

Written Evidence Department for Transport CCG004

Responses

1. What the department sees as its role in preparations for COP26

The Department for Transport (DfT) has two main roles in preparations for COP26:

- Drive greater international ambition and collaboration through three transport campaigns targeting zero emission vehicles, aviation and maritime
- Support planning for and the delivery of a safe, secure and resilient event.

COP26 Transport campaigns

The COP26 transport campaigns are captured within the 'Collaboration' goal of the four COP26 Goals, and include the DfT-led aviation and maritime campaigns, and the Zero Emission Vehicles (ZEV) campaign, which is jointly owned by the COP President and the Transport Secretary. These ambitious campaigns are engaging governments and industry to accelerate international ambition in transport decarbonisation.

Zero emission vehicles

The ZEV Campaign is one of five Presidency campaigns running alongside the overall negotiations. The ZEV Campaign is led by BEIS and COP26 Unit, in close collaboration with DfT. We represent the Transport Secretary's interests in the campaign.

The ZEV Transition Council which is jointly chaired by DfT Secretary of State and the COP President Designate is a leading initiative of the campaign and convenes Ministers representing over 50% of the global car market to coordinate efforts to accelerate the production of ZEVs, overcome strategic, political, and technical barriers, and increase economies of scale. Through the ZEV Transition Council and ZEV Campaign, we are lobbying countries and non-state actors to commit to 100% ZEV sales by 2040 (or earlier) to ensure we meet the goals of the Paris Agreement.

In addition, DfT is leading the road freight strand of the ZEV Campaign, working to increase international ambition and collaboration on decarbonising heavy goods vehicles.

Maritime

While maritime is not part of UNFCCC negotiations¹, COP26 presents an opportunity to showcase and demonstrate innovation and international leadership in maritime decarbonisation. As such, since 2019, DfT has been developing two COP26 shipping initiatives:

- **Operation Zero** will bring together a coalition of industry leaders in the offshore wind sector, committing to working together towards having

¹ The International Maritime Organization (IMO) is the dedicated UN agency for regulating international shipping and is based in London. Emissions from international shipping are not considered under the UN Framework Convention on Climate Change (UNFCCC) or the Paris Agreement, and are instead addressed through the IMO.

decarbonised workboats operating within the North Sea Basin's offshore wind farms by 2025.

- The **Clydebank Declaration** is an ambitious global initiative, encouraging and providing a process for governments to establish maritime 'green corridors' – specific maritime routes decarbonised from end to end, including both land-side infrastructure and vessels.

These proposals aim to unlock springboard opportunities for maritime decarbonisation through collaborative action.

We are also exploring the potential for an initiative focused on 'demand-pull' policy for COP26, complementing the recently announced Zero Emissions Shipping Missions under Mission Innovation 2.0, and engaging with the maritime sector on exciting opportunities for support for innovation in maritime decarbonisation that can be presented at COP.

Aviation

Like maritime, international aviation emissions also sit outside the formal UNFCCC negotiations,² though there are key links, notably between decisions taken on the Article 6 mechanism and the global aviation carbon offsetting scheme, CORSIA. However, COP26 represents an opportunity to galvanise support for increased ambition in tackling this hard-to-abate sector.

DfT is therefore leading two initiatives as part of the aviation policy campaign:

- The **International Aviation Net Zero Coalition** will be launched with a declaration at COP26, through which governments will commit to the highest ambition on international aviation emissions, as well as best practice in implementing CORSIA and sustainable aviation fuel policies.
- In collaboration with the Mission Possible Partnership, the *Clean Skies for Tomorrow* **Sustainable Aviation Fuel Ambassadors** is a small group of governments who are collaborating with the private sector to launch a 'toolkit' of sustainable aviation fuel policies that can be adopted by states and industry in all world regions. The states will also explore whether they can implement any of the policies themselves and promote them in their regions.

Support delivery of a safe, secure and resilient event

DfT is working closely with Cabinet Office's COP26 Unit and Transport Scotland on the design and delivery of an end-to-end transport plan for COP26. To ensure that safety and security remain at the core of delivering the Transport Plan, we engage with partners and stakeholders on security risks planning and mitigation.

Single Transport Plan: We are working with the COP26 Unit and Transport Scotland on the development of a Single Transport Plan. We have commissioned an analytical evidence base and are collaborating with modal and industry experts to support planning assumptions and decision-making that factors in capacity, costs, safety and other operational impacts and barriers to delivering the event.

² The 1997 Kyoto Protocol gave responsibility for tackling international aviation emissions to the International Civil Aviation Organization (ICAO), the UN aviation agency. This is primarily because, as emissions that occur between states, there is no agreed way of allocating these emissions to individual states.

Safety and Security: We are working with Cabinet Office, Transport Scotland and other government departments to understand the security and safety risks associated with COP26 and conduct our own assessments and identify mitigations as part of the Event Safety and Security Risk Assessment - the risk assessment document for COP26.

Delivery and resilience: We are working with all delivery partners on the development of the COP26 Concept of Operations (CONOPS), identifying any second order consequences of the planned structures within the CONOPS and ensuring that our own Command, Control and Communication structures are compliant with all requirements. We will develop a plan for a DfT Departmental Operations Centre that will stand-up for the duration of the event and coordinate our actions, and we will deliver the necessary training internally and with other delivery partners.

We are exploring options to facilitate and promote low carbon journey options to and from Glasgow - including maximising train travel by delegates across Europe and the UK, and potentially supplying sustainable aviation fuels for some departing flights, through a sub-group of the Jet Zero Council, as announced by Transport Secretary at Davos on 27 January.

2. Actions the department is taking to ensure a COP26 package can be agreed

DfT does not have a role in the negotiations or securing a package for COP26, beyond the roles outlined in response to question 1.

3. How the department is factoring climate change (1) mitigation, and (2) adaptation, into its policy decisions

Mitigation

DfT recognises the urgent need to go further and faster to decarbonise the entire transport sector. In 2019 the sector contributed 27% of domestic emissions – more than any other.

DfT is driving forward the change needed to deliver net zero from transport. Tackling climate change and improving air quality by decarbonising transport is one the department's priority outcomes. Sustainability is at the heart of other priorities, such as levelling up.

We will soon publish our Transport Decarbonisation Plan (TDP), setting out the steps we will take to deliver the necessary carbon reductions across every form of transport. The TDP will detail a credible and ambitious pathway to delivering transport's contribution to carbon budgets and net zero by 2050. It will be complemented by the transport sector as a key theme in the economy-wide Net Zero Strategy, due for publication in Autumn 2021.

DfT explored six priorities in developing the TDP, covering every mode of transport and measures to encourage behaviour change, roll-out low carbon technology, and galvanise innovation and green investment. Details of these

priorities as set out in Decarbonising Transport: Setting the Challenge in March 2020 are as follows.

1. Decarbonisation of road vehicles:

- Support the transition to zero emission road vehicles through:
 - regulatory framework
 - strong consumer base
 - market conditions
 - vehicle supply
 - refuelling and recharging infrastructure
 - energy system readiness
- Maximise benefits through investment in innovative technology development, and development of sustainable supply chains

2. Accelerating modal shift to public and active transport:

- Help make public transport and active travel the natural first choice for daily activities
- Support fewer car trips through a coherent, convenient and cost-effective public network; and explore how we might use cars differently in future
- Encourage cycling and walking for short journeys
- Explore how to best support the behaviour change required

3. Decarbonising how we get our goods:

- Consider future demand and changing consumer behaviour for goods
- Transform 'last-mile' deliveries – developing an integrated, clean and sustainable delivery system
- Optimise logistics efficiency and explore innovative digitally-enabled solutions, data sharing and collaborative platforms

4. Place-based solutions and environmental impacts:

- Consider where, how and why emissions occur in specific locations
- Acknowledge a single solution will not be appropriate for every location
- Address emissions at a local level through local management of transport solutions
- Target support for local areas, considering regional diversity and different solutions

5. UK as a hub for green transport, technology and innovation:

- Utilise the UK's world-leading scientists, business leaders and innovators to position the UK as an internationally recognised leader of environmentally sustainable technology and innovation in transport
- Build on expertise in the UK for technology developments and capitalise on near market quick wins

6. Reducing carbon in a global economy:

- Lead international efforts in transport emissions reduction
- Recognise aviation and maritime are international by nature and require international solutions
- Harness the UK as a global centre of expertise, driving low carbon innovation and global leadership, boosting the UK economy
- Further to the comprehensive decarbonisation policy package DfT is developing and implementing, officials are also working closely with other government departments to ensure the impacts and requirements of transport decarbonisation – for example, embodied emissions of improved rail infrastructure or the impact on the electricity grid of the transition to electric vehicles – are compatible with our economy-wide climate obligations.

Adaptation

Our plans to enhance resilience to climate change risks across road, rail, ports and aviation are set out in the UK's second National Adaptation Programme report, published in July 2018 - the government's response to the second Climate Change Risk Assessment (CCRA). Ahead of that, transport organisations including road and rail, strategic airport operators and harbour authorities produced progress reports under the second round of the climate change adaptation reporting power setting out the current and future predicted effects of climate change on their organisation and their proposals for adapting to climate change. The third round of climate change adaptation reporting is currently underway and the third CCRA is due in 2022.

Continually improving the safety, security and resilience of the transport system is key area of focus for the department. DfT is committed to preparing for, and responding effectively to, emergencies and unexpected events affecting all forms of transport – reducing risks for users and, when incidents and disruption do occur, keeping people informed and recovering as quickly as possible. Part of that preparation includes consideration the implications of, and adapting to, climate change. DfT will continue to develop a suite of mitigations to the full spectrum of threats and hazards, using innovation and R&D alongside policy solutions.

DfT continues to work with stakeholders across the sector to assess and improve the network's resilience to extreme weather events such as flooding, landslides and storms, including those exacerbated by climate change. Some examples of this work are included below.

Network Rail

Network Rail work closely with many governmental and specialist organisations to prepare their railway for the climate changes projected over the next few years, decades and beyond. Their planning is based on data from UK Climate Projections, which incorporates sophisticated scientific methods provided by the Met Office to suggest project climatic changes – out to 2080.

In 2015 Network Rail produced an overarching Second Climate Change Adaptation Report for Defra as part of the second round of the adaptation reporting powers under the Climate Change 2008 Act. This summarised their progress towards understanding the potential impacts of climate change on the performance and safety of the rail network, and actions taken to increase resilience. Network Rail have notified Defra that they will participate in the Third Round of Adaptation Reporting. Network Rail are planning to submit their report in 2021.

Network Rail's Weather Resilience and Climate Change Adaptation (WRCCA) Strategy was published in January 2017 and outlines their four pillars of resilience:

Network Rail's Weather Resilience and Climate Change Adaptation Policy outlines the key principles they are embedding within the way they do business including:

- Incorporate consideration of how climate change might amplify risks into analysis and decision-making processes throughout the business.
- Adapt at construction and at asset renewal to provide resilience in the most cost-effective manner
- Replacing like for better rather than like for like, with consideration of the whole life cost and the best strategic approach for managing the railway.
- Collaboration across the rail industry, government and other stakeholders to improve our understanding and management of weather and climate risks.

Network Rail are also working to ensure the most up-to-date technical data and expertise is utilised. Network Rail are developing technical guidance and tools to support their staff and contractors with understanding and managing the impacts of climate change across the railway.

Highways England

Highways England (HE) have also taken the effects of climate change into account using the latest UK Climate Projections. This work has included making climate adaptation a priority in their Sustainable Development Strategy and embedding climate resilience into the Design Manual for Roads and Bridges requirements. As for Network Rail, HE produced a progress report as part of the second round of the adaptation reporting powers under the Climate Change 2008 Act. HE are undertaking an organisation wide risk assessment under the Third Round of Adaptation Reporting, and are updating this assessment for publication later this year.

HE schemes are required to take climate change into account by undertaking a scheme level risk assessment of the effect of climate change to ensure that what is built is resilient to climate change. This should ensure that that schemes are prepared for risks such as wetter winters and increased temperatures. HE continue to work on projects, including through designated funds, to build resilience. They also co-operate with others to share best practice notably through the Infrastructure Operators Adaptation Forum and internationally working with the Conference of European Directors of Roads.

4. What the department considers to be the biggest challenges related to climate change mitigation and adaptation that fall within its remit, and how the department plans to address those challenges

For mitigation, the department set out its view in Decarbonising Transport: Setting the Challenge in March 2020. A step change required in both the breadth and scale of ambition. Decarbonisation requires a coordinated, cross-modal approach to reduce emissions to deliver the sector's contribution to both carbon budgets and net zero.

Technical measures, such as the need for rapid renewal of the road vehicle fleet with zero emission vehicles, are well understood and we have taken decisive action since "Setting the Challenge". This includes phasing out the sale of new petrol and diesel cars and vans by 2030, with all new cars and vans zero emissions at the tailpipe from 2035.

For a credible pathway to net zero, we also need to consider how we travel and how our goods and services reach us today. This is needed in parallel to the rapid development and deployment of clean technology. We also continue to invest in decarbonising public transport as one of the most sustainable forms of transport, encouraging active travel and funding R&D to transition the freight, aviation and maritime sector. A further challenge is the international nature of the aviation and maritime sectors, and the need therefore for coordinated global action to address emissions. From the sixth carbon budget, we will incorporate the UK's share of international aviation and shipping emissions into UK targets, allowing for these emissions to be accounted for consistently.

We believe the six strategic priorities under the TDP set out a cohesive framework for effectively tackling these challenges. In developing the TDP we conducted a significant programme of stakeholder engagement and policy development, including four meetings of the Ministerial-chaired Net Zero Transport Board and received over 7000 public responses to our call for ideas.

The TDP will build on this work and will be genuinely high ambition – technically and feasibly – for all areas of transport. and will rely, in part, on future HGV, maritime and aviation technology, coupled with the necessary behavioural and societal change. We are working to publish the Plan as soon as possible.

For adaptation, adverse weather and its impacts, including flooding and high winds can have clear impacts across transport. Ensuring existing infrastructure assets are adapted as required to cope with the impact of climate change in the

UK, presents a continued challenge. For instance, in rail, much of the network is over 100 years old and some is approaching 200 years old. Ports are also inherently susceptible to coastal flooding. As set out in the National Adaptation Programme report, they therefore have established procedures for handling and monitoring current and future flood risk, including well-rehearsed flood plans.

A further challenge is the need to ensure future transport infrastructure is designed to cope with the impact of climate change given the lead times and long expected lifespan of transport infrastructure.

As set out in the answer to question 3, key organisations such as Network Rail, Highways England and the major air and sea ports are already planning and reporting on their progress in adapting their assets for future weather trends under the Adaptation Reporting Power.

5. What assessment the department has made of the costs and benefits of those plans.

Delivering the fundamental changes required to deliver net zero from transport will result in a wide range of costs and benefits. These will vary dependent on the precise design and delivery of future interventions. They will also be impacted by factors such as consumer behaviour and the impact of innovation in producing new and/or lower cost low and zero emission technology; wider interventions and results from across the economy; and wider economic factors such as gross domestic product and future fuel prices. As such, the extent of these costs and benefits is not fully known at this point in time.

When setting the sixth carbon budget, an accompanying impact assessment was published. Overall, it was estimated that setting the sixth carbon budget at 965MtCO₂e will have a significant and positive net present value of £266bn compared to no further climate action, with monetised benefits more than offsetting the costs. This impact assessment presented “an illustrative assessment of possible pathways through the sixth carbon budget period to 2050, recognising the uncertainty whilst still allowing an assessment of the key costs, benefits, risks and opportunities of different budget levels” including those from transport.

Alongside emissions reduction, policies to decarbonise transport are expected to result in significant co-benefits, including improvements to air quality, improved health and wellbeing, the creation of jobs and growth, alongside reduced noise. This will be set out in more detail in the Transport Decarbonisation Plan. We believe that people everywhere will feel the benefits of mitigating climate change through transport decarbonisation – villages, towns, cities and countryside will be cleaner, greener, healthier and more prosperous and pleasant environments in which to live and work.

The costs and benefits of measures to mitigate climate risks are also dependent on the majority of the factors set out above as well as the uncertainty of future climate impacts. There will inevitably be significant costs to adapting the UK’s infrastructure to climate change, but ensuring that recovery from severe weather events is rapid and efficient will have widespread and tangible benefits far beyond the transport sector.

As individual policies to decarbonise transport, as well as to adapt to climate change, are finalised, these will be accompanied with their own impact assessments where appropriate, which will set out the specific costs and benefits of the proposals.