

Report to: West Yorkshire Combined Authority

Date: 27 July 2020

Subject: **West Yorkshire Carbon Emission Reduction Pathways**

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Is this a key decision?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Is the decision eligible for call-in by Scrutiny?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Does the report contain confidential or exempt information or appendices?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If relevant, state paragraph number of Schedule 12A, Local Government Act 1972, Part 1:	

1. Purpose of this report

- 1.1 To provide the Combined Authority with oversight of the findings to date of the West Yorkshire Carbon Emission Reduction Pathways study, which will inform future decisions about how to tackle the climate emergency and become a net-zero carbon region, and to endorse them.
- 1.2 To update the Combined Authority that the Green Economy Panel have reviewed the findings of the study to date and recommend that the Combined Authority approves this work so it can proceed to the next stages as outlined in the report, including engagement with wider stakeholders.

2. Information

Man-made climate change

- 2.1 There is scientific consensus that currently observed global warming is overwhelmingly as a result of human influence, being significantly over and above the warming caused by natural factors alone¹. Indeed, ice core records

¹ IPCC (2014) Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.

suggest concentrations of greenhouse gases in the atmosphere are at their highest for at least the last 800,000 years.

- 2.2 Warming of approximately 1.0°C above pre-industrial levels is estimated to have been caused by human activities and is likely to reach 1.5°C between 2030 and 2052 if current rates of temperature increase continue².
- 2.3 Human and natural systems are already being impacted by climate change with flooding, droughts, heatwaves and crop yield reductions all being experienced more frequently. West Yorkshire has suffered the impacts of climate change having experienced catastrophic flood events over the last 10 years, causing damage to residents, communities and businesses. Further warming will make these types of event even more common.
- 2.4 There is a clear and compelling rationale to mitigate and adapt to a changing climate and that is why addressing the climate emergency is one of the Combined Authority's and West Yorkshire councils' key priorities.

Background

- 2.5 The Combined Authority declared a climate emergency and strengthened the West Yorkshire emission reduction target in July 2019. The strengthened target commits the region to be net-zero carbon by 2038, with significant progress by 2030. The task is challenging and will require significant and swift action to decarbonise all sectors.
- 2.6 The West Yorkshire Carbon Emission Reduction Pathways (CERP) study was commissioned to demonstrate the different ways in which the climate emergency could be addressed, and the strengthened target met. It was also commissioned to provide guidance to West Yorkshire councils and businesses on the ways they could address their own climate emergency declarations and targets.
- 2.7 The CERP focusses on the transport, buildings, power, industry, and land-use and agriculture sectors and consists of three main tasks: to develop three emission reduction pathways, to set out the timescales for decision-making and deployment, and identify the policies and actions that need to be implemented. More information on the scope of the study is included in **Appendix 1**.
- 2.8 The findings outlined below represent the outcomes of the first part of the study and will be built on and further developed as the other tasks of the study are completed. What follows is not intended to replace locally designated targets and actions and should be seen as complementary rather than an alternative to local activity.

² IPCC (2018) Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emissions pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty

Key findings

- 2.9 The key findings are informed by a comprehensive and detailed technical analysis underpinned by nationally credible expertise and robust data and assumptions³; key messages are
- West Yorkshire could meet its target by:
 - Achieving emissions savings of between 73 and 82 percent by 2038 through the measures that have been modelled across the three future emissions reduction pathways. **Appendix 2** illustrates what would need to be deployed to achieve the most ambitious pathway.
 - Reducing remaining emissions (between 18 and 27 percent) through a combination of increased ambition in the deployment of certain measures (e.g. tree planting, renewable electricity generation, maintaining COVID-19 levels of remote working) and/or applying innovative emission reduction technologies (e.g. capturing carbon dioxide directly from the air and either using it for a specific purpose or storing it underground).
 - Achieving the levels of emission reduction modelled will require government to provide funding support and policy change e.g. heat decarbonisation, aviation and domestic retrofit.
 - Highly ambitious leadership and policy at all levels will be needed to deliver the emission reductions identified.
 - Several key challenges will need to be overcome to achieve the target e.g. government policy being misaligned.
 - Businesses, the public sector, and communities will need to work together to deliver the measures outlined in the study.
- 2.10 The key findings of the study allow us to start on a pathway towards net-zero carbon by 2038 and to focus, in the short-term, on those common actions which are identified in all the pathways. These include:
- Reducing the demand for travel by private car and increasing the levels of walking, cycling, bus and train travel, and remote working.
 - Retrofitting energy efficiency measures to nearly 700,000 homes and installing heat pumps in over 300,000 dwellings.
 - Generating enough electricity from onshore wind and solar PV to cover the electricity demand of over 162,000 homes.
 - Investigating how carbon capture and storage technology can be applied to energy from waste, glass and chemicals facilities.
 - Increasing the area of woodland / forest coverage by 170 hectares.
- 2.11 **Appendix 3** provides an overview of some common actions and what they could mean for residents, communities, and businesses in the region.

³ The technical report underpinning the study can be found at <https://www.westyorks-ca.gov.uk/media/4232/wy-cerp-technical-report-v6.pdf>

- 2.12 It is proposed that we do not commit to a specific pathway that has been modelled in the study at this stage due to the uncertainty that exists around the deployment of specific measures identified. To fully commit to a pathway, we need government to make decisions on certain issues, including the preferred route for heat decarbonisation in our homes and buildings, support for carbon capture and storage, and national policy on reducing emissions from aviation. A full set of asks of Government will be developed as part of Tasks 2 and 3 of this work.
- 2.13 As referenced above, national support will need to be provided within a short timeframe to ensure aviation can decarbonise and align with both national and regional emission reduction targets. Aviation currently contributes a small proportion of the region's emissions: 3.6 percent. Under the Max Ambition pathway (the most ambitious pathway modelled) an 82 percent reduction in emissions could be achieved in the region. If passenger numbers at Leeds Bradford Airport (LBA) were to increase to 7 million, as currently proposed, the emissions reduction achievable under the Max Ambition pathway would be 79 percent. Under this scenario, even greater ambition in respect of additional measures would be required to meet the target. This illustrates the need for Government to accelerate its decarbonisation strategy for aviation as soon as possible.
- 2.14 The Green Economy Panel have been involved throughout the development of the study and provided a recommendation at their 7 July 2020 meeting that the Combined Authority endorse the findings of the study to date.
- 2.15 The LEP Board also reviewed and endorsed the findings of the study at their 14 July 2020 meeting.

Engagement

- 2.16 Significant engagement has taken place to build an understanding of, and gather feedback on, the findings of the study both internally and with West Yorkshire councils, including Leaders and Chief Executives.
- 2.17 The next steps on engagement will be to consult with a wider stakeholder audience⁴ on the findings of the study and to gain their input into the development of the policies and actions that need to be implemented. Documents for engaging with stakeholders are contained in **Appendix 1 and 4** and the Technical Report.
- 2.18 An overview of the engagement process was provided to the Green Economy Panel at their last meeting and they provided a recommendation that the Combined Authority approve the engagement approach and that consultation with wider stakeholders could begin.
- 2.19 A public consultation will also be run in the autumn to gauge the appetite for the measures identified and inform the prioritisation of future activity to

⁴ Includes continued engagement with West Yorkshire councils and the Combined Authority.

address the climate emergency in West Yorkshire. A report will be brought back to the Combined Authority for approval to go out to public consultation.

Next steps

- 2.20 Subject to approval by the Combined Authority, work will begin on the next phases of the study in late July 2020, including those activities set out in 2.14.
- 2.21 The next stages of the study, with the input of stakeholders, represents the opportunity to shape how ambitious West Yorkshire can be in meeting its net-zero carbon ambition, building on and going beyond the significant emission reductions already identified in the study.
- 2.22 The next steps will also explore how this work can support the West Yorkshire Economic Recovery Plan. The transition towards a net-zero carbon economy will unlock significant economic benefits, jobs, skills and opportunities. Indeed, the LGA⁵ have estimated that 42,000 jobs (over 70,000 by 2050) could be delivered in low carbon sectors in West Yorkshire by 2030. That is why tackling the climate emergency and environmental sustainability are embedded across the Economic Recovery Plan and represent an opportunity as we emerge into a post-COVID-19 world. This study and its findings will feed into the development of future plans.
- 2.23 Furthermore a key part of the Economic Recovery Plan will be the development of a low carbon pipeline and funding proposition to government to unlock the benefits mentioned above. The proposition is crucial in ensuring that as the region rebuilds after COVID-19 the recovery accelerates the transition to low carbon activities and improves our climate resilience. The outcomes of the CERP will help to shape the initial pipeline of projects on which the proposition aims to develop.
- 2.24 Further information on how carbon reduction is at the heart of the recovery can be found in the paper on the Economic Recovery Plan that is also being discussed at the 27 July 2020 Combined Authority meeting. This includes the areas mentioned in 2.22 and 2.23.

3. Clean Growth Implications

- 3.1 The work described in this report is central to ensuring that the region understands how it can decarbonise key sectors by 2038 and make significant progress by 2030. Results of the study will be fed into a refreshed Tackling the Climate Emergency Action Plan, the Combined Authority's Connectivity Strategy work to develop a pipeline of future transport interventions and the COVID-19 recovery plan.

4. Inclusive Growth Implications

- 4.1 The engagement and consultation to be undertaken as part of the study will seek to be as inclusive as possible, gaining the views of a diverse mix of

⁵ Ecuity Consulting (2020) Local green jobs – accelerating a sustainable economic recovery. A report for the Local Government Association (LGA)

ethnicities and hard to reach groups e.g. BAME, LGBTQ, young people, disabled people.

- 4.2 It is crucial that transitioning to a low carbon economy reduces inequality in West Yorkshire, it cannot be the cause of further inequality for our most excluded / deprived groups and communities. To that extent subsequent stages of the CERP will factor in inclusive growth goals and outcomes in the design of policies, actions and the deployment of specific emission reduction measures.
- 4.3 While difficult to state the exact nature of the inclusive growth outcomes that will be achieved through the study (due to its high-level nature) examples of outcomes that could be delivered include:
- Improved wellbeing through improved green infrastructure, promoting public transport and active travel, and improving the energy efficiency of homes (thereby improving health outcomes and reducing fuel poverty).
 - Increased connectivity through accessible and affordable public transport and addressing digital exclusion for those needing / choosing to work from home.
 - Creation of job, career and volunteering opportunities that can be accessed by everyone and provided across the public, private and third sectors.
 - Roles that offer good pay and conditions and also long-term, rewarding careers.
- 4.4 While an EIA has not been carried out on the study to date due to its high-level nature and a lack of tangible outputs that an EIA could be applied to, our future work to further develop and refine the outcomes of the study has been informed by equality considerations as referenced below.
- 4.5 Full EIAs will be completed for the policies that are identified as part of Task 3 of the study. Furthermore, EIAs will also be completed for the common actions referenced in 2.10 and outlined in **Appendix 3**. The deployment of specific measures identified in the CERP will also be subject to full EIAs.

5. Financial Implications

- 5.1 The study is funded through contributions from the Combined Authority, the North East Yorkshire and Humber Energy Hub and York and North Yorkshire LEP.
- 5.2 Technical and policy costs associated with the study will be calculated as part of the next steps of the study. This information will provide a high-level indication of the funding that will be required to deliver the measures and policies that have been / are identified.

6. Legal Implications

- 6.1 There are no legal implications directly arising from this report.

7. Staffing Implications

- 7.1 Given the scale of the challenge to outlined in the results of the emissions reduction pathways study, there will be significant resourcing implications for the Combined Authority and stakeholders/partners. Exploring and securing resources to deliver the work required will be a key task of the Leeds City Region Climate Coalition that will be developed this year.

8. External Consultees

- 7.1 A wide range of stakeholders have been engaged in shaping the commission. These include regional organisations such as Northern Powergrid, Northern Gas Networks, and Yorkshire Water, local authorities and civic society including Leeds Living Streets, Friends of the Earth and the Leeds Climate Commission.

9. Recommendations

- 9.1 That the Combined Authority endorse the findings of the study in line with the recommendation from the Green Economy Panel.
- 9.2 That the Combined Authority approves engaging with wider stakeholders on the findings of the study and gaining their input into the development of policies and actions that could be implemented.

10. Background Documents

Information has previously been presented to the Combined Authority on the study and can be accessed [here](#).

11. Appendices

Appendix 1 – West Yorkshire Emission Reduction Pathways – Key Findings Report

Appendix 2 – Summary of the scale of action required under the Max Ambition pathway

Appendix 3 – Selected common actions and what they mean for residents, communities and businesses

Appendix 4 – Policy survey