



Strategic Transport Forum

15th May 2020

Agenda Item 4: Decarbonisation

Recommendation:

It is recommended that the Forum:

- a) Consider the significant national policy developments that need to be reflected in England's Economic Heartland's response to decarbonisation.**
- b) Note progress with the Pathways to Decarbonisation project and agree to consider its final outcomes alongside the draft Transport Strategy at its next meeting.**

1. Context

- 1.1. Forum members will recall that many responses to the engagement phase of the Outline Transport Strategy called for further development of EEH's policy and approach to decarbonisation, climate change and carbon related issues.
- 1.2. In addition, Forum members will be well aware of the climate emergency declarations that have been made by the majority of England's Economic Heartland's constituent authorities.
- 1.3. In January 2020 the Strategic Transport Forum, following advice from the Transport Officer Group, agreed that further work was needed to ensure that the draft Transport Strategy would be more ambitious in terms of pursuing the de-carbonisation agenda.
- 1.4. The Strategic Transport Forum also recognised the requirement to align with national policy and legislative requirements.
- 1.5. To this end the Forum approved the proposal to work with the collaboration of universities that together are working on the National Infrastructure Systems Model (NISMOD) and Data & Analytics National Infrastructure platform (DAFNI) projects to leverage their already extensive research program to deliver a regionally-specific project exploring our pathways to decarbonisation.
- 1.6. Since the previous meeting, a number of key decisions have been made that further strengthen the need for England's Economic Heartland to be bold in our approach. In addition to some key national policy developments set out below, Forum Members will be conscious of the Court of Appeal judgement in February 2020 which determined that proposals for the expansion of Heathrow Airport would undermine the commitments of the 2016 Paris Agreement, to which the UK is a co-signatory.

2. DfT: Transport Decarbonisation Plan

- 2.1. On 26 March 2020, the Department for Transport published a report detailing the approach to the development of The Transport Decarbonisation Plan. The document was intended be



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the commencement of a series of discussions and debate on how the transport sector can best respond to decarbonisation and set out key policy positions.

- 2.2. The document was a positive outcome for England's Economic Heartland, given the synergies between our proposed level of ambition and plan of action and the Department's. The document set out the Secretary of State's vision for decarbonisation, including recognition that there will be a fundamental change to the way we access transport in the future. The document sets out, for example that "Public transport and active travel will be the natural first choice for our daily activities. We will use our cars less and be able to rely on a convenient, cost-effective and coherent public transport network".
- 2.3. The document also recognises the importance of taking a "whole system" approach to transport provision and systemic decarbonisation. The document highlights that with current policies in place and emerging trends/pathways, the UK's transport system will not achieve the requisite emissions reductions to meet the statutory 2050 targets in the Climate Change Act.
- 2.4. These high-level messages set out in the Transport Decarbonisation Plan are entirely in line with EEH's approach and reinforce the significance and relevance of our pathways to decarbonisation commission and EEH's policy framework for decarbonisation.
- 2.5. EEH will continue to support DfT in the development and delivery of its Decarbonisation Plan, including collating and consolidating evidence where required. EEH has also offered our assistance to DfT to support any regional engagement work planned.

3. Committee on Climate Change

- 3.1. The Committee on Climate Change (CCC) is a statutory independent body that advise the UK and devolved governments on emissions targets and reports to Parliament on progress made in reducing greenhouse gas emissions.
- 3.2. The CCC has amend its 2020 work programme to respond to the global Covid-19 pandemic and will refocus its annual Progress Report to Parliament on 25th of June to include advice on supporting a resilient recovery following the pandemic, alongside the statutory assessment of the UK's progress in reducing emissions.
- 3.3. Advice to Government on the level of the Sixth Carbon Budget (2033-2037) will be published in December 2020, instead of in September. This provides additional time to complete the analysis and reflect on the impacts of the Covid-19 pandemic. The new publication date is still within the statutory timetable.
- 3.4. While the revised timetable should not directly impact the delivery of EEH's draft Transport Strategy, the delivery of the DfT Transport Decarbonisation Plan may be affected. Carbon targets with in the document may be published with significant caveat and will be subject to revision.

4. Pathways to decarbonisation.

- 4.1. EEH's Pathways to Decarbonisation is underway in partnership with Oxford University and NISMOD (National Infrastructure Systems MODel). The project outcomes underpin the policies around decarbonisation set out in the EEH draft Transport Strategy. The that end, the policies included in the draft Transport Strategy have been developed following advice from the research consortium and reflect the likely outcomes that the research work will conclude.



- 4.2. EEH Business Unit has worked with the research consortium to agree the proposed scenario pathways towards decarbonising transport in EEH. The scenario pathways being tested build on the policy framework set out in the draft transport strategy.
- 4.3. Forum members will be mindful that there is a legal requirement that the transport strategy and policies within it give due consideration to climate change and decarbonisation and the requirements to deliver against government targets. The outcomes of the pathways to decarbonisation work will give us an evidence-based narrative that is testing our approach and policies against to both delivering our legal requirements and our regional ambitions.
- 4.4. The outcomes from the pathways to decarbonisation project will give EEH a framework on which to develop implementation plans for the policies set out in the transport strategy. As part of this, they are providing the evidence we need to determine what implementation actions are best delivered at the local, regional and national scale.
- 4.5. Each agreed pathway is comprised of a variety of strategic approaches towards decarbonisation by 2050, each with a different focus.
- 4.6. For all pathways (except business as usual), the research methodology assumes that 100% of motor vehicle traffic in 2050 is made up of zero carbon vehicles (based on a modified 'Shift to ZEVs' Scenario and CCC Net Zero 'Further Ambition' and 'Speculative' scenarios). For these analyses, we assume that there are differences in the rapidity of change, vehicle efficiencies and capacity utilisation, depending on the pathway.
- 4.7. The pathways that are being taken forward by the Consortium are set out below.
- a) **Pathway 1:** Business as Usual (BaU). The 'Business as Usual' pathway acts as a 'baseline' and is based on recent trends in transport demands. The baseline year for the model is 2015. This pathway assumes that by 2050, 46% of car and 25% LGV mileage is powered by zero emission technologies (based on DfT TAG Data Book 2019 estimates).
 - b) **Pathway 2:** Highly Connected (tech-led solution). This pathway is focused on the increasing use of digital communications to enhance the operation of transport systems, with a high and increasing level of embedded technology within vehicles and transport systems, connected to technologies in homes, businesses and mobile devices.
 - c) **Pathway 3:** Adapted Fleet (tech-led solution). Rapid technological development allows wide-ranging modernisation of the vehicle stock for all modes at a faster rate than for the 'Highly Connected' Pathway. Increased engine efficiencies reduce energy consumption for all types of vehicle. Electrification is extended across the existing rail network and through the development of new tram and trolleybus networks. Extensive deployment of hybrid transmissions and regenerative braking also reduce fuel consumption.
 - d) **Pathway 4:** Behavioural Shift (policy-led solution). The focus of this pathway is to achieve behavioural change away from single occupant car driving towards more car sharing and use of public transport. The approach is likely to be a combination of road pricing measures and education measures to promote more sustainable transport models and active travel. This will be assessed in the first instance through an increase in the cost of car travel by 50%, although this may be modified as results are scrutinised.



- e) **Pathway 5:** Behavioural Shift (results-led solution) This Pathway is related to Pathway 4, but rather than implementing policies of pricing and behavioural shift, we assume that societal change takes place (regardless of the policy being implemented). This results-led Pathway is then assessed to determine how closely it aligns with other Pathways.

5. Impact of COVID19

- 5.1. There is no doubt of the positive short term impacts of significantly reduced travel patterns on air quality and carbon emissions during the COVID19 pandemic. There are, in addition, some global conditions that further the uncertainty around the long term impact of the current pandemic.
- 5.2. The fall in demand for fossil fuel, driving the oil market to sub \$25 barrel. It is plausible that peak fossil fuel demand may have been bought forward, meaning 2019 could be the peak year for carbon emissions.
- 5.3. However, there is an opposing view: the fossil fuel industry could bounce back, significant forward buying may result in a delay in the transition to ULEVs and potentially a delay in the delivery of new EV/ULEV models and modes.
- 5.4. Whilst it's impossible to predict the future, it's unlikely that long haul air travel will recover to pre Covid-19 levels of service. This may result in a further reduction in oil demand and international business travel.
- 5.5. There could be some significant changes to commuter travel patterns, particularly a reduction in am/pm peak as more people work from home which could significantly change the way bodies like EEH and our partners deliver Policies as currently set out in the EEH Transport Strategy.

6. Timeline

- 6.1. Whilst the social and economic situation remains fluid, the draft Transport Strategy offers a strong framework of principals to support a clean growth recovery and the region and country. Our programme of work continues – the realities of climate change and the necessity to decarbonise remain.
- 6.2. EEH will continue to provide updates to partners on the changing situation allowing us, as a region, to be at the forefront of changed approaches and behaviours as they arise.
- 6.3. The outputs of the pathways to decarbonisation work will be provided to the Forum at its meeting on 19th June 2020 and will be used to ensure the final draft of the Transport Strategy is sufficiently clear and ambitious on EEH's pathway to decarbonisation.

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