

Institution of Civil Engineers Northern English Regions

Consultation Response to the Transport for the North (TfN) Decarbonisation Strategy

The Institution of Civil Engineers (ICE) is an independent, professional body working to harness engineering knowledge and expertise for the benefit of society. The Northern English regions of the ICE (North East, Yorkshire & Humber and North West) have 13,000 members in the civil engineering profession. A roundtable of members representing each region discussed the strategy and this consultation response is a summary of that discussion. The detail of the individual responses will be attached with this overall position.

Question 2: Surface transport emissions in the North: We have presented a range of information about present day emissions being generated by surface transport in the North, as well as the emissions we expect to be generated in the future without additional policy measures in place. Are there any other factors affecting these emissions, or additional areas for analysis, that would be important for us to consider?

It was acknowledged that there was a definite shift in behaviours resulting from the pandemic, in terms of demands on transport infrastructure. It is important to fully understand the different scenarios of mobility going forward, paying particular attention to the supply chains and freight distribution. Overall, there was an agreement that TfN should explicitly state its remit in delivering on the priorities identified and how to identify the adequate and relevant funding mechanism to do so.

Question 3: Bridging the gap to decarbonise surface transport in the North: To what extent do you agree or disagree with TfN's approach to developing a Decarbonisation Trajectory?

There was a general consensus on TfN's approach, but due consideration needs to be given to the funding mechanism and practical delivery of these initiatives proposed.

Question 4: Why

Some areas of transport will decarbonise faster than others so a standard rate of progress cannot be assumed, but rather one which is realistic, and evidence based to give an achievable target. It was recognised that bridging the gap with the decarbonisation trajectory will involve a combination of policies and regulations that target vehicle sales, mode-shift, demand reduction and improved fuel efficiency. The policy on cars is in place but HGVs remain a big problem and a main polluter¹. Tax credits, lower prices for electric vehicles and the development of a comprehensive strategy for charging infrastructure are all major considerations.

¹ In its Transport Decarbonisation Plan last month, Government committed to ban the sale of petrol/diesel HGVs from 2040 (and this might be earlier, subject to consultation)

5a. Choose the three Policy Gap Actions (for TfN to prioritise), that you consider to be of most importance?

1. PGA8: Develop and implement comprehensive plans for the regional public transport network, such as Northern Powerhouse Rail and wider improvements to the rail network.
2. PGA11: Provide evidence and strategic support to partners to identify opportunities for shared mobility.
3. PGA12: Work with Government to support regional coordination of measures to improve logistics efficiency, including consolidation centres, mode shift to rail and information democratisation schemes.

It was felt that PG8 is underway with evidence of good planning but more focus should be placed on implementation. Assuming that PG8 is progressing well, PG11 becomes key. Mobility is an issue for all but there is a big gap between urban areas and city centres. Mobility in urban areas needs to improve to significantly impact mode shift in accessing the main networks. TfN cannot do this in a vacuum and should be engaging with other regions, on a national level to make sure that systems are complementary. The need for central research has been identified to support initiatives.

The simplest way to decarbonise transport is to travel less but understanding what impact an increase in working from home has on productivity is needed before any imposing strategies for limiting travel. There is evidence² that working from home is not as carbon efficient as we might think and working from the office is less carbon intensive. More research is needed to understand the impact of future mobility scenarios.

Whilst there was agreement that they were the right strategies, TfN must prioritise what it can deliver effectively whilst the whole debate on future mobility scenarios continues to be discussed³.

It was recognised that the issue of freight is complex and that behavioural changes influence user needs. Local and small businesses are a big part of the supply chain and there needs to be due consideration in the provision of local workforce, commuting ease and good transport links as well as long haul decarbonisation.

In conclusion, it was felt that any future models should consider appropriate infrastructure networks and the provision of low carbon alternatives for the 15-minute commuters and communities' needs for the movement of goods. It is recognised that the widespread provision of EV charging points will be challenging in many parts of the North with predominantly terraced housing.

5b. Choose the three recommendations for national government, that you consider to be of most importance?

1. Mode Shift 2. Provide a substantial and consistent funding stream to Local Authorities to improve public transport and active travel networks.
2. Reducing car travel 3. Develop a coherent plan for taxing and pricing car travel that accounts for reduced Fuel Duty revenues and incentivises key outcomes such as reduced overall car travel, more efficient road network operation and uptake of ZEVs.
3. Planning policies 12. Develop appraisal guidance that includes the full impacts of transport projects on carbon.

² Internal Mott MacDonald report on Carbon – can be obtained on request

³ <https://www.ice.org.uk/news-and-insight/policy/ice-discussion-paper-public-transport-funding>

Overall, the most appropriate funding mechanisms backed with effective governance is needed to achieve a coherent strategy with local impact. ICE has previously explored the practicalities of a ‘pay as you go’ (PAYG) system on the UK’s Strategic Road Network and found that there was public support for road user charging if it was used as a replacement for both Vehicle Excise Duty (VED) and Fuel Duty.⁴ ICE outlined a set of principles for PAYG roads, which included ensuring that the system is fair and transparent so that it cannot be challenged in terms of its pricing method and integrity.⁵

5c. Choose the three recommendations for local government, that you consider to be of most importance?

1. Mode Shift 1. Use marketing policies to re-build confidence in the safety and value of public transport.
2. Mode Shift 2. Subject to Government funding, invest in bus and light rail networks to offer improved journey quality, accessibility, and cheaper fares to passengers.
3. Planning Policies 11. Use local planning policy to promote ‘15-minute neighbourhoods’, prioritise development close to public transport hubs and encourage car-free or car-lite development.

Improving the passenger/user experience is crucial for the uptake of the decarbonisation strategy actions and concentrating on the 15-minute neighbourhood concept is vital. In a recent discussion paper on the future funding of public transport post-Covid, ICE outlined that there will need to be changes in where revenue comes from, whether through continued central government support, higher fares, diversified funding streams or new/devolved taxation powers.⁶

It is crucial that governments and operators take these decisions on funding soon. The costs of uncertain, short-term bailout packages without a clear transition plan could begin a spiral of decline and cuts to both public transport services and capital projects that would take years to recover from.

6. Do you feel we have missed any policy actions or recommendations?

1. TfN should support the enhancement of accessibility, comfort and functionality of existing transport interchanges. There are quick wins in these areas that could enhance / gain public support.
2. TfN should work with partners to deliver a policy for an existing or new train station within a minimum radius of every new housing development, with adequate parking including priority/reduced fee parking for ZEVs and active travel provision.

7. To achieve the required demand management targets, where do you feel the policy focus should lie?

Technology	Balanced
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⁴ ICE (2019) [Pay As You Go – Achieving Sustainable Roads Funding in England](#)

⁵ ICE (2019) [Pay As You Go – Achieving Sustainable Roads Funding in England](#)

⁶ ICE (2021) [ICE Discussion Paper: Public Transport Funding Post-Covid](#)

Demand reduction	More focus
Mode shift	More focus

8a. Choose the three Policy Gap Actions (for TfN to prioritise), that you consider to be of most importance?

1. PGA1: Develop a pan-northern ZEV infrastructure plan to ensure transboundary road trips are considered, factoring in interoperability across the region and optimal locations for high-power charging hubs on the Major Road Network, with input from Local Authorities and the Distribution Network Operators (DNOs).
2. PGA5: Work with Network Rail and train operating companies to ensure service patterns are based around the progression of electrification and minimising the use of diesel-only trains.
3. PGA7: Work with Network Rail to ensure there is sufficient capacity to allow freight traffic to run directly and with minimal dwell times, reducing emissions from existing diesels.

TfN should be adopting a net zero rail strategy with a focus on electrification of networks, looking at whole life costs including procurement and maintenance. TfN should avoid referring to “minimising” and commit to eliminating diesel only trains (PGA5 Q8a).

It is also recommended that TfN look at inter- regional rail connections, to improve their technical base to support electrification and understand the other demands of hydrogen use within the timescale of delivering electrification.

8b. Choose the three recommendations for national government, that you consider to be of most importance?

1. Road Vehicles 3. Develop a coherent and comprehensive strategy for charging infrastructure, defining a role for local and regional bodies, providing public funding where appropriate and developing a regulatory regime that enables the private sector to invest and ensure interoperability
2. Road Vehicles 4. As more ZEV HGV models become available in the 2020s, introduce a system of strong grants and tax incentives
3. Rail 7. In partnership with Network Rail, identify and fund a core network for electrification with the highest traffic density, then prioritise secondary, lower density routes where alternative technology will be the permanent solution.

TfN needs to take an active role in the electrification of the rail network as a matter of priority, with a second emphasis on electrification of the road network.

8c. Choose the three recommendations for local government, that you consider to be of most importance?

1. General 1. Develop a model for delivery and maintenance of electric vehicle charging infrastructure, covering rapid hubs, on-street charging, public parking spaces, and council fleets. Initially proactive bidding for Government funds will be needed, but over time private sector investment will support this, subject to an effective national and local regulatory regime.

2. General 3. Carry out community engagement to increase understanding of EVs and EV infrastructure.
3. In smaller towns, villages, and dispersed communities 9. Develop charging infrastructure at rural tourist spots to counter range anxiety. These should be developed in such a way to avoid unsustainable traffic levels within protected rural areas (e.g., National Park park-and-ride schemes).

Implementing a cohesive charging network needs broad collaboration, joint economic appraisals, and master planning of infrastructure improvement. As Inclusivity and Supporting Sustainable Growth is also in TfN's remit it has been identified there is a critical need for education and awareness with particular emphasis on the inclusion of rural areas as part of the electrification strategy, recognising the potential disparity in affordability.

9. Do you feel we have missed any policy actions or recommendations?

No, all policy actions and recommendations have their own merit, but prioritisation will be vital.

10. Are there any important potential wider risks or benefits that you feel have not been considered?

There is a risk that the assumptions made on future societal needs will be wrong. It is acknowledged that economic activity depends on transport. However, there is not enough emphasis on the varying needs of the different users: business vs leisure, high street vs supermarkets/out of town retail centres, school/college/university and health.

There is no consideration of inter urban cycle routes and active travel as wider than a localised solution.

Whilst safety and security of transport may not be the remit of TfN, it is an important aspect to consider within the strategy.

A funding element that has not been properly addressed outside of London is the increase in capital value, particularly the long-term value of an investment in terms of the social and environmental impacts. This 'value' must be quantified when appraising projects and programmes.

It is clear that no one solution will fit all needs and safeguarding the public must always be a consideration.

11. Are there any parts of the population that you think will be disproportionately impacted by transport decarbonisation? why?

The section of population with middle incomes are likely to be adversely impacted, caught between the higher incomes who can afford new technology and lower incomes where subsidy is likely. Lifestyle choices will be forced by legislation around petrol/diesel engines and fossil fuel domestic boilers towards more expensive options.

As with most new technologies, there is likely to be a higher initial cost and so greater subsidy or financial penalty is likely to be required to change behaviours initially. Also, the North has widely

differing locations and transport needs, and so it is important to understand how decarbonisation might work in practice for those users and locations.

There is a risk that people in rural areas may be further penalised by targeted decarbonisation measures. The intensity and emissions per head are often higher in rural urban areas. This means that these individuals could be hit harder by emissions-based fees for road-use charging, for example.

Implementing EV charging infrastructure will have a major impact on residents of the urban Victorian terraces found in northern cities. Greater innovation of the infrastructure is required so there is no adverse impact. This needs to sit alongside an enhanced public transport network.

There is a high likelihood that the urban population will become more reliant on public transport and may not have the same flexibility, resulting in a potential loss of social mobility.

12. In addition to the Government's proposed measures, documented in their Net Zero Review, what additional actions could TfN take to ensure that all parts of the population benefit from transport decarbonisation?

There needs to be more awareness of regional and national initiatives such as the Tees Valley Hydrogen Hub and due consideration given to additional uses for hydrogen. TfN can use its position to support local authorities to embrace innovative solutions.

With partners, TfN could affect a radical shift in how strategies are planned, delivered and are responsive to transport infrastructure demands with carbon emissions at the heart of the whole process.

Detailed assessment/ prediction is needed of the effects of public policy on those with low incomes and specifically in rural areas. This can then be used to target resources more effectively.

Carbon literacy and the quantification of carbon needs to be improved. Personal targets in absolute terms (kg CO₂e per person per year) could be promoted and translated into metrics that are easily understood such as - how many "short" car journeys can we afford from our own carbon budget?

13. Are there any clean growth opportunities that you feel have not been considered?

More work is required on the provision of electricity supply including whole life cost, reduction of transmission losses, supply for rail electrification and use of hydrogen.

It would be useful to consider the likely scope/ range of local power generation and community acceptance.

There is a need to consider system resilience carefully, its adaption to climate change and ongoing innovation.

Further exploration of alternative energy sources such as wave energy and fusion.

14. Are there any other areas where TfN should focus its future decarbonisation analysis?

It is recommended that TfN considers the following:

- Further investment/focus in blue and green Hydrogen production
- CCUS under the North Sea
- Use of hydrogen in mass transport

- Expand/enlarge Tees Valley transportation energy hub and use as a blueprint for other areas
- Develop Northern ports to match Rotterdam's position as a large energy hub
- Improve connectivity for inter-regional freight routes

15. For each of the 'priority activities to 2025' identified by TFN, which role do you feel do you feel TfN is best placed to fulfil? (1=lead, 2=support, 3=not a role for TfN)

<u>Decarbonisation Strategy</u>	
SD1: Regional route-map for transport decarbonisation	1
SD2: Developing place-based decarbonisation pathways for rural typologies.	2
SD3: Formation of decarbonisation working group/s with TfN partners	1
SD4: Exploring the relationship between transport decarbonisation and transport-related social exclusion (TRSE) (inclusive of PGA11	2
SD5: Research into embodied carbon analysis for strategic transport infrastructure programmes	2/3
SD6: Programmatic assessment of Investment Programme (IP) against TfN Decarbonisation Trajectory	1
SD7: Consideration of emissions from aviation and shipping generated by the North	1/3
<u>Electric Vehicles and Fuel Efficiency</u>	
CGA1: Develop a regional ZEV charging framework (inclusive of PGA1)	1/2
CGA2: Supporting local partners in the development of local ZEV charging infrastructure	2
PGA14: Increase awareness of fuel-efficient driving styles	3
<u>Hydrogen</u>	
CGA3: Undertake or support a pan-northern hydrogen transport refuelling study	1 / 2
CGA4: Supply chain support for future hydrogen infrastructure solutions	2
<u>Demand Management</u>	
SD8: Supporting the development of scalable digital solutions for incentivising greener, shared and active mobility in rural areas.	2
CGA5: Supporting a Demand Management Narrative for the North	1
CGA6: Supporting local partners in the development of Mobility Hubs	2
PGA10: Consider role of micro-mobility/shared mobility in first and last mile journeys at train stations	2
PGA8: Develop infrastructure to improve regional public transport network	1
PGA9: Research on the effects of home-working upon productivity and agglomeration.	2
<u>Freight</u>	
SD9: Low carbon urban freight scenarios	1

CGA7: Developing and supporting partnerships to consider zero carbon, port to port freight corridors	2 / 3
PGA2: Facilitating large ZEV truck trials in the North	2 / 3
PGA3: Support partners to aggregate large orders of ZEV vans, truck and buses across the North	2 / 3
PGA12: Supporting freight information democratisation schemes	2 / 3
<u>Rail</u>	
CGA8: Supporting our partners to attract testing and pilots of new low emission train technologies (inclusive of PGA6)	1 / 2
PGA4: Identify appropriate routes for electrification	1
PGA5: Work with Train Operating Companies (TOCs) and Freight Operating Companies (FOCs) to exploit operational efficiency opportunities (inclusive of PGA7)	2
<u>Project-level Carbon</u>	
SD10: Developing an embodied carbon database for major infrastructure developments	3
PGA13: Influence government to seek augmented DFT appraisal guidance	1
<u>Awareness Raising and Behaviour Change</u>	
SD11: Engagement and awareness-raising activities	2
SD12: Behaviour change research	2

N.B: The opinions above are diverse. Where there is a clear majority, the relevant position has been attributed. However, in the topics where views are split, and have been recorded in equal proportion, both positions have been noted.

16. Of the 'priority activities to 2025' identified, choose the three which you consider to be the top priority for urgent action?

Priority 1	SD1, CGA2, CGA5
Priority 2	SD6, CGA3, SD9
Priority 3	SD4, SD11, PGA4

There was a range of opinions with different priorities and the top 9 are above.

17. Are there any other potential activities that you feel have not been considered and could be effectively delivered by TfN?

TfN should include a climate change resilience strategy and clear analysis of how the inter-dependence in systems will impact on their decarbonisation strategy, recognising the inter-connectivity and resilience in capacity planning, flood routing and network diversions.

To summarise, other areas for investigation included in this consultation response:

- 15 minute communities
- marketing, education and raising awareness of the benefits
- capital accounting



- Resilience; affordability and quantification of benefits
- Interconnectivity of systems- accessibility

However, we recommend that TfN should focus and prioritise its deliverables to ensure its strategies succeed. The above views are a collection of views from the members of the Institution of Civil Engineers from the North East, North West, Yorkshire and Humber. Furthermore, we have also sought the opinion of the Sheffield Chamber of Commerce and a collection of views from their members, who are also part of the supply chain for Infrastructure Projects. These views are similar in nature.