



West Midlands  
Combined Authority

## Environment & Energy Board

<b>Date</b>	1 March 2023
<b>Report title</b>	West Midlands Hydrogen Policy Position Paper
<b>Portfolio Lead</b>	Environment, Energy & HS2 - Councillor Ian Courts
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### Recommendation(s) for action or decision:

#### The Environment & Energy Board is recommended to:

- (1) Receive the independently produced 'West Midlands Hydrogen Policy Position Paper' as a foundation for WMCA decision making on hydrogen related issues.
- (2) Provide feedback prior to the paper being finalised by the consultants.

### 1. Purpose

- 1.1 The purpose of this paper is to set out the context of the West Midlands Hydrogen Policy Position paper, which has been commissioned by a cross departmental team in the WMCA.
- 1.2 Independent consultants have been brought in to provide sector specific expertise and evidence to help us define the WMCA's role in supporting the development of the hydrogen economy in the West Midlands, within the context of other players operating both within and outside the region.

### 1.3 The paper will help us to better understand:

- How the WMCA can support start-ups/ new market entrants to gain a foothold in the hydrogen economy and what opportunities might there be locally as well as more widely? The hydrogen economy is an immature market, with high levels of interest but there is a lot of misunderstanding about the costs and technical aspects and the industry lacks a clear policy direction from Government, so what is the critical path for the industry and who makes the decisions when?
- Several groups/ forums/ organisations are pursuing hydrogen as a low carbon solution in the region, but these are not joined up and often have vested interests. What are the opportunities and risks associated with the current approach which often follows funding opportunities? Where can value be added and what does the public sector need to do?
- Other regions have natural assets for CCUS and clean energy generation that are lacking in the West Midlands. What are the competitive advantages and opportunities for the West Midlands and is market intervention required to access these? If so, **where should limited resources be focused given the WMCA's objectives are grounded in achieving a just transition?**

1.4 The following summary of the West Midlands Hydrogen Position Paper outlines the role of hydrogen in our region to achieve our overall goals of a just transition to net zero.

## 2. Background

2.1 A consortium of CENEX and WSP were commissioned by a cross departmental WMCA Hydrogen Working Group to produce a West Midlands Hydrogen Policy Position in November 2022. A draft of this paper has been produced following extensive research, analysis and stakeholder engagement.

2.2 The regional context has been considered carefully, as have the technical opportunities and constraints.

2.3 The WMCA has prioritised decarbonisation through its 2041 Net Zero Strategy and the opportunities offered by hydrogen will be explored with this strategy as the driver. As a landlocked region, the WMCA does not currently benefit from easy access to blue hydrogen. Therefore, WMCA strategy is to prioritise use of electrical energy, as opposed to converting electrical energy to hydrogen energy, prior to end use.

2.4 The following position statements have been recommended by the consultants for our consideration:

Position Statement	WMCA Implications
1. The future hydrogen economy opportunity is intrinsically linked to the energy transition needed to achieve Net Zero targets and therefore to both Net Zero and related energy policies.	We need to consider hydrogen as one of a number of ways that we can meeting our 2041 targets. The report has suggested a number of enabling actions that WMCA and its partners could help to explore the targeted opportunities further

<p>2. The most significant demand for hydrogen in the region will be for certain aspects of transport (primarily longer range vehicles). There will be demand for hydrogen from industry and for commercial and residential buildings, but the decarbonisation of these sectors will be primarily via electrification.</p>	<p>Focus should be on demonstrating the systems viability through innovative projects such as ZEBRA that can then be applied to other transport modes</p>
<p>3. Hydrogen is considered essential for the decarbonisation of certain hard to abate industrial processes which require high grade heat and cannot easily be electrified.</p>	<p>Targeting industrial companies that require hydrogen and working with them to support their decarbonisation journey should be a priority. This will be achieved through the actions of the Industrial Energy Task Force.</p>
<p>4. Hydrogen has potential to provide heat for buildings where electrification is challenging. Use of hydrogen for heating in homes remains dependant on national government decisions.</p>	<p>This will require a watching brief as to the outcomes of national trials and ensuing national policy on hydrogen for heating buildings. In the meantime, full resources should be applied to a regional retrofit programme as laid out by the SMART hub as this is a least regrets option regardless of future policy direction.</p>
<p>5. Due to current low gas demand for power generation in the region, hydrogen is not expected to play a significant role in future power generation in the region.</p>	<p>No immediate implications.</p>
<p>6. Green hydrogen is the logical production choice for the West Midlands region.</p>	<p>All hydrogen opportunities shall be assessed on their decarbonisation potential.</p>
<p>7. A merchant market will be critical for resilient hydrogen supply and a competitive market</p>	<p>WMCA and its partners should consider multiple operators for future schemes to ensure competitiveness.</p>
<p>8. Pipeline supply offers the most cost-effective means by which to distribute large quantities of hydrogen over long distances. Projects are under development for pipeline supply with the potential to connect to the West Midlands in the 2030 to 2035 timeframe originating in the east of the region.</p>	<p>A pipeline will require an assessment of appropriate demand to justify the investment. WMCA and its partners to work with identified key stakeholders (transport and industrial) to further understand their demand and their preferred decarbonisation pathway.</p>

<p>9. Blending may provide some short-term decarbonisation benefits but cannot wholly decarbonise sectors.</p>	<p>As the benefits are very marginal, this should be seen in addition to the primary actions as identified.</p>
<p>10. The hydrogen opportunity is characterised by being multifaceted but also in its infancy, so the WMCA policy approach needs to be one of assessing where best to focus to help unlock those opportunities of greatest utility for the region.</p>	<p>Further technical resource will be required to assess hydrogen opportunities as they develop. An internal hydrogen working group has already been established and this may need to bring in further additional expertise to be able to rigorously analyse developments as well as establish some of the market-making elements of the recommended actions.</p>

2.5 The full West Midlands Hydrogen Policy Position Paper is appended to this paper and further technical appendices can be made available on request.

### **3. Financial Implications**

3.1 There are no immediate financial implications from this paper. However, if WMCA was to further explore any of the position statements within this paper, there may be cost implications for which there is no budget at present.

### **4. Legal Implications**

4.1 None from this report.

### **5. Equalities Implications**

5.1 None from this report.

### **6. Inclusive Growth Implications**

6.1 Our ability to bring about a just transition to net zero will depend on our energy mix being wholly appropriate for the region. Ensuring that our limited resources and reach are being targeted in areas that ensure that households and businesses in fuel poverty will not be further unduly burdened by high energy costs will be paramount to the success of this developing policy area.

### **7. Geographical Area of Report's Implications**

7.1 The whole WMCA geography, including non-constituent authorities.

### **8. Other Implications**

8.1 None.

## **9. Schedule of Background Papers**

- 9.1 Full policy position paper submitted as background reading. Further technical appendices are available upon request.