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60-SECOND SUMMARY

The British economy is at a critical juncture. Its future success depends on overcoming two major, interrelated problems – long-term structural weaknesses in investment, productivity and trade, and the need to decarbonise. In this context, the north of England faces a particular challenge. The North's economy is more carbon intensive than the English average, and its many carbon-intensive industries face a challenging transition. It is also suffering from a lack of investment relative to other regions, particularly London.

However, the North has a large economic potential, more of which could be unlocked from directed investment, and is already realising many of the opportunities of decarbonisation, with a vibrant low-carbon goods and services sector and nearly half of England's renewables generation. Other opportunities could deliver further economic benefit to the region, contribute to emissions reductions and address related socioeconomic challenges, such as air pollution.

In order to realise these opportunities within the context of national decarbonisation, the government's industrial strategy should include a mission to secure the greatest socioeconomic benefit to the UK from a reduction in greenhouse gas emissions to net-zero by 2050. An explicit decarbonisation mission within industrial strategy would provide a strong organising basis, bringing together the demand and supply side elements of accelerating decarbonisation, and complementing the government's efforts to meet what they have identified as the 'clean growth grand challenge'.

A devolved carbon budget would provide a clear regional demand side focus for the North, enabling regional stakeholders to set and drive progress towards regional missions that promote certain technologies and systems.

These regional missions should include transitions in the energy sector, towards more renewable generation and efficient use of energy; carbon-intensive industry, through the development of carbon capture and storage technologies and the recovery of heat; and in mobility, through the development and adoption of ultra low emission vehicles within a more connected, digital transport system.

RECOMMENDATIONS

For central government

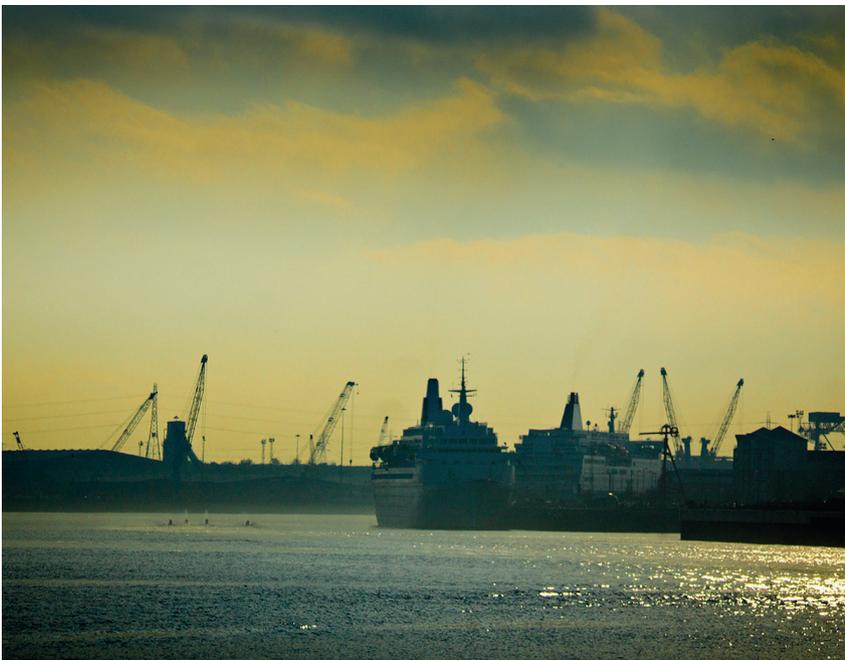
- Declare a mission to secure the greatest socioeconomic benefit to the UK from a reduction in greenhouse gas emissions to net-zero by 2050.
- Establish a cross-departmental Decarbonisation Mission Unit in BEIS or the Cabinet Office
- Give powers to UK regions to adopt a regional carbon budget that binds a region to reduce emissions by an agreed amount over five-year periods.
- Devolve fiscal powers to local authorities in order to offer low interest loans for energy-efficiency equipment coordinated as part of Local Energy Devolution Deals.

For the north of England

- Central government should establish a Hydrogen Catapult located in the Tees Valley.
- The government should fund the Teesside Collective's proposed industrial CCS project in Tees Valley.
- BEIS and Innovate UK should carry out a feasibility study for the establishment of a CCS Catapult in the next parliament.

KEY FINDINGS

- The North's economy is more carbon intensive, at 0.51 ktCO₂ per £ gross value added, than the average for English regions, which is 0.44 ktCO₂ per £ gross value added.
- In six out of the eight most energy-intensive industries in the UK, the north of England contributed over 30 per cent of the total UK GVA in 2015 including over 50 per cent of the total UK GVA in both the chemicals and coke and refined oil sectors.
- The north of England is already making the most of a number of the industrial opportunities presented by low-carbon technologies. The region accounted for 35 per cent of all jobs in the low-carbon goods and services (LCGS) sector in 2013, and the region generated 48 per cent of all renewable energy in 2015 – the largest of any region in England.
- Our analysis has identified three areas in which there is strong potential for the North to develop currently underutilised expertise or geographic assets: hydrogen, domestic energy efficiency, and mobility.
- Our analysis has identified two key areas in which there is strong potential for northern industries to reduce their carbon emissions, lowering costs and increasing competitiveness, which have particular advantages for the region: industrial carbon capture and storage (CCS) and industrial waste heat recovery.



- LEPs should coordinate to find vendors to establish the first commercial power-to-gas hydrogen storage project in the UK be in either the Tees Valley or Cheshire and Warrington by 2025.
- Partnerships between industry and local authorities in the north of England should aim to generate at least 15TWh of recovered heat by 2050.
- Transport for the North and local and combined authorities should agree the constituent targets of a regional mobility transition mission.
- Transport for the North and other regional bodies should develop Local Mobility Transition Plans for realising the socioeconomic potential of sustainable transport.

Recommendations for carbon-intensive industries in the North

- Set science-based targets using respected methodologies.
- Commit to sourcing 100 per cent of their electricity from renewables by 2023, while those who cannot should replace existing fuels with biomass and/or hydrogen with a view to these accounting for 15 per cent and 32 per cent of energy use respectively by 2050.

The progressive policy think tank

Citation: Laybourn-Langton L, Emden J, Baxter D and Lloyd H (2017) *Net-Zero North: Delivering the decarbonisation mission in the north of England* IPPR. www.ippr.org/publications/net-zero-north

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