To all Members of the Climate Emergency Standing Committee

You are hereby summoned to attend a virtual meeting of the **Climate Emergency Standing Committee** to be held on **MONDAY 28 SEPTEMBER 2020 at 8.00 PM** via **the Zoom platform** <a href="https://us02web.zoom.us/j/85088260809">https://us02web.zoom.us/j/85088260809</a>

#### - AGENDA - (A)

Please note that timings on the agenda are given for guidance of the Chairman and the Council only and should not be taken as the time at which discussion of a particular item will commence. The Committee may agree to defer (in whole or part) any items on the Agenda, if necessary.

	Welcome	8.00 pm					
	Public Question Time						
	Prior to the commencement of the business session of the Committee, there will be an open session lasting 15 minutes, for members of the public to speak to Members.						
	Members of the public applying to be co-opted onto the Standing Committee should introduce themselves here.						
2021 15	Public Bodies (Admission to Meetings) Act 1960 amended by the Openness of Local Government Bodies Regulations 2014 on 6 August 2014						
	As Local (Parish and Town) Council meetings can now be recorded, the Chairman to check if any members of the public wish to record the meeting, to ensure reasonable facilities can be provided. The meeting will, in any case, be recorded by the Deputy Clerk for public viewing.						
2021 16	To accept apologies for absence	8.16 pm					
2021 17	To receive Members' personal and disclosable pecuniary interests in items on the agenda	8.17 pm					
2021 18	To receive Officers' personal and disclosable pecuniary interests in items on the agenda	8.18 pm					
2021 19	To consider written requests for new DPI dispensations	8.19 pm					
2021 20	To consider whether items on the agenda should be discussed in private session	8.20 pm					
	- any recording by members of the public to be halted during such items; co-opted members to be moved to the Zoom "Waiting Room"						
2021 21	To confirm the Minutes of the Previous Meeting	8.21 pm					
	- To confirm the <u>Minutes of the Climate Emergency Standing Committee meeting</u> held on 8 June 2020, numbered 2021 01 – 2021 14 inclusive <b>(B)</b>						
2021 22	Welcome to Councillors as Members to the new Standing Committee	8.22 pm					
	- Councillor introductions						

2021 23	Welcome to Climate Emergency Co-ordinator							
	- Introducing Michelle Brown to the Standing Committee							
2021 24	Election of co-opted members							
	- Councillors to elect up to 10 co-opted Members of the Standing Committee							
2021 25	The name of the Standing Committee							
	- <b>TO CONSIDER</b> : A Member has proposed changing the Committee name to Climate and Biodiversity Emergency Standing Committee to reflect the wider nature of the crisis							
2021 26	Mobilisation Group							
	<ul> <li>Climate Action Mobilisation (Climate Emergency Co-ordinator; public engagement/launch; events/emails; Zoom networking; Climate Emergency Facebook page)</li> </ul>							
2021 27	Climate Emergency Sub-groups to feed back	9.05 pm						
	<ol> <li>Energy, Housing, Buildings (home energy efficiency measures, renewables)</li> </ol>							
	<ol><li>Transport/Travel (public transport promotion, electric vehicles, walking, biking)</li></ol>							
	3) Waste/Consumption (minimising waste as well as recycling)							
	4) Agriculture, Food, Environment, Land Use (engaging farmers and landowners; local focus)							
2021 28	Holme Valley Climate Action Partnership							
	- To consider how best the Climate Emergency Standing Committee can work with the Climate Action Partnership.							
2021 29	Update on Lottery Application							
	- Member John Queening to report <b>(C)</b>							
2021 30	Review of Committee Budget and for 2020/21							
	1) <b>TO NOTE</b> : Committee to appraise the year-to-date expenditure and implications <b>(D)</b>							
	2) <b>TO NOTE</b> : Committee to note the need to make preparations for the setting of next year's Committee budget before the next meeting							

2021 31 News 9.45 pm

1) Update to the installation of the water bottle filling station (E)

2) **TO NOTE:** "Tackling the Climate Emergency Emission Reduction Pathways report" from West Yorkshire Combined Authority **(F)** 

Close 9.50 pm

#### Rich McGill

Rich McGill

Deputy Clerk and Responsible Finance Officer

Holme Valley Parish Council Holmfirth Civic Hall, Huddersfield Road, HOLMFIRTH HD9 3AS

Telephone: 01484 687460

#### MINUTES OF THE VIRTUAL CLIMATE EMERGENCY STANDING COMMITTEE MEETING HELD ON MONDAY, $8^{\rm th}$ JUNE 2020 via the Zoom Platform

Those present:

Chairman: Cllr P Davies

Councillors: Cllrs G Barker, J Brook, D Carré, J Sweeney,

Co-opted Members: Caroline Anstey, Steve Barker, Andrew Colwill, Alison Morgan, John Queening, Laura

Tarlo-Ross, Matthew Tulley

Officers: R McGill, Deputy Clerk, Liz Bennett Clerk

#### Welcome

#### **Public Question Time**

Cllr T Bellamy, Chairman of the Council, was present as a member of the public. He chose not to speak during Public Question Time.

2021 01 Public Bodies (Admission to Meetings) Act 1960 amended by the Openness of Local Government Bodies Regulations 2014 on 6 August 2014

Local (Parish and Town) Council meetings can now be recorded. The Parish Council was recording the meeting in video and audio formats through Zoom.

2021 02 To accept apologies for absence

**RESOLVED**: Apologies for absence were accepted from Cllr S Sheard.

No apology for absence was received from Cllr D Gould.

1910hrs Cllr Carré joined the meeting.

2021 03 To receive Members' personal and disclosable pecuniary interests in items on the agenda

None were received.

2021 04 To consider written requests for new DPI dispensations

None were received.

2021 05 To consider whether items on the agenda should be discussed in private session

**RESOLVED**: No items to be heard in private session.

2021 06 To confirm the Minutes of the Previous Meeting

**RESOLVED:** The Minutes of the Climate Emergency Standing Committee meeting held on 4 February 2020, numbered 1920 17 – 1920 29 inclusive were confirmed.

2021 07 To elect a Vice Chairman for the Standing Committee

1912hrs Mmbr John Queening joined the meeting.

**RESOLVED:** Cllr Barker was elected Vice Chairman of the Climate Emergency Standing Committee.

The Committee resolved to change the Agenda order at this point.

#### 2021 09 Update on Lottery Application

#### 2021 10 Climate Emergency Mobilisation

- Cllr Davies was keen to iterate that it was important that the Committee continued to push forward and deliver on the actions from the Community Emergency Action Plan despite current restrictions. He asked the Committee and subgroups to review the breakdown of the Climate Emergency budget for 2020-21 and to begin a process of prioritising achievable actions under the different budget headings. Cllr Davies ventured that many Climate Emergency Action Plan goals were still achievable even remotely, and that Subgroups should try to focus on completing at least one action.

#### 1932hrs Mmbr Andrew Colwill joined the meeting.

- Members agreed to work with a view to a proposed, face-to-face, large-scale community engagement event in the autumn. The progress of this arrangement depends, inevitably, on subsequent advice on Coronavirus public safety.
- RESOLVED: In the meantime, Members resolved for Subgroups to work on developing -public engagement through small (max 8/12), focused Zoom meetings. Subgroup organisers should contact the Deputy Clerk should they wish to publicise events on the Council website or Facebook pages.
- Members agreed that using the Zoom facility of "breakout rooms" so that larger groups could break away into smaller 4-5 person groups for set periods was a useful feature for having topic-based conversation with the public.
   RESOLVED: The Clerk, Deputy Clerk and other Zoom hosts to familiarise themselves with utilising breakout rooms to facilitate future public Zoom engagements.
- **RESOLVED**: Councillor Davies to organise a zoom call for the Mobilisation Sub Group to discuss and agree actions to continue with engaging our partners and residents in implementing our Climate Emergency Action Plan. This to include moving forward with the recruitment of the Coordinator role, developing a communications strategy and planning public engagements.

1945hrs Mmbr Caroline Anstey joined the meeting.

#### 2021 8 Climate Emergency Subgroups - feedback

Energy, Housing, Buildings (home energy efficiency measures, renewables)

- The Energy Efficiency Audit on Parish Council owned properties has had to be deferred due to the closure of buildings.
- Mmbr Frances Bennett was drafting the Home Energy Savings booklet. **RESOLVED:** The Home Energy Savings booklet would be a targeted priority of the Subgroup.
- **RESOLVED**: Mmbr Matthew Tulley said he had significant experience of managing energy efficient buildings and would join Mmbr S Barker with the energy review of the public toilets and other Parish Council properties.

Transport/Travel (public transport promotion, electric vehicles, walking, biking)

The Chairman and Subgroup members focused on the most achievable outcomes pertinent to the Subgroup.
 RESOLVED: The members of the Subgroup would make contact with one another and would focus on achievable actions like the Walk-to-School Initiative and the Car-free Days.

Waste/Consumption (minimising waste as well as recycling)

- Cllr Barker expressed a need more recycling banks across the Valley.
- There was a discussion of the possibility of the Parish Council sponsoring, branding, and supplying reusable plastic glasses at local festivals
- **RESOLVED**: The Subgroup to investigate these possibilities.
- Mmbr Caroline Anstey talked about the success of fundraising for the Repair Café.

Agriculture, Food, Environment, Land Use (engaging farmers and landowners; local focus)

- **RESOLVED**: To look into the possibility of using Zoom to set up small-scale virtual meetings with local farmers and the National Farmers Union.
- **RESOLVED**: The Subgroup to discuss how to use their budget, perhaps for a tree audit.

#### 2021 11 Local Planning

There was a discussion of local, planning developments, promoting greener housing and the Holme Valley Parish Council Neighbourhood Development Plan, and of the longer term action to engage with property developers.

#### 2021 10 Addition to Further community engagement regarding the Climate Emergency Action Plan

There was discussion of the situation with the Climate Emergency Coordinator recruitment. Cllr Davies shared that four excellent candidates had applied for the role but that progress had been stalled by the pandemic. He hoped that interviews would go ahead in or before August so that the Coordinator could be in post before the planned autumn public engagement event. Mmbr Matthew Tulley and Cllr G Barker shared experiences of using Zoom to undertake virtual job interviews.

There was discussion on supporting the Deputy Clerk with regard to developing the Climate Emergency sections of the Parish Council website.

**RESOLVED**: Members John Queening and Laura Tarlo-Ross agreed to support the Deputy Clerk with web content and design.

#### 2021 12 Local Electricity Bill

The Committee considered the petition to support the Local Electricity Bill. **RESOLVED**: The Committee resolved to commend to the Parish Council that it supports the Local Electricity Bill.

#### 2021 13 Review of Committee Budget and for 2020/21

The Committee considered a request to use funds from the Climate Emergency Standing Committee budget to fund a water dispenser outside Holmfirth toilets

**RESOLVED:** That the purchase of the water dispenser from the Climate Emergency budget be approved.

**RESOLVED:** That the Deputy Clerk arranges for the purchase of the water dispenser.

The Committee had been forwarded a Grant application from Hepworth School for a composter. However, this application has been abandoned or deferred because HoTT is supporting the school to apply for a grant for the composter from the Green Energy Trust.

#### 2021 14 News

Close

The Committee noted the NALC Chief Executive's Report regarding Climate Emergency webinars and Frome Council's work on climate change.

The Committee noted news regarding the NALC Tree Charter and the free trees giveaway.

The Committee noted news that The Great British Spring Clean has been postponed until 11th-27th September 2020

Chairman

	 ٠





Dear All,

Thank you for helping us put together a **Climate Action Fund bid to the Lottery**. We did well to get into the last round of 24 from a national field of 630 applications, but unfortunately we've not been selected for funding this time.

Yesterday we had a Zoom feedback meeting with two representatives from the Lottery. It was helpful and constructive. We discussed the strengths and some weaknesses of the bid and possible ways forward. We'll be sent a written report in due course.

In the meantime, we'll be reflecting on how we wish to progress the **Holme Valley Climate Action partnership** and will share our thoughts and ideas once they're more formalised.

Best regards,

Greta Bradley Chair of HoTT info@hott.org.uk www.hott.org.uk

1 of 1 21/09/2020, 13:53

#### Budget 2020-21 Year-to-Date

#### HVPC Year-to-Date Expenditure

			Starting	Revised															
CODE	DESCRIPTION		Budget	Budget	April	May	June	July	August	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Total	Remaining	
Climate Emergency																			
701 Climate Emergency Action Plan (publication)			£0	£0	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	701
702 Commur	nity Mobilisaion	12.61%	£17,500	£17,500	£0.00	£0.00	£0.00	£0.00	£2,082.50	£124.68	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£2,207.18	£15,292.82	702
703 Energy S	trategy	0.00%	£14,000	£14,000	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£14,000.00	703
704 Transpor	rt Strategy	0.00%	£13,000	£13,000	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£13,000.00	520
705 Waste a	nd Consumption Strategy	0.00%	£500	£500	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£500.00	705
706 Environn	nent and Land Use Strategy	0.00%	£1,000	£1,000	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£1,000.00	706
Total Cli	mate Emergency	4.80%	£46,000	£46,000	£0.00	£0.00	£0.00	£0.00	£2,082.50	£124.68	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£2,207.18	£43,792.82	

NB: £1758 was spent in April to fund the publication of the Climate Emergency Action Plan. This payment was factored into last years accounts, so does not come out of this year's budget

# Ey-up! Fill-up, Drink-up



The Holme Valley
thanks you
for using
LESS PLASTIC



# Tackling the Climate Emergency

**Emission Reduction Pathways report** 

**July 2020** 







## Introduction

The West Yorkshire Combined Authority and the Leeds City Region Enterprise Partnership (the LEP) are working towards the challenging ambition of being a net zero carbon economy by 2038, and to have made significant progress by 2030. Net zero carbon means emissions produced and emissions taken in are balanced.

In June 2019, the Combined Authority and the LEP formally declared a climate emergency supported by a range of partners including local authorities, businesses and young people.

The 2038 target was determined following work by the Tyndall Centre for Climate Change Research, which was commissioned to create a science-based carbon budget for the Leeds City Region that is consistent with the objectives of the UN Paris Agreement on Climate Change (Paris Agreement) and the Intergovernmental Panel on Climate Change (IPCC).

The target builds on the Leeds City Region Energy Strategy and Delivery Plan (adopted December 2018) and sector-specific low carbon workshops held in summer 2019. It also builds on our existing work to address the climate emergency, including the Resource Efficiency Programme, Energy Accelerator, Better Homes Yorkshire, our scheme to install electric vehicle charging points and the CityConnect walking and cycling programme.

Meeting our target, achieving emission reductions of over 11  $MtCO_2$ e by 2038, will require urgent and collaborative action across all sectors of our regional economy in partnership with businesses and communities.

The Emissions Reduction Pathways study, produced for the Leeds City Region and York and North Yorkshire local enterprise partnerships, is the first in a three-step process to determine what steps are needed to create a net zero carbon economy.

The results will set out how we can address the climate emergency, meet our target and reduce emissions across five sectors of our economy: buildings, industry, land use and agriculture, power, and transport.

The findings will also help local authorities within our region develop their own responses to the climate emergency, including in some cases becoming net zero before 2038, as well as helping businesses and other organisations that have signed up to the Leeds City Region Climate Coalition.

Following this in-depth study, the Combined Authority and LEP will work with partners and stakeholders to identify what policies are needed to meet the net zero carbon ambition before a public consultation is carried out in late 2020.

# **Key findings**

West Yorkshire could reduce emissions by 100 percent and achieve its 2038 net-zero target by delivering between **73% and 82%** of emissions savings through the measures that have been modelled in the Emissions Reduction Pathways study.

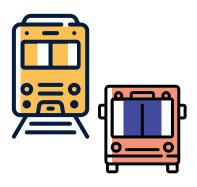
The remaining **27% to 18%** could be reduced through a combination of specific, ambitious measures and innovative new technologies as they become available. Examples of more ambitious measures we could take include:

- Increasing the amount of land allocated to the planting of trees
- Generating more electricity from large-scale solar farms
- Maintaining levels of remote working seen throughout the COVID-19 pandemic
- Providing funding and support for innovative emission reduction technologies

#### To achieve our net zero carbon ambition, our region requires:

- Ambitious leadership at local, regional and national levels
- Funding support and policy change from national Government
- A robust plan to overcome challenges including public behaviour change and technology supply chains
- A strengthened partnership approach from the public sector, businesses and communities

At this stage we are not advocating a preferred pathway due to too much uncertainty associated with some of the measures identified. However, we cannot afford to wait for more certainty and therefore must focus on a number of actions that could begin to be implemented across West Yorkshire as soon as possible to accelerate our transition start becoming net zero carbon.



#### **Transport**

- Reducing private car travel by 21% through shifting demand to public, shared and active travel e.g. walking and cycling
- Increasing travel by walking by 78%
- Increasing travel by bike by 2,000%
- Increasing travel by bus by 39%
- Increasing travel by rail by 53%



#### **Buildings and industry**

- Retrofitting nearly 700,000 homes with energy efficiency measures such as loft and cavity wall insulation
- Installing heat pump heating systems in 665,000 homes and businesses



#### **Power**

- Generating enough electricity from onshore wind and solar to power more than 162,000 homes
- Implementing carbon capture and storage technology at four existing waste facilities and at two new proposed sites



#### Land use and agriculture

- Increasing the area of tree coverage by the equivalent of 452 football pitches
- Restoring 100% peatland
- Reducing food waste by 38%

### **Current situation**

In 2018, the Government estimated the UK produced 449 million tonnes of carbon dioxide equivalent. As a region, West Yorkshire currently emits 11.1 million tonnes of carbon dioxide equivalent per year.

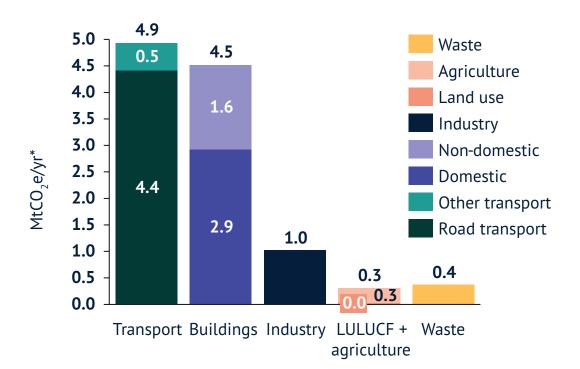
Transport is the largest emitting sector, dominated by road transport and private vehicle use.

The majority of emissions from buildings and industry are due to heat generation, primarily as a result of the combustion of natural gas.

In comparison to other parts of the UK, West Yorkshire does not have a large number of energy intensive industries such as refining or cement, and industry emissions reflect this. Glass, chemicals and food and drink are the key sectors contributing to industry emissions.

Due to the urban nature of our region, land use and agricultural emissions are low.

Emissions from waste are small and mostly from landfill sites.



#### Methodology

The study looked at the current baseline situation and three possible scenarios to decarbonise different sectors of the economy by 2038.

For each economic sector, the three different scenarios were applied to show the difference in carbon reductions from 2020 to 2038. These three scenarios are set out in this report but no one specific pathway has been chosen by the Combined Authority and the LEP at this stage.

#### **Baseline situation**

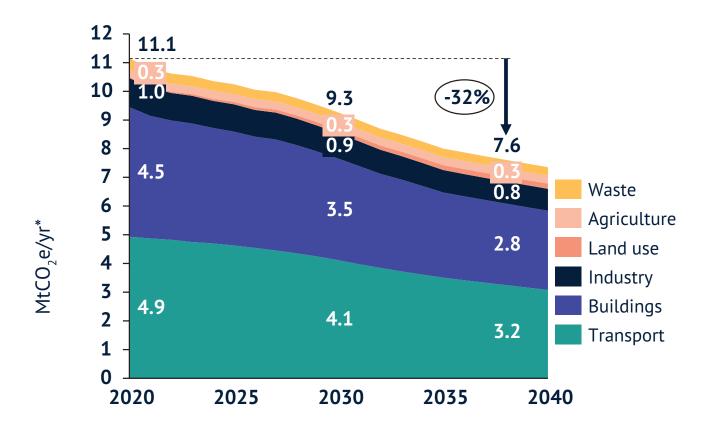
The study explored the likely levels of carbon emissions by 2038 if no new action to reduce them was taken. This assumed no new national and local policies, regulations or incentives were introduced.

It found that overall, emissions would fall by 32% leaving 7.6 million tonnes of carbon remaining, primarily in the transport and building sectors.

In the transport sector, reductions would occur through wider adoption of cleaner, more cost-effective technology such as electric powered vehicles.

National efforts to decarbonise electricity and increase energy efficiency would result in reductions in emissions from buildings and industry.

However, we would see a growth in emissions from agriculture and land use as our population rises to meet the demand for increasing food production and urban spread.



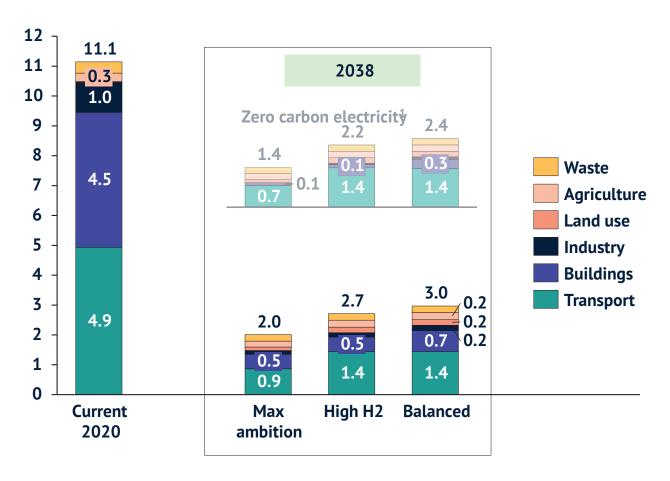
#### The scenarios

The study looked at three potential scenarios to decarbonise different sectors of the economy.

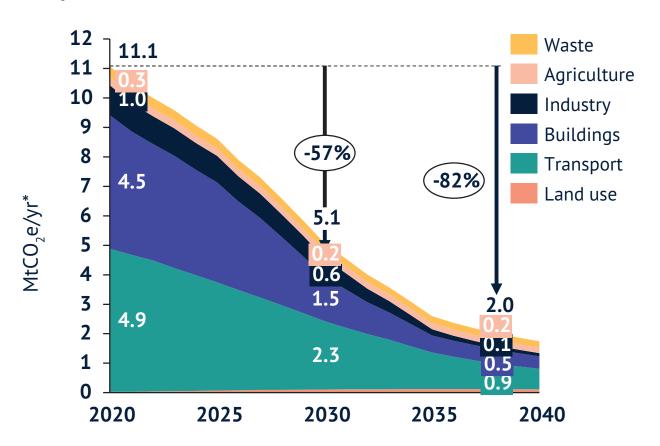
For each economic sector, the three different scenarios were applied to show the difference in carbon reductions from 2020 to 2038. These three scenarios are set out in this report but no one specific pathway has been chosen by the Combined Authority and the LEP at this stage.

- Max Ambition This assumes significant electrification of heat, transport and industry supported
  by enabling technologies such as demand-side response and energy storage. This also includes
  significant increases in low carbon power generation with accelerated negative emission
  technologies and ambitious forest planting rates.
- **High Hydrogen** Promotes large-scale hydrogen use and carbon capture and storage roll-out. The existing gas network is repurposed for hydrogen, enabling significant hydrogen use in buildings, heating, industry, power and transport. This is supported accelerated forest planting and bioenergy production.
- **Balanced** Encompasses a balanced mix of technology across all sectors with contributions from hydrogen, electrification, bioenergy, carbon capture and storage, and decentralised energy production.

#### Emissions remaining compared with current MtCO<sub>2</sub>e/yr\*

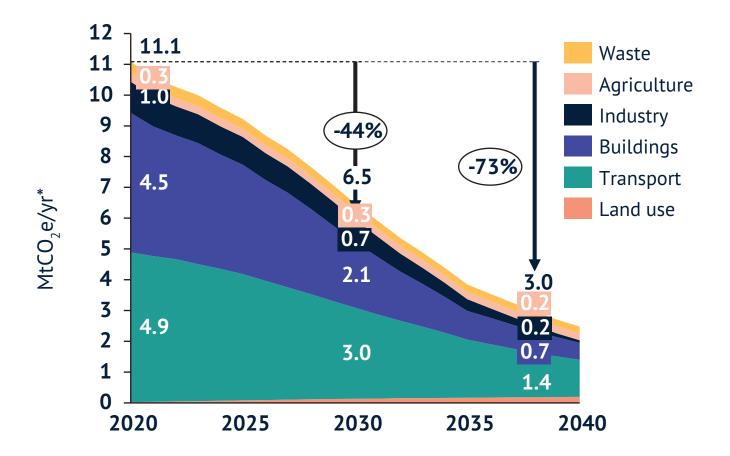


#### **Pathway results**



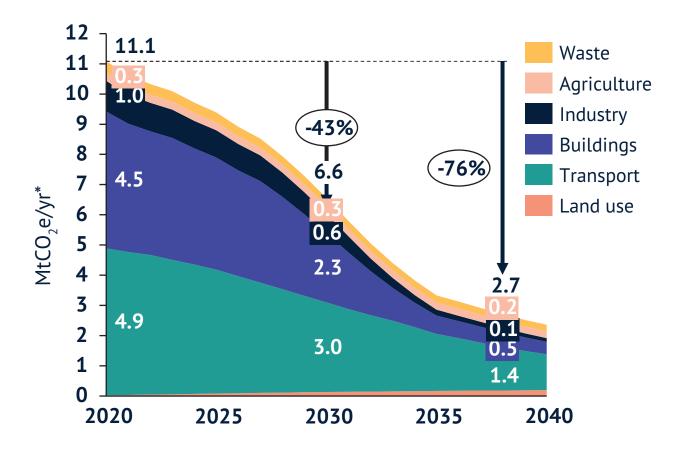
#### **Max Ambition**

- According to this scenario, by 2038 there would be an 82% reduction in carbon emissions across
  the region leaving approximately two million tonnes of carbon remaining primarily in the
  transport and building sectors from the use of electricity.
- This requires a rapid update to electric powered vehicles, alongside significant consumer and industry behaviour change.
- There would be a rapid shift from private car use to cycling and walking and electrified public transport.
- From the 2020s onwards, there would be a large-scale retrofit of buildings with an ambitious roll-out of heat pumps and heat networks particularly between 2025-2035.
- By 2030, there will have been a rapid roll-out of solar and onshore wind as well as carbon capture and storage.
- Industry focuses on developing new technology and switching to low carbon fuels (electricity, hydrogen, bioenergy). Hydrogen is available to select industry sites through dedicated pipelines.
- Land use emissions stay steady as forest planting offsets emissions from new urban development. There would be limited impact on agriculture despite ambitious reductions in meat and dairy consumption.



#### High Hydrogen

- According to this scenario, by 2038 there is a 76% reduction in carbon emissions across the region leaving approximately 2.7 million tonnes of carbon remaining primarily in the transport sector.
- This requires significant uptake of hydrogen fuel-cell vehicles, particularly heavy goods vehicles and buses during the 2030s.
- The natural gas grid will be converted to hydrogen from 2028, powering buildings and industry
- In the 2020s hybrid heat pumps and energy efficiency are implemented and by 2038 nearly half the housing stock is heated by hydrogen.
- Land use and agriculture emissions struggle to decarbonise, with space constraints on new forest planting.

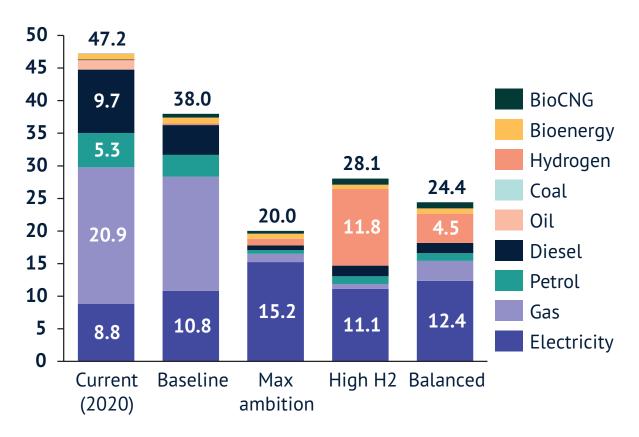


#### **Balanced**

- According to this scenario, by 2038 there is a 73% reduction in carbon emissions across the region leaving approximately three million tonnes of carbon remaining primarily in the transport and buildings sectors.
- There will be a significant shift from petrol and diesel to hydrogen and electric vehicles.
- Buildings and industry will rely on a mixture of hydrogen and electric heating technologies.
- Significant gas usage remains in building boilers and industrial sites, resulting in higher emissions compared to the other scenarios.
- As with the high hydrogen pathway land use and agriculture emissions struggle to decarbonise, with space constraints on new forest planting.

The remaining emissions in all of the pathways (between 18 and 27 percent) will be reduced through a combination of greater ambition for the deployment of specific measures and/or implementation of innovative technologies. See page 3 for more details.

#### Fuel use in 2038 across scenarios TWh/yr



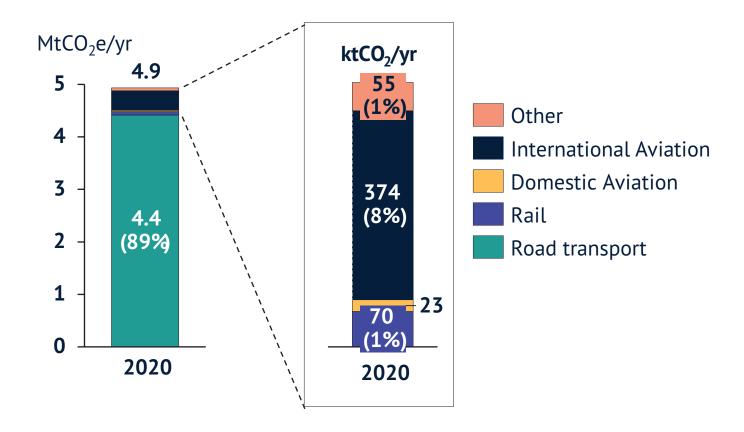
#### **Fuel demand**

- By 2038, all pathways rely predominantly on electricity and hydrogen power. This is a significant shift from 2020 where the fuel mix is primarily fossil fuel, with a small amount of electricity.
- Of the three pathways, Max Ambition has the least demand for fuel while High Hydrogen has the greatest.
- Under the Max Ambition pathway, a 72% increase in electricity demand would be required as heat and transport are electrified. Hydrogen and bioenergy use is limited.
- Under the Hydrogen pathway, 42% of fuel demand is hydrogen with 40% attributed to electricity demand.
- Under the Balanced pathway, electricity demand is highest with demands also for hydrogen, bioenergy and natural gas.

# **Transport**

Transport is a critical area for carbon emissions reduction across West Yorkshire and all three scenarios will require ambitious action, which goes beyond current national policy and targets. This will require a significant shift in behaviour change and the fast adoption of low carbon technology.

#### **Current emissions in West Yorkshire in 2020**



By 2038, under the scenarios, emissions from transport would reduce by:

- Max Ambition 83%
- High Hydrogen 71%
- Balanced 71%

#### Depending on the scenario, actions identified to reduce the levels of emissions by 2038 include:

#### **Road transport**

#### Private cars

- Private car use must decline by between 38% and 21%.
- Sales of petrol and diesel cars in the region must end by either 2030 or 2035. Both targets are ahead of the current Government ambition of 2040 but, if commitments are brought forward to 2035 (currently under consultation), the alignment with national targets would require less action at a local level.
- Sales of plug-in hybrid vehicles must end by 2035 under Max Ambition but continue beyond 2040 in other scenarios.

#### HGVs

- Sales of zero emission HGVs must increase by between 1,000 and 2,000 per year.
- HGVs will switch from petrol and diesel engines to be 79% electric battery powered or twothird powered by hydrogen fuel cell.

#### Public transport

- Sales of conventional petrol and diesel buses will end by 2031 across all scenarios.
- Up to 66% of buses will be powered by electric battery and up to 34% by hydrogen fuel cell.

#### Active travel

- Journeys made by walking need to increase by up to 70%.
- Journeys made by bike need to increase by more than 2,085%.

#### Rail

- Rail passenger kilometres will increase by 53%.
- Rail freight kilometres will increase by 157%.
- Up to 90% of passenger rail services and 75% of rail freight services will be electric.

#### Aviation

- Demand for domestic aviation needs to reduce by 20%.
- Demand for international aviation must remain at 2020 levels or be limited to a 25% increase.

For more technical information on the impact on transport across all pathways please see Appendix 1.

#### **Buildings**

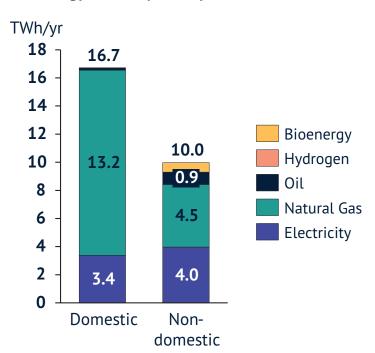
West Yorkshire's high population density and relatively older housing stock present challenges for reducing emissions. However, as 95% of buildings are already connected to the gas network, a higher proportion than the national average, there are significant opportunities. Consumer confidence and pricing will be vital for success.

#### **Current emissions in 2020**

#### **Buildings emissions by subsector**

# MtCO<sub>2</sub>/yr 5 4 - 4.5 1.6 3 - 2 - 2.9 1 - 0 Emissions

#### **Energy consumption by subsector and fuel**



By 2038, under the scenarios, emissions from buildings would reduce by:

- Max Ambition 89%
- High Hydrogen 89%
- Balanced 84%

#### Depending on the scenario, actions identified to reduce the levels of emissions by 2038 include:

- Up to 660,000 heat pumps or 515,000 hydrogen boilers will be installed in homes.
- District and communal heating increases to supply up to 250,000 homes and up to 28% of nondomestic buildings.
- Nearly 680,000 homes are retrofitted with energy efficiency measures such as loft and cavity wall insulation.
- Domestic solar PV installations will increase by up to 171,000.
- The gas network is converted to hydrogen from 2028.

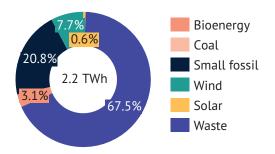
For more technical information on the impact on buildings across all pathways please see Appendix 1.

## **Power**

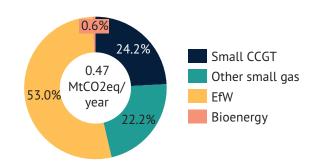
West Yorkshire produces only a quarter of the power it consumes and is dependent on importing power from the National Grid. It lacks large-scale power plants such as those seen in neighbouring North Yorkshire. The information below relates to the emissions generated by electricity generating plants in West Yorkshire and does not relate to emissions from electricity supplied by the National Grid.

All pathways see an increase in the demand for electricity over current levels. The trend we see in West Yorkshire for a greater amount of renewable sources generating electricity over time is mirrored by the National Grid, resulting in the amount of emissions generated from the electricity we consume reducing over time.

**Power Generation:** Energy from waste dominates power generation, followed by small–scale fossil and onshore wind.



**Emissions:** Emissions are almost equally divided between small scale fossil generators and various types of energy from waste.



By 2038, depending on the scenarios, emissions from power could reduce by:

- Max Ambition 76%
- High Hydrogen 77%
- Balanced 76%

#### Depending on the scenario, actions identified to reduce the levels of emissions by 2038 include:

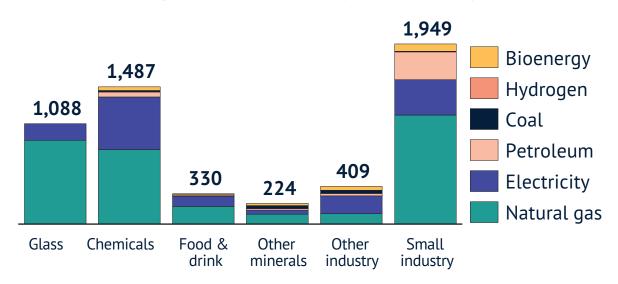
- Power generation within West Yorkshire increases by up to 28%.
- Power generated by solar PV must increase by 217% and by onshore wind by 23%.
- Total land required for solar PV and onshore wind in 2038 under the Max Ambition pathway will be 5.5%.
- Dependency on National Grid increases to between 79% and 81% to meet demand from population growth and more people living in urban areas.

For more technical information on the impact on power across all pathways please see Appendix 1.

# **Industry**

Industrial emissions in West Yorkshire are relatively low due to limited heavy industry, which is currently clustered around the Knottingley and Bradford areas, and is confined to large glass and chemical plants. The majority of emissions are from fuel combustion and can be addressed by using low carbon fuels.

#### Industrial energy by sector & fuel (estimate only) GWh/yr



By 2038, under the scenarios, emissions from industry would reduce by:

- Max Ambition 87%
- High Hydrogen 85%
- Balanced 82%

#### Depending on the scenario, actions identified to reduce the levels of emissions by 2038 include:

Coal and oil are phased out from as early as the 2020s.

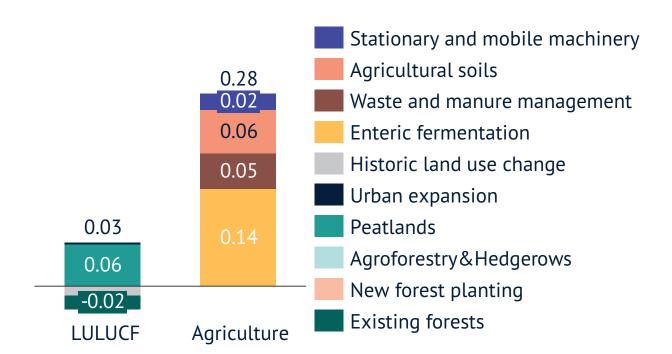
- Natural gas is replaced from as early as the mid 2020s onwards with electricity, hydrogen or bioenergy.
- Carbon capture and storage is implemented during the 2030s to large plants in the glass and chemicals sectors enabling negative emissions.
- Industrial research and development projects must be supported immediately to ensure solutions are available by 2030 for a wide range of industrial applications.

For more technical information on the impact on industry across all pathways please see Appendix 1.

# Land use and agriculture

Whilst West Yorkshire contains a diverse mix of cities, towns and rural areas, overall it is a largely, but not wholly, urban area with an increasing population, resulting in very limited potential for reducing carbon emissions through use of land. However, emissions from land use and agriculture in the region are only a small contribution to the overall emissions. A trade-off will have to be made between using land to create employment or grow food, such as agriculture, or for mitigation, such as planting new forests.





By 2038, under the scenarios, emissions from land use and agriculture would increase by

- Max Ambition 3%
- High Hydrogen 35%
- Balanced 39%

#### Depending on the scenario, actions identified to reduce the levels of emissions by 2038 include:

- Restoration of all lowland peat and 60% of upland peat
- Planting 183 new hectares of forest
- Up to 38% reduction in food waste
- Up to 32% reduction in meat and dairy consumption

# **Next steps**

The Emissions Reduction Pathways study is the first in a three-step process that will enable West Yorkshire to achieve its ambition of becoming a net zero carbon economy by 2038.

The next step is to produce an implementation roadmap plotting when and how each sector can reduce carbon emissions based upon the results of the study.

This will be followed by an action plan with policy recommendations for each sector which will clearly show how we can reach net zero carbon by 2038. This will be codesigned with a number of stakeholders from across different sectors of the economy.

A public consultation will also be carried out to enable communities and businesses to have their say on the action plan and the priority of measures needed.

For more information please contact netzero@westyorks-ca.gov.uk







# Expression of Interest from Dr Catherine O'Halloran towards becoming a co-opted member of the Holme Valley Parish Council Climate Emergency Standing Committee:

I would like to be involved in the work of the Climate Emergency Sub-committee as I am concerned about the climate emergency and would like to help the Parish Council in its efforts to reduce the carbon footprint of the Holme Valley. My professional background is health care and I am particularly interested in promoting walking and cycling as an alternative to car journeys and so I would like to contribute to the work on transport.

I believe I have skills that will be useful to the sub-committee. I bring many years' experience of senior leadership and change management. I am used to working with government policy and its implementation at local, regional and national level and although my experience has been in health and higher education, I believe the skills I have developed in this work are transferable to most areas of government policy. I am used to partnership working across many sectors and as an academic I also have experience of research, bid writing and managing projects. Following retirement, I now also have time and I would like to use some of that time to contribute to the critically important work of combatting climate change.

Dr Catherine O'Halloran