

# Decarbonisation Policy and Technical Stocktake Interim Findings: Internal Briefing Note for TfN

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## Overview

This is a briefing note outlining the key findings from the policy and technical stocktakes. These have been developed over the past two months and have involved a literature review of key policy and technical documents produced to date. It also reflects discussions with TfN technical leads during a 2-day visit to TfN's head office in Manchester in early August.

## Documents, Programmes, Analysis and Policies Reviewed

A summary of the major documents, programmes and analysis undertaken by a range of organisations – including TfN itself, national government and agencies, local authorities and TN partners – is as follows:

- Interventions developed by TfN were identified in the Investment Programme, the SPOCs prepared to date for the SDCs, and the Strategic Transport Plan. The Investment Programme provides an overview of all currently planned projects and interventions, and incorporates the measures outlined in the other documents. These have been examined and are presented here.
- The Northern Powerhouse Independent Economic Review (NPIER) 'transformational economic scenario' underpins the transformational travel scenarios developed by TfN, which in turn act as an input into greenhouse gas calculations. The 'transformational economic scenario' is to be updated, and a new suite of transformational travel scenarios are due to be developed by TfN.
- The Greenhouse Gas Model (v7) developed to date provides a back-end calculation process for greenhouse gas emissions. This is currently being superseded as part of the move to the new analytical framework, which is due to be deployed for use alongside the new travel scenarios.
- TfN's analytical framework will consist of components including NELUM and NorTMS and will include a vehicle fleet model. This framework can account for the impacts of and interrelationship between a comprehensive list of drivers that result in changes in travel demand and emissions intensity. These outputs can be used to calculate the overall emissions by applying the existing back-end calculation process.
- National-level policy which will influence greenhouse gas emissions within TfN's remit has also been reviewed:
  - The DfT's Road to Zero defines a suite of measures focused around ending the sale of conventional petrol/diesel cars and vans by 2040.

- The Clean Growth Strategy developed by BEIS outlines the Government's commitments in growing the economy while cutting GHG emissions.
- The Climate Change Act 2008 introduced an 80% emissions reduction target by 2050 relative to 1990 levels. This was accompanied by 5-year carbon budgets
- The 2019 update to the Climate Change Act amended the emissions reduction target to a Net Zero 2050 target.
- Policies and interventions devised by eight local authorities within TfN's jurisdiction (WYCA, York, Greater Manchester, Hull, Sheffield, Newcastle, Liverpool and Tees Valley) have been reviewed. Quantification of greenhouse gas impacts associated with these is limited.
- The Tyndall Centre has produced analysis for Greater Manchester and Sheffield setting out carbon budgets and a GHG emissions pathway which is related to and based on the commitments of the Paris Agreement. This is the only analysis currently published, which we are aware of, which directly aligns carbon pathways to the Paris Agreement commitments.

### **Initial Commentary and key Thoughts**

At this stage it may also be useful to outline some key thoughts and initial commentary based on the findings of the policy and technical stocktakes, and discussions with TfN technical leads. However, please note that a more comprehensive and detailed commentary, findings, suggestions and recommendations will be detailed in the briefing notes that are to follow:

- In order to remain in line with the UK Net Zero 2050 commitment and the Paris Agreement commitments, TfN will need to consider an ambitious greenhouse gas target and associated decarbonisation pathway. This will likely include an absolute zero emissions target for those emissions that fall under TfN's jurisdiction by 2050 at the latest. Innovative work has been conducted by the Tyndall Centre developing carbon budgets for Greater Manchester and Sheffield which are in line with the Paris Agreement. This presents a general approach that TfN and its partner organisations could follow.
- A significant number of policies and interventions have been proposed by TfN's partner local authorities. TfN could build on this in the future and seek to maximise these efforts and outcomes within its own more overarching decarbonisation work. This could be achieved through developing and leading a joined-up technical and policy level a decarbonisation strategy across the North. Additionally, TfN's existing focus through its Investment programme is not on reducing greenhouse gas emissions. TfN could reposition its focus more closely towards reducing GHG emissions by aligning with and exploiting the policy levers available to its local authority partners. Our work revealed a clear intention amongst local authorities to liaise with TfN more closely on decarbonisation work moving forwards.
- A comprehensive analytical framework is in the final stages of development which should allow TfN to undertake sophisticated analysis of a wide range of policies and measures. This will provide TfN with a robust evidence base to inform the decarbonisation pathway. Further thought is required as to how this modelling suite can be more aligned to decarbonisation policy analysis. This may require some additional pre and post processing of data.
- Further work is needed to develop a robust and accurate greenhouse gas emissions inventory specific to TfN's jurisdiction.

- Key to further analytical work is determining which policies and interventions are included in the baseline and policy scenario projections. There are no right or wrong approaches to doing so, and decisions will be informed as much by policy as by technical considerations. However, whatever approach is adopted it will need to be clearly documented.
- It is recommended that the policy stocktake is used as an evolving document to keep track of new interventions and the latest policy developments which need to be accounted for in future decarbonisation analysis.
- It is further recommended that TfN considers the scope for analysing air quality and noise impacts alongside the current focus on greenhouse gas emissions. There are significant crossovers in these areas and there is potential for applying aspects of the analytical framework for air quality and noise assessment.