicle manufacturing, supply chain and charging in recent years. Ambition and policy certainty is needed for other transport sectors like HGVs, shipping and aviation.

The UK has a good track record in cutting emissions in the power sector and is on course to decarbonise the grid by the early 2030s. Now, the policy focus of the government needs to turn to decarbonising transport - the biggest climate challenge for the next government.

1. Transport emissions - an overview

Transport is the highest emitting sector in the UK - contributing 29% of all carbon emissions. The power sector is on course to decarbonise by the early 2030s but transport's emissions have barely shifted over the past three decades. Although policies are now in place to decarbonise cars and vans - and with a phase out date for diesel trucks - policies to decarbonise shipping and aviation are miles away from delivering the emissions reductions needed.



The next decade will be pivotal for climate action. For the transport sector, it's the decade where we have to start making a change. The next UK government will be pivotal to that change.

2. Cars and vans

Road transport is the biggest contributor to the UK's transport emissions. Cars account for over half of transport emissions and vans about 16%.

Regulation

- The zero emission vehicle (ZEV) mandate is now in effect and will drive down emissions from cars and vans. It requires automakers to hit annual targets for the share of new sales that need to be zero emission, increasing to 80% of all new cars and 70% of all new vans by 2030. The ZEV mandate is the biggest single carbon-cutting measure in the UK's arsenal - without it the UK will either not be able to meet its legally binding carbon budgets or will have to find massive cuts from elsewhere.

Demand for EVs

- The overall volume of EVs being sold is increasing and we've now passed the 1 million mark in terms of the number of battery electric vehicles (BEVS) on our road. The

technology is shifting from its “early adopter” phase towards becoming a more mainstream product for the public.

- Much of the demand for EVs is coming from corporate registrations, which make up around 60% of new car registrations. This is not a bad thing. Company cars make up 60% of new car registrations, fleets are better placed to absorb higher upfront costs of EVs and the cars go into the used market after three to five years, where most people buy their cars. BEVs are well incentivised in this market via low company car taxation (benefit-in-kind).
- While the ZEV mandate requirements on car makers will help to bring down EV prices and a wider variety of EV models to market there is much more to be done in securing the EV transition in the UK - especially in the context of economic squeezes that are acutely affecting the country, rampant misinformation, and inconsistent policy and messages from previous, successive governments.

What more does the Government need to do to support the transition?

- The rollout of charging infrastructure is continuing at pace, with charger installation rates now exceeding 40% growth year-on-year each month - enough to meet the government’s expectation of 300,000 chargers by 2030. There is still work to be done to ensure that charging infrastructure is evenly spread across the country and charging is reliable, accessible and affordable.
- Misinformation continues to be a pervasive and significant issue. Our research from earlier this year found that many people did not know basic information about electric vehicles and were unaware of existing policies already in place to support the transition. A new government needs to address these problems and develop communications campaigns in order to effectively communicate the transition to the public.
- This needs to be paired with policies to address the real issues people wanting to make the transition still have. Those include a guarantee on battery health, speeding up the reskilling of the maintenance and repair sector and tackling insurance premiums on EVs.

Why SUVs are a problem

- Although EVs are cutting emissions, the climate benefit is being reduced because new petrol and diesel cars’ emissions are going up. This is caused by the growth of sports utility vehicles (SUVs). T&E identified the trend of cars growing wider across Europe and the UK is no exception. SUV share of sales in the UK are some of the highest in Europe, making up 60% of all new car sales. The UK has much lower purchase tax rates on higher polluting cars, like SUVs, than other countries in Europe.

Switching vans to electric

- Emissions from vans are rising faster than from other road transport, increasing by 24% between 2001 and 2021 - with a 64% increase of vans on our roads in the same period.
- The sales share for battery electric vans has yet to pick up. Fiscal support, such as extending the existing plug-in van grant for small businesses, a diesel van scrappage

scheme and the development of a commercial vehicle infrastructure strategy should all help boost that slow rate of uptake. Cities could also bring in zero emission freight zones to encourage businesses to switch to electric vans and cargo bikes where feasible.

3. Trucks

Road freight is essential to UK trade and heavy goods vehicles (HGVs) comprise around one fifth of UK transport emissions in the UK. To achieve net zero, 50% of new HGVs need to be zero emission by 2030.

Policy needs to develop

- UK policy is that the purchase of new non-zero emissions HGVs under 26 tonnes will be phased out by 2035 and the purchase of those over 26 tonnes will be phased out by 2040.
- However, the phase-out dates need to be backed by zero emission vehicle (ZEV) mandates for HGVs to ensure there are sufficient zero emission trucks entering the UK market, support for supply chain development for battery electric trucks (which could also form a core pillar of the UK's industrial strategy) and more direct financial support for zero emission HGV acquisition.

Battery technology is the best solution for trucks

- Most now recognise that battery electric technology will be the technology of choice for decarbonisation of most HGV use cases and it could be adopted without putting major pressure on the public charging network, with most charging taking place at depots and warehouses in the early stages of the roll out (similar to zero emission buses).

Truck charging infrastructure

- Supporting the roll-out of private charging infrastructure for depot-based fleets, funding truck public charging at major warehouses and developing planning policies to further incentivise charging infrastructure at logistics hubs are also needed in order to enable the infrastructure.
- As the zero emission HGV market develops, public charging infrastructure will increasingly be needed at key locations like motorway services and truck stops.

4. Shipping

Shipping constitutes about a fifth of all UK transport greenhouse gas emissions but according to the Climate Change Committee, the UK has "no credible policies" to tackle the problem.

UK policy on shipping

- The current policy approach is to apply non-binding emissions targets to domestic shipping, which means no obligation for industry to meet those targets. For international

shipping, policy is to pass responsibility for reducing emissions to the International Maritime Organization (IMO) - a plan likely to fail as the IMO requires broad consensus across its members to progress initiatives.
- The lack of UK policy is especially concerning as international shipping emissions will be included in the UK's carbon budgets from 2033. If the IMO, which depends on international consensus for decisions, does not significantly increase ambition on emissions reductions and speed of delivery, UK international shipping emissions risk breaching the UK's carbon budgets. This would mean other sectors having to take action to make up the shortfall.

The long delayed Clean Maritime Plan

- The revised Clean Maritime Plan (CMP), the government's flagship strategy for eliminating UK shipping emissions in line with Net Zero, was due in 2022 but has still not been published. The CMP must set out how the UK will regulate all its shipping emissions, both domestic and international, under a single, Net Zero aligned policy framework. This must be in place early in the next parliament.

Future fuels for shipping

- The UK will require a significant amount of renewable, hydrogen-based fuels, (3.2 million tonnes in 2035), and has the opportunity to build an industry in the UK to produce this. Mandating use of these fuels would provide policy certainty to help guarantee investment in this as an industry.
- Minimum efficiency requirements on all ships making UK port calls would be a powerful way to cut emissions.
- So-called alternative fuels like biofuels and liquefied natural gas (LNG) are dead-ends that must be discouraged. Biofuels are very limited and can be better used in other sectors. LNG is a high-carbon fossil fuel favoured by some parts of the sector due to lower air pollutant emissions than traditional fossil fuels. LNG is worse for the climate than diesel. LNG cannot be replaced cost-effectively with non-fossil equivalents.

UK port emissions

- Ports in the UK face significant air pollution problems due to ships burning fossil fuels for electricity. Very significant amounts of pollutant emissions are discharged directly into ports, impacting human health. The UK needs to mandate a zero emission standard for all berths in UK ports, and provide a plan for shore power which allows vessels to plug in at berth instead of running engines.

5. Aviation

Aviation is the most climate-intensive form of transport. In the UK aviation emissions contribute significantly to UK emissions and transport emissions. Globally aviation accounts for three per

cent of all emissions, while in the UK, they account for more than twice that, seven per cent. It comprises 25% of all UK transport emissions.

15% of people take 70% of all flights and half of the UK population did not fly for 15 of the last 17 years. Aviation emissions have been lower since the pandemic thanks to the fall in demand, but emissions are bouncing back with budget airlines predominantly fuelling the trend while British Airways remains the highest polluter.

Aviation also has a secondary strong warming effect thanks to its non-CO2 emissions - nitrogen oxides (NOx), vapour trails and cloud formation triggered by the altitude at which aircraft operate. These emissions contribute twice as much to global warming and account for two thirds of aviation's warming effect.

UK aviation policy

- The UK Government's Jet Zero Strategy is inadequate to successfully decarbonise the sector in order to align with net-zero targets. It overly relies on technological solutions that will not make the impact they need in time to help the sector reach its own targets.

Sustainable Aviation Fuels

- A lot of noise is being made around Sustainable Aviation Fuel (SAF), which will be an important part of decarbonising aviation in the UK, but SAF needs to come from the right sources if it is to genuinely cut overall emissions. Crop-based biofuels are extremely limited and will require extensive land-use change. Used cooking oils and animal fats are also very limited as are advanced biofuels. For SAF to really deliver whole society carbon savings, hydrogen based fuels like e-kerosene will be needed.
- The SAF mandate, announced just a few weeks ago, should help with the transition but it does not go far enough and is considerably weaker than the equivalent in the European Union.

Paying its fair share

- The aviation industry, in direct contrast to all other sectors of the economy, does not pay for its pollution and pays no fuel duty. To ensure that industry starts paying for its pollution, fuel duty should be applied to kerosene to ensure there is a fairer application of fuel duty across all sectors and that the industry is being charged for the amount it pollutes. Alongside this, the emissions trading scheme (ETS) should be extended to all departing flights (at the moment it just covers flights within the UK and to Europe).

Zero-emission flying

- The development of zero-emission aircraft (that emit no 'tailpipe' emissions) is also vital to ensure that the aviation industry can continue operating in the age of net zero. Policy is needed to help reinforce efforts to produce the aircraft of the future and ensure their delivery is aligned with carbon budgets and net-zero targets.

6. Industrial Policy

There are a number of areas the UK could excel at in order as part of an industrial strategy that will help achieve net zero but also help our economy flourish long into the future. Those areas include electric vehicle production, battery production, lithium refining, and battery recycling. Competing with China's dominance of many manufacturing sectors needs a clear industrial strategy and a greater focus on collaboration with other countries to develop supply chains - from extraction of critical raw materials, to mid-stream processing and manufacturing.

Future automotive industry

- By 2035 the UK, in line with Europe, will end the sale of new petrol and diesel cars in order to put the country on the path to a decarbonised road system by 2050. Alongside this will come an industrial transformation in the UK as zero emission transport replaces the production of petrol and diesel cars.
- T&E analysis shows that the UK has the fifth largest announced battery capacity production in Europe but that nearly all of this is assessed at medium risk, a higher rate compared to other European countries.

Delivering an industrial strategy

- Policy certainty provided by the ZEV mandate is enabling private investment in the automotive sector and charging infrastructure. Policy certainty is now needed across other transport sectors.
- The UK also needs to target foundational sectors needed for net zero industry, particularly on battery value chain and renewable energy. There needs to be specifics on the supply of critical minerals with contracts on the ground instead of just vague agreements; solid measures to secure gigafactories and mid-stream production in the batteries supply-chain; and reducing the cost of energy by investing in the grid and continued growth in renewables.
- Collaboration, upskilling and planning are vital to the UK's development of a green industrial economy. That includes having a close strategic relationship with the EU and others to support battery manufacturing and supply chains; ensuring skills policy and regional policy are addressed; working with private finance to unlock greater levels of investment and scaling up innovation and ensuring that the planning and permitting system has the capacity and capability to deliver at pace.

Further information

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