



West Midlands  
Combined Authority

## Economic Growth Board

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<b>Report Title</b>	Towards a Sustainable Economy
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<b>Report has been considered by</b>	n/a

### Recommendations

**Economic Growth Board is asked to:**

**Note the contents of the report highlighting any specific areas EGB would wish to see on the forward plan for EGB for more detailed consideration.**

#### 1. Purpose

- 1.1 This paper updates Economic Growth Board on regional level activities that achieve the dual ambitions of driving economic productivity and enhancing environmental sustainability in the West Midlands. These activities are complemented by local level activities led by local authorities and other agencies at a local level, including universities and Catapult centres.

#### 2. Background

- 2.1 The foundational strategies for a sustainable and productive economy are the climate strategy for the region: West Midlands 2041 and the region's medium term high value jobs and growth strategy, Plan for Growth.
- 2.2 As EGB members will be aware, WM2041 focuses on changing our economy without leaving anyone behind; investing in the resilience of our places; using the region's industrial past to create a new future; creating places and connections that help us to meet the climate challenge and decoupling prosperity from the consumption of energy and resources. The West Midlands

Plan for Growth focuses on enabling activity that helps to create the high value jobs of the future in the West Midlands.

- 2.3 To encourage this sustainable and productive economy across the West Midlands Region, the WMCA has embedded the Inclusive Growth Framework across its programme activities. This Framework is designed to support all types of programmes and investments to consider 8 different 'inclusive growth fundamentals' in design and delivery. The Climate Resilience fundamental sets the outer limit on growth, advocating for growth which does not exceed the capacity of the planet to regenerate. Areas of importance to achieve this include energy use, waste, emissions and biodiversity.
- 2.4 Building resilience to a changing climate and decoupling prosperity from the consumption of energy and resources does not come at the expense of productivity and high value jobs. Indeed, it is only through investing in the technologies and skills of the future that the West Midlands will achieve the levels of high value jobs that can drive a resilient, low carbon and productive economy in the West Midlands.
- 2.5 This paper brings together ongoing activity at a regional level that the West Midlands Combined Authority is helping to drive forward. It is in no way an exhaustive overview of all activities at either a local level or where regional assets are driving change across the wider economy. It does, however, provide EGB with an overview of a number of different activities taking place to make the West Midlands a truly sustainable economy.

### **3. Plan for Growth - Modern & Low Carbon Utilities cluster**

- 3.1 The West Midlands Plan for Growth identifies clear market opportunities that enable productivity growth for the West Midlands economy at the same time as creating a more sustainable economy. This is most clearly demonstrated in the sub-sectors ('clusters') of potential competitive advantage for the WM economy, in which there is a clearly identified opportunity for the West Midlands to lead nationally, in Europe, or, in some cases, globally.
- 3.2 Many of the target clusters in Plan for Growth either:
  - i) explicitly focus on sustainability as part of their growth, for example Electric Light Vehicles and Batteries; Aerospace; and Manufacturing of Future Housing or
  - ii) see sustainability as a key opportunity and issue in the future growth of their cluster, for example Creative Content Production and Gaming, who explicitly call it out as part of their strategy and vision for future cluster growth.
- 3.3 The Plan for Growth also, explicitly references modern and low carbon utilities as a key growth opportunity for the region. Under this broad descriptor of the cluster, we have been working with partners, including Energy Capital, led by a

specialist agency in economic development, Metro Dynamics, to highlight strengths and opportunities for these cluster of businesses.

- 3.4 This work has begun to identify that there are clear opportunities for West Midlands businesses through clustering, but that these are different from other parts of the country where the focus has been on hydrogen generation, carbon capture and transportation, powered by offshore wind, tidal and nuclear power.
- 3.5 Indeed, the primary weakness facing the West Midlands' transition to net zero offers the region's greatest opportunity for commercial growth. The region's geographic position means that it must rely primarily on grid capacity for decarbonised power, rather than locally generated hydrogen or nuclear, meaning smart and efficient energy usage is required to draw sufficient power from a constrained grid. Smart energy management, clean-tech and strategic advisory services are required to achieve this, demand for which is already attracting new business investment and pivoting existing business activity.
- 3.6 This business activity builds on the region's existing and emerging commercial strengths in technology, data, professional services, underpinned by, in many cases globally leading R&D, innovation, and a rich and active regional policy agenda.
- 3.7 Specifically, the West Midlands has several mainstream major energy companies such as National Grid, Cadent and Eon headquartered in the region. This has led to a regionally located highly skilled energy workforce, which has, in turn, attracted new investment from innovative energy management and clean-tech companies such as Grid Edge and CarbonTRACK. In addition, the region has an active and high-profile policy landscape that is driving innovation in energy management, led by Energy Capital, with several flagship innovation assets located in the region.

#### **4. Plan for Growth Innovation through Clean Technologies**

- 4.1 As a foundational resource for unlocking the potential of clean-tech, smart energy management and strategic advisory services, the West Midlands has significant innovation assets, working with innovative businesses, to lead the drive towards a more sustainable and more productive economy:
  - The Manufacturing Technologies Centre (MTC), Warwick Manufacturing Group, and the UK Battery Industrialisation Centre combined are the UK's primary R&D centres for batteries and related advanced manufacturing and robotics applications.
  - Tyseley Energy Park in Birmingham is leading the demonstration of clean energy generation, storage and energy management and, as part of the wider business park, is home to a significant localised energy industry cluster.
  - The Black Country Innovative Manufacturing Organisation (BCIMO), wider WMCA area universities and Catapults Centres, and MIRA Technology

Park, have amongst the best demonstration facilities for mobility related R&D in the world.

- The National Brownfield Institute at the University of Wolverhampton is a lead in planning, and sustainable remediation and enabling, of land development.
- All WMCA area universities have key strengths in advanced materials for engineering and advanced manufacturing all driven by industry and wider governmental policy drivers aimed at increasing sustainability and reducing the carbon impact.

4.2 As EGB members will recall, to boost the innovation ecosystem in the West Midlands, the Levelling Up White Paper confirmed the West Midlands Innovation Accelerator pilot. This granted £33m to five projects to accelerate collaborative R&D and in turn boost productivity of West Midlands based businesses. Funding is through to March 2025.

4.3 The focus for this funding was agreed to be on activities relating to advancements in clean-technologies, and health & medical technologies. These technology families have applications across all eight Plan for Growth clusters.

4.4 Specifically, three projects focus on clean-technologies applications:

4.5 The **Biochar** project is led by Aston University and was awarded £1.8m to support SMEs to advance the generation and application of biochar. Biochar is generated from organic waste that would otherwise go to landfill or waste-to-energy facilities. Due to its unique properties, it has key applications in fuels, agriculture, and industrial machinery components.

4.5.1 Biochar has a carbon removal potential of 100 megatons by 2050 if it is deployed to its fully capabilities. Production and commercialisation is currently led by Germany, Switzerland, and the Nordic Countries. The UK has some of the best biochar R&D facilities and potential to be a leader in a number of markets and industries that biochar has applications in with the West Midlands in leading position.

4.5.2 The project enables access to specialist university facilities and knowledge leading to validation and demonstration of new biochar commercial applications.

4.6 **Clean Futures** is led by the Black Country Innovative Manufacturing Organisation (BCIMO) and Coventry University. It has been awarded £8.3m to run business accelerator programmes focused on applications for very light rail and automotive. The accelerator programmes focus on five challenges areas of greener electric vehicle components, circular economy of materials and components, greener road freight, greener infrastructure, and future fuels.

- 4.6.1 The project provides grants, intensive support, and access to specialist demonstration facilities for 40 SMEs, as well as market knowledge awareness training for 800 SMEs.
- 4.7 **DIATOMIC** is led by the Connected Places Catapult, working with universities in Birmingham and the Birmingham Chamber of Commerce. It has been awarded £6.2m to deliver business accelerator programmes focused on bi-lateral trade and FDI of clean technologies, digital twins for local energy systems, and an inclusive innovation network.
- 4.7.1 The project provides grants, intensive support, and access to demonstration facilities for 40 SMEs. It is centred on Birmingham and as part of its sustainability will generate blueprints for how wider WMCA area local authorities could replicate this programme of supporting local innovative firms to internationalise.
- 4.8 As part of the West Midlands Strategic Innovation Partnership with Government, as set out in the West Midlands Deeper Devolution Deal text, WMCA and the West Midlands Innovation Board is making the case for a follow-on funding settlement.

## 5. Industrial Energy Task Force – addressing current energy demands.

- 5.1 The West Midlands Industrial Energy Taskforce (WM IETF) was established in response to an emergency summit convened by the Mayor of the West Midlands in August 2022. The summit included Mike Wood MP, the Black Country Local Enterprise Partnership, then Energy Minister Greg Hands MP and around 30 industrialists from across the West Midlands.
- 5.2 The WM IETF was set up as an independent commission, financed by the West Midlands Combined Authority, and led by Camirus Consulting with support from Make UK. It received significant voluntary support from a variety of business representative groups, public sector bodies and energy industry specialists. The full final report of the WM IETF can be found online<sup>1</sup>.
- 5.3 The UK energy market is complex and multi-layered, however the WM IETF identified five challenges that were faced by all region's businesses that depended on energy during the crisis. These were:
- The **legacy** of an unprecedented crisis, which resulted in inequitable contracts signed under duress and locking firms into unsustainable pricing.
  - An **energy market** offering which provides consumers of industrial energy many complex options hiding a simple structural operation of the energy market that favours suppliers.

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<sup>1</sup> <https://www.wmindustrialenergy.co.uk/reports-and-data>

- **Barriers to energy resilience** with significant gaps between theory and practice in industrial energy efficiency.
- **Energy policies** undermining industrial competitiveness in how infrastructure and transition costs are allocated in ways that have a significant negative impact on industrial competitiveness.
- **Institutional and cultural failures** at every level in how local, regional, and national institutions are poorly equipped to deliver and support solutions.

5.4 In response to these five challenges, the WM IETF outlined 15 recommendations which were broken down into the following categories: priority, urgent, medium-term, longer-term, and institutional in order to help support energy intensive businesses in the West Midlands. A full list of these recommendations can be found in Appendix 1.

5.5 In regard to the third challenge on energy resilience; the WM IETF argued that there was a strong public interest in improving the economic resilience of the West Midlands industry base and a clear benefit case for public intervention to eliminate market failures. Therefore, in the summer of 2023, the WM IETF proposed an energy efficiency programme that built on existing West Midlands expertise and networks in business energy efficiency support. This programme was taken up by the Department of Energy Security and Net Zero and HM Government's Energy Efficiency Taskforce. This programme is now known as the Business Energy Advice Service and, from October 2023, has been in delivery across the region.

## 6. **Business Energy Advice Service – building a more sustainable and productive economy.**

6.1 As part of the response to the West Midlands Industrial Energy Taskforce, WMCA, working with local authority partners commissioned a £4.6M programme, utilising the regional allocation of UK Shared Prosperity Fund, to drive decarbonisation activity amongst West Midlands businesses. This included provision of a match funding capital grants scheme.

6.2 Separately and driven by the work of Matthew Rhodes as Chair of the Industrial Energy Taskforce, DESNZ and DLUHC awarded the wider ITEL1 West Midlands £24.6M to develop energy efficiency measures in 4,000 businesses across the region. This funding was approved by WMCA Board on 15<sup>th</sup> September 2023 with the initial launch of the programme on 16 October 2023.

6.3 The programme complements and is aligned with other regional programmes, funded through UK Shared Prosperity Fund which are delivering energy efficiency audits and grants. There are four sub-regional delivery partners and a consortium led by Aston University in the WMCA area, building on the regional UK Shared Prosperity Fund programme. Each delivery partner will provide standard energy efficiency audits and, in most cases, deliver energy efficiency grants. Delivery partners which do not have the capacity to deliver



energy intensive audits will pass details of businesses to the Manufacturing Technologies Centre (MTC) who are leading the delivery of energy intensive audits across the whole of the ITL region.

- 6.4 In total, the BEAS Programme is aiming to provide 4000 energy audits and deliver over £15M in grant funding. The programme is forecasting lifetime energy savings for SMEs of between 332 and 631GWh per annum at current commercial rates, this will also result in the reduction of carbon emissions for the west Midlands Region. This activity is also expected to influence regional energy productivity, delivering the same or greater economic output for lower industrial energy demand. (NPSV of between £24.38M and £114.57M).
- 6.5 This programme brings substantial additional funding into the West Midlands and is aligned to strategic priorities by contributing to reducing energy use, aligned to #WM2041. By focusing on increasing business productivity and more resilient supply chains, alongside energy reduction, it forms a key part of interventions under Plan for Growth.

## **7. Circular Economy – a future economy opportunity**

- 7.1 The circular economy is an approach to economic productivity that seeks to design out waste and pollution by keeping products and materials in use for as long as possible. Encouraging more circularity in our economy will be essential for the region to achieve its ambition of net zero carbon emissions by 2041. Analysis conducted during the development of the WMCA's Circular Economy Routemap has shown that greenhouse gas emissions can be reduced by up to 45% through the uptake of more circular processes.
- 7.2 Whilst supporting the region's efforts to decarbonise, the circular economy can also be used to create a more resilient, and productive economy. Reports from the three Chambers of Commerce in the WMCA area and MAKE UK consistently highlight the challenge faced by businesses caused by the price, and availability, of the materials they need in their industries.
- 7.3 By creating a closed loop system and keeping materials in use within the West Midlands for as long as possible, the circular economy can help to alleviate the pressures being experienced by businesses in the advanced manufacturing and construction sectors. Analysis has also shown that the uptake of circular practises can increase business productivity. Reprocessing materials that are currently disposed of can increase their productivity by six times, and the waste produced annually by the region's construction sector could be worth up to £5 billion pounds.
- 7.4 The WMCA is taking steps to create an economic environment that enables a transition towards increased circularity. An Industrial Symbiosis Demonstrator, that aims to create a network of businesses exchanging waste and resources for mutual benefit, will launch in early 2024. Alongside this, the WMCA is

developing the infrastructure required to support materials recovery in the construction sector, aiming to launch a pilot Zero Waste Construction Hub in mid to late 2024.

## **8. Homes for the Future – towards sustainable construction for the future**

8.1 As part of the rapid changes taking place in the construction sector and linking closely to Plan for Growth focus on ‘Manufacture of Future Housing’, in April 2022, the WMCA Housing & Land Delivery Board agreed a programme of work to develop a ‘*Homes for the Future Strategy*’.

8.2 The scope was to produce a coherent strategy to accelerate the development of the Future Homes Cluster following the growth strategy for the cluster as part of the Plan for Growth, secure delivery and investment in Advanced Manufacturing in Construction (AMC); zero carbon homes (ZCH); get the region ready for the roll-out of changes to Building Regulations (Part L) set out in the Government’s emerging Future Homes Standard; and consequential reduced occupier costs in the new homes.

8.3 WMCA’s Homes for the Future strategy builds on the work already pioneered to date around AMC and ZCH under Housing & Land Delivery Board and is an important part of achieving WMCA’s commitment to West Midlands 2041 target. This new integrated strategy is a cross-cutting document that directly links and delivers on a range of regional policies and programmes:

- unlocking the potential of the ‘*Manufacture of Future Housing*’ economic cluster in the West Midlands Plan for Growth.
- the West Midlands brownfield housing and regeneration programme (launched in the 2018 Housing Deal)
- WM2041
- Investment and Levelling Up Zones (March 2023 Devolution Deal)
- The Affordable Housing Programme (March 2023 Devolution Deal)
- The Public Land Programme (March 2023 Devolution Deal)
- the investment opportunity in future homes set out in the West Midlands Investment Prospectus (launched May 2023); and
- the high-level deliverables of the Housing & Land Portfolio agreed by WMCA Board in February 2023.

8.4 In addition, there are significant benefits for the occupiers of these homes. Homes for the Future means that the region will be able to deliver more sustainable, warmer, more energy efficient, climate resilient homes that will be healthier, happier properties for residents to occupy from the outset, reducing the need for later improvements.



- 8.5 From a commercial productivity perspective, Homes for the Future supports the move towards more sustainable construction materials, generating skills and talent within the region, and encouraging a shift to more locally and sustainably sourced construction materials with a consequent reduction in the waste of construction materials as part of the move towards a circular economy.
- 8.6 Furthermore, by supporting the market in encouraging a shift to alternative means of construction, Homes for the Future will help to confront the growing problems within the traditional construction sector, including an ageing workforce, earlier retirement age, and decreasing productivity, among other factors. It is also preparing the market for being able to deliver scalability of zero-carbon homes in the long-term.

## **9. Financial Implications**

- 9.1 There are no direct financial funding requests from this paper. As the paper discusses several current WMCA programmes, there will be financial implications through their delivery, which will follow WMCA governance routes.

## **10. Legal Implications**

- 10.1 This paper provides a strategic overview of the current activities being undertaken by the West Midlands Combined Authority to promote a sustainable economy in the West Midlands. There are no legal implications arising from this summary overview paper.

## **11. Equalities Implications**

- 11.1 The regional level activities set out in this paper aimed at moving the West Midlands economy towards one that is more productive, growing and sustainable, are likely to have a neutral impact on people or communities with respect their protected characteristics. There are likely to be positive socio-economic impacts as a result of these activities and it is recommended that a full Health and Equity Impact Assessment is carried to examine this and other potential impacts as described.

## **12. Inclusive Growth Implications**

- 12.1 The regional level activities set out in this paper aimed at moving the West Midlands economy towards one that is more productive, growing and sustainable aligns will likely have a positive impact on supporting the West Midlands Combined Authority definition of [Inclusive Growth](#).

Working towards a more sustainable economy directly supports the Climate Resilience fundamental, particularly in regard to the “energy use”, “waste” and “emissions” considerations as outlined in the Business Energy Advice Service, Circular Economy, and Innovation Accelerator programme workstreams. The activities around the Homes for the Future will have a positive impact on the Affordable and Safe Places fundamental which will help tackle welfare related poverty and designing out homelessness through design by supporting the transition to new methods of construction and therefore, good employment.

### **13. Geographical Area of Report’s Implications**

13.1 The report relates to the 7 Met area.