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**Report to:** Employment and Skills Panel

**Date:** 14 September 2020

**Subject:** **Emission Reduction Pathways**

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**Director:** Alan Reiss, Director Policy, Strategy and Communications

**Author(s):** Jacqui Warren

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## **1. Purpose of this report**

- 1.1. To start a conversation with the Panel on its roles in tackling the Climate Emergency.
- 1.2. The panel is asked to consider the actions in the refreshed Employment and Skills plan that can address the Climate Emergency.

## **2. Background**

### Man-made climate change

- 2.1 There is scientific consensus that currently observed global warming is overwhelmingly a result of human influence, being significantly over and above the warming caused by natural factors alone<sup>1</sup>.
- 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, which is why addressing the climate emergency is one of the Combined Authority's and West Yorkshire councils' key priorities.

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<sup>1</sup> 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.

- 2.5 The Combined Authority started to tackle climate change in 2016 through the Strategic Economic Plan's ambition to be a carbon zero economy. A regional energy strategy and delivery plan was developed in 2018 to accelerate action. However, the Combined Authority and LEP 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, but it is possible. The City Region's climate related work is outlined [here](#) in detail and includes:
- Energy Strategy and Delivery Plan (2018)
  - Resource Efficiency Fund and new Re-Biz - business energy efficiency support programme
  - The Energy Accelerator – low carbon project development support service
  - Travel Plan Network – business support programme
  - New Transforming Cities Fund – wide range of new transport schemes
  - Up to 5000 homes installed with energy efficient measures through Better Homes Yorkshire
  - 88 ultra-low emission vehicle charging points being installed.
  - £1.7m of funding spent on natural flood management schemes

#### Leeds City Region Local Enterprise Partnership's Role(s)

- 2.6 As tackling the Climate Emergency is everyone's responsibility it cannot only fall on the Leeds City Region's Green Economy Panel to address it. In June 2020, a [report](#) was endorsed by the LEP Board recommending that all Panels develop actions to play their part in tackling the Climate Emergency. It also endorsed the recommendations for all panels to:
- receive the findings of a carbon reduction pathways study to help them determine the key actions to explore; and
  - nominate a Champion to support this work.

This report also identified a range of potential areas that this panel could consider. This paper builds on this commitment and aims to start a conversation with the Panel on the roles they may wish to play.

#### Carbon Emission Reduction Pathways (CERP)

- 2.7 A West Yorkshire CERP study was commissioned to demonstrate the different ways in which the climate emergency could be addressed, and the strengthened target of 2038 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.
- 2.8 The findings outlined below are the outcomes of the first part of the study and will be built on in the subsequent tasks of the study.

## Key findings

- 2.9 The key findings are informed by a comprehensive and detailed technical report, these have been distilled into a number of key messages:
- West Yorkshire could meet its net zero carbon 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.
    - Reducing remaining emissions 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).
  - 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 The full results can be viewed [here](#). A new Tackling the Climate Emergency Action Plan will be consulted on later this year, ready for adoption by the LEP and Combined Authority in Spring 2021.
- 2.12 Delivering these actions above will have the potential to create employment and skills opportunities in areas such as retrofitting energy efficiency measures in homes and buildings, onshore wind and largescale solar, innovative technologies, and in flooding and nature recovery – i.e. tree planting. **Appendix 1** provides an overview of some actions and what they could mean for residents, communities, and businesses in the region. It also begins to suggest areas of potential for future employment and skills opportunities, including building the supply chains, with a skilled workforce, to deliver energy efficiency measures to nearly 700,000 homes and install heat pumps in over 300,000 dwellings by 2038.

## Economic Recovery

- 2.13 On 27 July 2020 the Combined Authority approved the West Yorkshire Economic Recovery Plan, including a net-zero carbon transition proposition. This aims to accelerate and unlock significant economic benefits such as jobs, skills and business opportunities through transitioning our economy to net zero carbon. The LGA<sup>2</sup> have estimated that 42,000 jobs (over 70,000 by 2050) could be delivered in low carbon sectors in West Yorkshire by 2030, representing a major opportunity as we recover from the COVID-19 crisis.

The proposition asks government for support of just under £200m, including:

- Capital funding for a range of low/zero carbon projects
- The development of a longer-term low carbon investment pipeline
- £10m for the development of a net zero carbon skills (STEM) partnership and workforce fund (based on the activity within the developed pipeline). See below and attached in **Appendix 2**.

### **Towards Net Zero Carbon Skills (STEM) Partnership**

Coordination post to bring together partners from education, skills and employers to assess the needs to support the development of future skills and jobs requirements needed for a net zero carbon economy and to ensure a just transition for jobs at risk from decarbonisation.

This includes:

- Coordinating a programmes of careers and inspiration activities with employers to raise awareness of the importance of STEM skills and to address the future demand for green jobs. To offset the gender stereotypes embedded by the age of 7 this activity would be for Early Years, primary and secondary aged students and their parents, carers and teachers.
- working with SMEs to identify skills requirements and opportunities to retrain / upskill the existing workforce.

### **Local Towards Net Zero Carbon Skills (STEM) - Pilot a 'Workforce Fund' - 2022 (£10m) to:**

- Address locally identified skills gaps; supporting employers to recruit to hard to fill vacancies requiring specialist STEM skills
- Improve engagement between employers and training providers; building capacity to co-design & co-deliver training which can be sustainable
- Support West Yorkshire residents to enter/retrain into skilled digital jobs and progress their careers through gaining good quality work
- Diversify the net zero carbon jobs talent pipeline by embracing new methods of recruitment and flexible ways of delivering training

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<sup>2</sup> Ecuity Consulting (2020) Local green jobs – accelerating a sustainable economic recovery. A report for the Local Government Association (LGA)

## Potential roles for the Employment and Skills Panel to play

- 2.14 Decarbonising our economy will result in a range of employment and skills opportunities as new industries and roles emerge. Work around the City Region's Energy Strategy and Delivery Plan and the Clean Growth Audit have identified a growing clean growth sector in the City Region, and the Combined Authority has begun to understand the current and future employment and skills opportunities. **Appendix 1** summarises some potential areas but there is a clear need for a Net Zero Carbon Skills Partnership (see para 2.13) to fully understand the opportunities and current skills gaps. The Energy Strategy estimated that over 100,000 jobs could be created through taking early action to decarbonise the City Region. However, more work is needed to understand the potential. The LGA also estimated that 42,000 jobs (over 70,000 by 2050) could be delivered in low carbon sectors in West Yorkshire by 2030. The report also highlights gaps in skills in areas such as solar and a range of technician roles. Most recently two billion pounds has been announced to support energy efficiency improvements in homes over the next two year, however, the supply chains and skills needed to deliver this funding are not in place. Therefore, decarbonising our economy present a huge opportunity for this Panel to consider exploring in detail, especially in its current and future Employment and Skills Plan and other planned work.
- 2.15 The panel is specifically asked to consider the actions that need to be undertaken in the refresh Employment and Skills plan so it can support the LEPs plans to tackle the Climate Emergency. The Panel are also asked to identify any net zero carbon skills related opportunities (see Appendix 1) that are important to them and to identify any known current gaps, especially in training provisions.
- 2.16 The Future-Ready Skills Commission has highlighted the importance of retraining and maintaining a blend of transferable skills that will be needed in the future, including as we move towards a net-zero economy. It has also highlighted concerns around individual and employer investment and confidence in retraining where line of sight to a job is not obvious.
- 2.17 The LEP's commitment to inclusive growth is particularly important as the economy recovers from COVID-19 and transitions to net-zero carbon, as changes in demand for skills, new opportunities and availability of jobs can impact both individuals and communities. Research by the London School of Economics demonstrates the need for this to be an inclusive process, delivering social justice for workers, communities and consumers: this is the agenda of the just transition.
- 2.18 According to IPPR, decarbonisation holds huge opportunities for the north of England. The North has a leading low-carbon goods and services sector - accounting for around a third of all jobs in the sector in England. It has world-renowned universities and leading expertise in technologies such as nuclear power, hydrogen and offshore wind. This is matched by the many historic, geographic and geological advantages that exist in the region. In short, there

is substantial potential for the north of England to become the new heartland for a low-carbon energy economy.

- 2.19 Up to 46,000 jobs could be created by 2030 just in the power sector (IPPR). However, such an outcome is not guaranteed. Decarbonising the economy, if managed badly, carries significant risks. As home to the majority of coal and gas power stations in England, the North could suffer approximately 28,000 job losses in the coal, oil and gas industries by 2030. This is without considering the other potential job losses in high-carbon energy intensive industries and the wider economic and social implications that the loss of industry can bring about. In the past, industrial change has been poorly managed, including in the north of England, resulting in regional inequalities. But a well-managed 'just transition' could build on the economic strengths of the north of England and deliver a high-skill, high-wage, low-carbon economy of the future. Therefore, there is a range of opportunities for the Panel to consider exploring.
- 2.20 As seen above, there is now an emerging set of data from a number of studies that can help to establish the employment and skills opportunities that the zero carbon sector could offer our region. This work needs to be fully reviewed and should feed into the Net Zero Carbon Skills Partnership work above (subject to securing the funding).
- 2.21 Therefore, there is a range of opportunities for the Panel to consider exploring in conjunction with other LEP Panels. This is not an exhaustive list. The Panel is also asked to raise any other areas it is interested in exploring.

### **3. Clean Growth Implications**

- 3.1. The work described in this report is central to ensuring that the City 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 for the City Region, to the Combined Authority's connectivity strategy work to develop a pipeline of future transport interventions and the COVID-19 recovery plan.

### **4. Financial Implications**

- 4.1. There are no financial implications directly arising from this report

### **5. Legal Implications**

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

### **6. Staffing Implications**

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

### **7. External Consultees**

- 7.1. The Leeds City Region LEP and Green Economy Panel.

## **8. Recommendations**

- 8.1. That the Panel notes the importance of Emissions Pathways study in determining how the City Region can meet its net zero carbon ambitions.
- 8.2. That the Panel endorses playing a role in tackling the climate emergency.
- 8.3. The Panel identifies areas that it would like to explore in the next six months, including the refresh of the Employment and Skills plan.
- 8.4. The Panel are also asked to identify any net zero carbon skills related opportunities (see Appendix 1) that are important to them and to identify any known current gaps, especially in training provisions.
- 8.5. The Panel to nominate a Tackling the Climate Emergency Champion to support this work.

## **9. Background Documents**

- 9.1. None

## **10. Appendices**

**Appendix 1.** Common Actions and what the pathways mean in 2038 for communities, residents and businesses

**Appendix 2.** Net Zero Carbon Transition Proposition