National Infrastructure Commission Submission – Midlands Engine

The Midlands Engine

The Midlands Engine is a pan-regional body that brings together stakeholders and partners for the economic and social good of the region. We add value and drive prosperity. The Midlands Engine Observatory is the UK's only pan-regional economic observatory that provides substantive data to support evidence-led policy making for our region.

The Midlands Engine is a vital component of the UK economy - the biggest regional economy outside of London and the South East providing £246bn in GVA or 14% of England total and 20% of all exports. Developing a detailed comprehension of contemporary evidence of the challenges across our economy underpins the work we deliver through the Midlands Engine Observatory.

The Midlands Engine Ten Point Plan for Green Growth

The Midlands Engine has gone further than any other region in translating government low carbon ambitions into a regional plan for net-zero. Our industry-led Ten Point Plan for Green Growth sets out how we can and will deliver levelling up and economic prosperity. It is how the Midlands Engine partnership will mobilise and spearhead pan-regional action with a focus on green buildings, net-zero transport, clean and smart energy, and crucial enablers including green innovation, the energy workforce and green finance.

Exceptional work in low carbon is already underway across our vast Midlands Engine partnership landscape, making the Midlands a leading location for green growth. But the potential for more is phenomenal. By 2041 and by working together, we have the potential to create or safeguard 196,000 green jobs, increase regional GVA by almost £26 billion, and reduce carbon dioxide emissions by 36%.

Our Ten Point Plan brings together an impressive spectrum of expertise to identify a key role for the Midlands region in driving green innovation and as a centre for excellence in new technologies and clean fuels, such as hydrogen – we complement existing partner initiatives and capitalise on the wealth of economic opportunities presented by the shift to low carbon.

We consulted with over 20 partners to produce this submission, focusing on the challenges the region has faced historically in securing funding for and developing infrastructure, as well as ongoing and future challenges.

Introduction

Question 1: Do the nine challenges identified by the Commission cover the most pressing issues that economic infrastructure will face over the next 30 years? If not, what other challenges should the Commission consider?

The Commission fails to cover the impact and redress needed for historic underinvestment in many areas across the UK, as well as the lack of powers local authorities have to invest and plan infrastructure.

The Midlands Engine has seen historic levels of underinvestment in research and innovation, transport, health, to name just a few. The West Midlands received 3% of equity investments since 2011 and 6% of private debt, despite hosting 8% of the business population. The East Midlands had

only 2% of equity investments since 2011, 6% of private debt, and 7% of the business population.[1] Whilst the region has not seen as steep a decrease in FDI investment as the UK (10.3% loss compared to 17%) this cannot counter the productivity gap that exists in the region or balance out significant and long-term underinvestment.[2] Simply increasing funding to national levels will not be enough to improve the Midlands' infrastructure, close the productivity gap, or address social and economic inequalities.

The Government's Levelling Up programme seeks to address some of these issues, but it has a £86 billion-pound deficit compared to the UK average, accrued over 15 years up to 2019 to make up for.[3] The Midlands Engine had a productivity gap of £82.3bn in 2019. The productivity gap has increased by nearly £6.6bn (+7.3%) since 2018 and just over £9.7bn (13.4%) since 2016.[4]

As set out in the Levelling Up White Paper, infrastructure or physical capital is an important part of developing the productivity and growth of the country. Everyone must receive the benefit of infrastructure upgrades. Developing a more robust electricity network to allow for electric vehicle charging or ensuring that existing green spaces support biodiversity will not help those who cannot afford an electric car or the charging costs or cannot access existing green spaces. Social barriers to accessing infrastructure, often caused by poverty, should be a part of Levelling Up and rectifying historic underinvestment.

As part of the development of the Midlands Engine Observatory Research Programme for 2022-23, we consulted with over thirty different universities, LEPs, local authorities, and public bodies to ascertain which areas they felt were important to research. A clear frontrunner among these topics were green skills, including retrofitting, mechanics for electric vehicles, and technicians to deploy and maintain the electricity network. A regional insulation installer in Derbyshire expressed concern about the size of the labour pool citing issues around the loss of EU workers due to the UK's exit from Europe, the increase in demand for insulators in Europe, and a lack of new apprentices. The opportunities for training open opportunities to level up some of the region's poorest towns. Plumbing, ventilation, heating and air conditioning alone will require 59,000 extra people by 2028 and 91,500 by 2045.[5] Decarbonisation should also include decarbonising buildings, industry and transport. The Midlands Engine region has a higher proportion of people with low or no skills than the UK average, with an extra 378,755 people needing to obtain a Level 4+ NVQ to reach the UK average.[6] Providing green skills training or re-training opportunities solves joint issues of skills shortages, low skills among the population, business access to skills, the productivity gap, and poverty. However, this requires extra funding to achieve.

The Commissions challenges overlook the role of funding in ensuring that the national infrastructure is suitable for current and future needs. The regional insulation installer expressed concern that the removal or reduction of the energy company levy that funds Energy Company Obligations as a way of tackling rising gas prices is being considered. This would make it more difficult to reduce the UK's carbon production but sadly is in line with years of stimulus or the removal of stimulus that destabilises supply chains and discourage investment. The government must develop and embed a

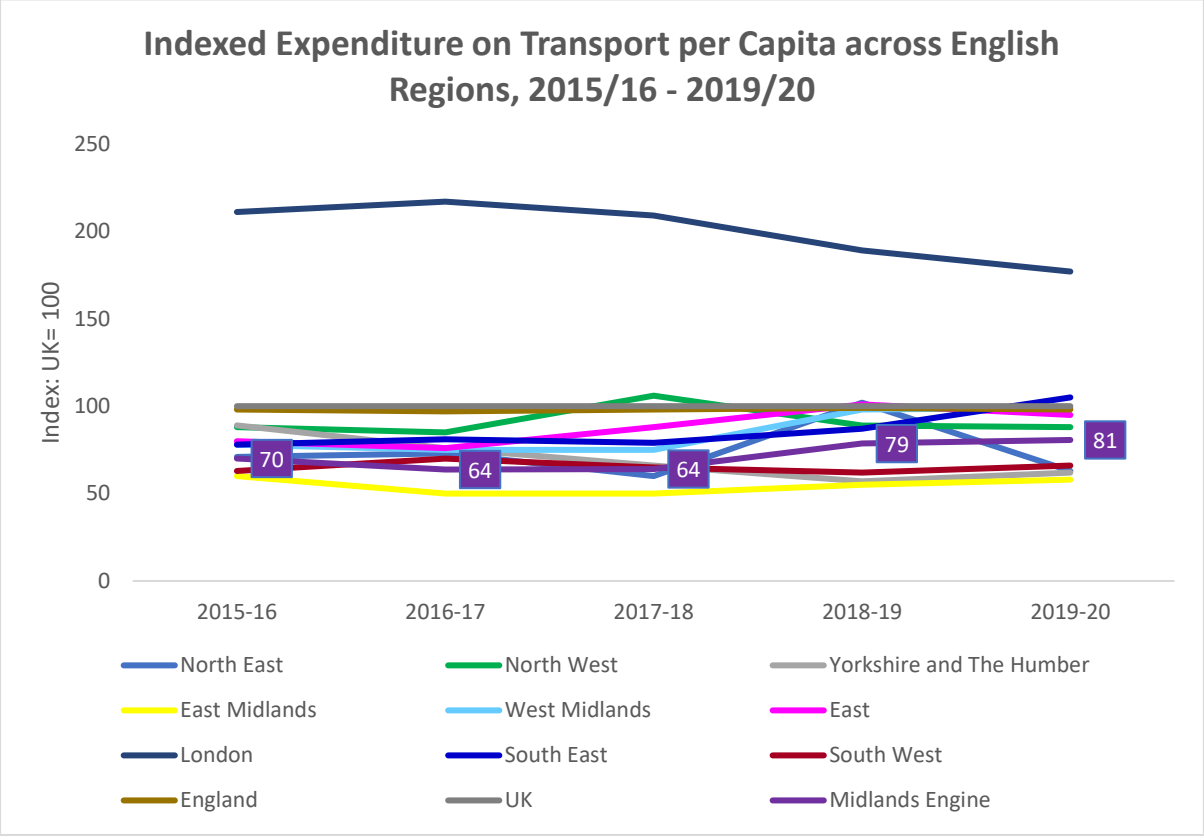
[1] https://www.midlandsengine.org/wp-content/uploads/2021/11/Midlands-Engine-Monitor-Edition-19.pdf
[2] Midlands Engine State of the Region 2021 (arcgis.com)
[3] Midlands Engine, Levelling Up for Good, Powering Prosperity for every part of our Region, October 2021
[4] https://www.midlandsengine.org/wp-content/uploads/2021/12/ME-State-of-the-region-Exec-summary-Oct-2021.pdf
[5] Can low carbon jobs really level up post-industrial towns? We went to Bolsover to find out (theconversation.com)
[6] Labour Market & Skills | Midlands Engine (arcgis.com)

consistent financial goal for their investments and stimulus. This may include a Natural Capital Mandate as explored by the Dasgupta Review and making the role of banks clear in directing the flow of capital where there is need.[7]

A Midlands business working in housing retrofit stated that there is an opportunity to class housing retrofit as part 'infrastructure' investment. This would make funding for this vital area more secure as it is one of the most difficult aspects of the UK green industrial revolution to solve.

Question 2: What changes to funding policy help address the Commission's nine challenges and what evidence is there to support this? Your response can cover any number of the Commission's challenges.

Devolving funding and distributing funding could help address the Commission's challenges. The Midlands Engine Ten Point Plan for Green Growth highlights the opportunities of Gigafactories. An additional 8,000 new jobs would increase GVA and see a 12% CO2 reduction through electric vehicle usage. However, transport budgets have been consistently low, which has limited the region's capabilities to increase the number of charging points to serve the charging needs of the population. East Midlands investment has remained low. The West Midlands, on the other hand, has seen an uptick in transport spending which may in part be due to the creation of the Combined Authority, which has been able to secure more money. This shows the importance of giving local areas proper access to funding and the necessary powers to utilise it.



By properly devolving money and power to the region's, we can use our regional anchor networks and strengthen the social value of our work. Localities know the problems within their areas, and also have connections with core organisations to tackle them. The Midlands Engine Ten Point Plan for Green Growth is a good example of this. Drawing together a wide range of national and regional

[7] "The Economics of Biodiversity Review'' Professor Das Gupta and HMT - 2020

partners, the Ten Point Plan is being implemented through the actions of the network. Again, the creation of jobs, training and regionally based interventions allows a holistic approach to the challenges presented by local and regional issues, such as the productivity gap.

The Government has previously supported public and private sector investment to grow the wind sector within the UK. Local and regional authorities may be future investors in emerging technologies, such as electric vehicle charging infrastructure, if these same conditions can be replicated. 50% of new technologies required to achieve the UK government's Net Zero Infrastructure targets lack investment frameworks or sufficiently mature business models to attract low-cost capital.[8] Devolved government would have both the funds and the appetite to invest in projects, companies, or research that would directly benefit both the locale and the nation. However, for this to be possible they have to have proper powers and funding and the Government should de-risk the business model of emerging technologies and provide clarity about how regulation could change in the future regarding return on investment. [9]

Question 3: How can better design, in line with the design principles for national infrastructure, help solve any of the Commission's nine challenges for the next Assessment and what evidence is there to support this? Your response can cover any number of the Commission's challenges.

Building on the design principles of climate and value, the changes we make to the infrastructure now should be sufficient for our needs in 2050. Electricity use is set to increase by 2050 to meet the needs of electric vehicles and hybrid heat pumps. Upgrading the electricity networks now, promptly and in a future-proofed way will limit costs and increase uptake of carbon-reducing technologies. When grid capacity is increased, this must be sufficient to avoid upgrading again before 2050.[10]

What industry clusters do we have in the Midlands where this is appropriate?

Question 4: What interactions exist between addressing the Commission's nine challenges for the next Assessment and the government's target to halt biodiversity loss by 2030 and implement biodiversity net gain? Your response can cover any number of the Commission's challenges.

We endorse the Midlands Connect response to the question.

Question 5: What are the main opportunities in terms of governance, policy, regulation and market mechanisms that may help solve any of the Commission's nine challenges for the Next Assessment? What are the main barriers? Your response can cover any number of the Commission's challenges

Over a decade of austerity have seen local authorities have their budgets cut dramatically. In Coventry alone, the City Council have lost the equivalent of 49% of its grant since 2010/11.[11] Budget cuts have been regressive, hitting areas with the greatest need the most.[12] This has led to staff cuts across local authorities and has contributed to poor local infrastructure development and engagement. Logically, this has also reduced staff capacity to handle tasks that require innovative thinking about infrastructure to reduce emissions. Increased funding and greater control of budgets would allow localities to better approach and lobby around local challenges. The region would also

[8] Infrastructure Investment in Net Zero - PwC UK
[9] PwC, Unlocking Capital for Net Zero Infrastructure, November 2020
[10] https://www.theccc.org.uk/wp-content/uploads/2019/05/Net-Zero-Technical-report-CCC.pdf
[11] Coventry – a marmot city (instituteofhealthequity.org)
[12] Build Back fairer - the COVID-19 Marmot review (health.org.uk)

be supported by targets and guidance for policy setting from the central government.[13] This would enable local and regional bodies such as the Midlands Engine to better implement our goals through the Ten Point Plan by aligning our priorities and timelines with the Government.

We endorse the Midlands Connect and Cadent Gas responses to the question.

Challenge 1: The digital transformation of infrastructure – the Commission will consider how the digital transformation of infrastructure could deliver higher quality, lower cost, infrastructure services.

Question 6: In which of the Commission's sectors (outside of digital) can digital services and technologies enabled by fixed and wireless communications networks deliver the biggest benefits and what how much would this cost?

To achieve flexibility and manage renewable energy, the power grids at both transmission and distribution levels will require further innovation to deliver a smarter grid infrastructure and therefore the largest allocation of infrastructure funding.[14] National Grid has already invested £7bn up to 2026 to get reach carbon zero by 2025 and is facilitating innovation in ultra-rapid charging at motorway stations.[15]

However, there are also local initiatives that utilise digital services and technologies to lower carbon emissions. Black Country is aiming to deliver a zero-carbon industrial cluster through a range of measures including cost-efficient energy infrastructure and greater resource efficiency.[16] Nuclear power generation across the region can be made safer and more efficient through the use of digital systems, robotics and other remote technologies which both keep humans safer and improve the efficiency of production.[17] The roll-out of smart meters to homes slowed during the pandemic, making it harder to consumers to track and reduce their energy consumption.

Consultation with Midlands businesses as part of the research for the draft Midlands Engine report, 'Demand and Supply of Green Finance in the Midlands Engine',[18] finds that businesses which measure their energy usage and carbon footprint using digital technologies are much more likely to make mitigation efforts. This is because often mitigation efforts reduce their overall costs. However, most businesses currently do not measure these. Wider roll-out of digital technologies to enable businesses to measure their energy usage and carbon footprint would likely lead naturally to mitigation efforts by businesses.

Question 7: What barriers exist that are preventing the widescale adoption and application of these new digital services and technologies to deliver better infrastructure services? And how might they be addressed? Your response can cover any number of the Commission's sectors outside digital (energy, water, flood resilience, waste, transport).

The Midlands Engine is home to the first multi-city testbed for 5G, but also has some of the lowest digital skills in the country. Both the East and West Midlands have the 3rd highest levels of people with very low digital engagement, at 30%, compared to the UK average of 29%.[19] Improving digital

[13] PwC, Unlocking Capital for Net Zero Infrastructure, November 2020
[14] PwC, Unlocking Capital for Net Zero Infrastructure, November 2020
[15] Midlands Engine Manufacturing Opportunities, Nov 2021
[16] Midlands Engine, *Ten Point Plan for Green Growth in the Midlands Engine*, July 2021
[17] Midlands Engine Manufacturing Opportunities, Nov 2021
[18] Report due to be published Feb/March 2022
[19] Midlands Engine State of the Region 2021 (arcgis.com)

skills and rolling out 5G and broader connectivity to the region will be essential to continue to deliver better digitally enabled infrastructure and services. If digital connectivity and skills were at the same level as they are in London, the Increased Revenue from Digital Innovation in the East Midlands would increase by £2.52 billion by 2025 and £3.18 billion in the West Midlands. However, for many in local authorities and LEPs in less digitally advanced regions, there is still, unfortunately, a lack of understanding both around the value case underpinning resource and investment, as well as how to go about improving digital innovation in their area Other barriers include the financial costs of implementation of digital strategies, lack of capacity of providers to instal the infrastructure, systems within LAs and between providers to enable quick planning and introduction[20]

As identified within the Midlands Engine Manufacturing Opportunities paper, digital connectivity is essential to future opportunities within transport infrastructure in the region. Good connectivity allows drivers to find electric vehicle charging points on the go or access apps to pay for charging. The UK Rail Research and Innovation Network, which includes the Universities of Birmingham and Nottingham, is leading the way in the UK's digital railway vision. Opportunities in this space include predictive maintenance and remote condition monitoring systems, signalling, connected robotic devices and drones and delivering autonomous rail systems. Next-generation autonomous transport modes are also being explored in aerospace and, more intensively, in automotive. The Midlands Future Mobility Zone provides a national testbed for trials and commercialisation of technologies, complementing the existence of Connected and Autonomous Vehicle (CAV) manufacturers such as RDM and Westfield Technologies, and scaling opportunities within self-driving hardware and software.[21]

2. Reaching net zero

Challenge 2: Decarbonising electricity generation – the Commission will consider how a decarbonised, secure and flexible electricity system can be achieved by 2035 at low cost.

Question 8: What are the greatest risks to security of supply in a decarbonised power system that meets government ambition for 2035 and what solutions exist to mitigate these risks?

Western Power Distribution produces Distribution Future Energy Scenarios (DFES) which drill down to local areas within the Midlands and forecast growth of both demand and generation. These tie in with National Grid Transmission scenarios and will ensure we plan for the right future. This supports the goal to produce future-proofed infrastructure. The most recent reports highlight issues around the number of homes in fuel poverty and the poor level of insulation for homes across the Midlands Engine region.[22] Heating comprises 74% of building emissions in the UK.[23] The vast majority of the Midland's 4.46 million households require retrofitting to improve thermal insulation.[24]

Nottingham City Council estimates 365GWh of electricity could be generated annually by installing 4kWp solar PV systems on Nottingham's favourable properties (approx. 75%) and a further 38.6 kWh through installing 5 large and 50 small wind turbines. Together, these would meet 29% of the city's electricity demand and would require £570m in investment. [25] This shows the need for significant

[20] Driving Digital: Innovating local economies - Public Policy Projects
[21] Midlands Engine Manufacturing Opportunities, Nov 2021
[22] Distribution Future Energy Scenarios 2021, Stakeholder Consultation, West Midlands, 489851 (westernpower.co.uk)
[23] National Statistics (2020), 'Households projections for England', Table 401 and Department for Business, Energy and Industrial Strategy (2020), 'Non-domestic National Energy Efficiency Data Framework' based on 2018 data (viewed October 2021)
[24] Midlands Engine, *Ten Point Plan for Green Growth in the Midlands Engine*, July 2021
[25] UKCCIC, *City Investment Analysis Report*, October 2021

investment from local and regional authorities and/or central government to meet the renewable energy needs of our region and the wider country.

We endorse the Cadent Gas response to this question.

Challenge 3: Heat transition and energy efficiency – the Commission will identify a viable pathway for heat decarbonisation and set out recommendations for policies and funding to deliver net zero heat to all homes and businesses.

Question 9: What evidence do you have on the barriers to converting the existing gas grid to hydrogen, installing heat pumps in different types of properties, or rolling out low carbon heat networks? What are the potential solutions to these barriers?

We endorse the Cadent Gas response to this question.

Question 10: What evidence do you have of the barriers and potential solutions to deploying energy efficiency in the English building stock?

Some local authorities implement planning restrictions in such a way as to limit the ability to retrofit or install other emissions saving changes.[26] This lack of alignment in operating standards for refurb housing restricts the ability to do this at the volume required. Significant impact can be made on a home's insulation and carbon emissions, but this can be restricted by inconsistent planning restraints. For example, a carbon leaking, expensive to heat solid wall home in an area where the local planning department does not allow a change of façade from brick to render cannot be made more energy-efficient. We do need to try and protect the heritage elements of our housing stock, but the interpretation of this differs from LA to LA and is not aligned to the carbon challenge as a priority. This is essential, as the vast majority of the Midland's 4.46 million households require retrofitting to improve thermal insulation.[27]

Also, according to those who are industry leaders, current standards of installations are not in line with the need for volume and have forced up prices without a pragmatic view on other solutions. Standards are vital but need to be balanced with an understanding of current buildings and their owners. Financial returns for heat source changes are very poor with subsidies of around 80% needed to cover financing costs, let alone create financing incentives. Incorporating solar PV or battery storage increases capital costs but offers improved returns.[28]32,000 new homes are built every year in the Midlands, but current building regulations do not support low carbon home development. Workers also often lack the skills to identify and implement new low carbon solutions.[29]

Solutions may include local heat networks, which are being developed across urban areas in the region. [30]Heat handled locally is proving successful: Birmingham District Energy Scheme incorporates three district energy networks all built and operated by EQUANS. It produces 60,000MWH of heat annually and has achieved significant financial and carbon savings. Total capital cost was £24m and all from the private sector (EQUANS). Capital is recovered through the sale of heating and cooling to

[26] 489851 (westernpower.co.uk)
[27] Midlands Engine, *Ten Point Plan for Green Growth in the Midlands Engine*, July 2021
[28] UKCCIC, *City Investment Analysis Report*, October 2021
[29] Midlands Engine, *Ten Point Plan for Green Growth in the Midlands Engine*, July 2021
[30] 489859 (westernpower.co.uk) 489862 (westernpower.co.uk)

the buildings/consumer connected to the network.[31] The Midlands home to heat network in Nottingham is one of the largest in the UK.[32]

Challenge 4: Networks for hydrogen and carbon capture and storage – the Commission will assess the hydrogen and carbon capture and storage required across the economy, and the policy and funding frameworks needed to deliver it over the next 10-30 years.

Question 11: What barriers exist to the long term growth of the hydrogen sector beyond 2030 and how can they be overcome? Are any parts of the value chain (production, storage, transportation) more challenging than others and if so why?

As explored above, poor insulation and the lack of consistency of housing standards damage the effectiveness and scope of hydrogen heating. However, WPD has a policy that allows all domestic customers to receive the same or a next day response of acceptance for most domestic size Heat Pump applications. Where service cables and termination equipment are required at a small capacity, this is replaced at no charge to the individual customer.

Commercialisation and scaling of hydrogen technologies is the biggest challenge to the sector. Across the Midlands, work is being done to support the commercial use of hydrogen. This includes working with academics and supply chains to create technologies and demonstrators that can be scaled, exemplified in the Midlands Engine Hydrogen Strategy and the soon-to-be-launched HyDEX Programme. Large projects such as East Coast Hydrogen are working to convert our natural gas pipelines to hydrogen to facilitate demand. Meanwhile, the Strategy has identified some barriers. Many hydrogen technologies only exist as prototypes or trials and need investment and support to move to replication and growth. This includes support for the manufacturing of hydrogen technologies to establish a vibrant supply chain. Part of the reason for this is weak policy support for hydrogen as part of tackling the climate crisis. Currently, there is not a nationwide infrastructure of hydrogen refuelling stations, limiting the growth of hydrogen for transport and reflecting a wider lack of infrastructure and policy for hydrogen transport and storage.[33]

We endorse the Midlands Connect response to this question.

Question 12: What are the main barriers to delivering the carbon capture and storage networks required to support the transition to a net zero economy? What are the solutions to overcoming these barriers?

Given the large number of CCS required by 2050, long lead times for CO_2 infrastructure (especially CO_2 storage) and infrequent refurbishment rates in the industry, developing regional 'cluster'-based infrastructure is on the critical path for achieving net-zero emissions. The Midlands is home to many industrial clusters, with high energy manufacturing taking place in the Black Country, car manufacturers present across the country, and food production and textiles are found across the East Midlands. The Midlands, which is the UK's manufacturing heartland, accounts for 21% of UK manufacturers, 22% of UK exports and generating £36 billion in annual GVA. This means that the region is well suited to a 'cluster-based infrastructure for achieving zero emissions. Some clusters,

[31] UKCCIC, *City Investment Analysis Report*, October 2021
[32] Midlands Engine, *Ten Point Plan for Green Growth in the Midlands Engine*, July 2021
[33] Midlands Engine, *Midlands Engine Hydrogen Technologies Strategy*, December 2021

which may include sector coupling, have already been identified through the work of the Ten Point Plan for Green Growth in the roll-out of hydrogen technologies.[34]

As well as enabling industrial CCS, it will also provide the opportunity for low-carbon hydrogen for industry, which we expect to be most cost-effectively produced with CCS. CO2 infrastructure development should start as early as possible and will need clusters in all areas with large industrial emissions, with the first operational by 2026. BEIS, working with industry, should identify these industrial sites that require CCS and work with the refurbishment cycles to plan by which dates CO2 transport and storage infrastructure will be available for which clusters. [35]

3. Climate resilience and the environment

Challenge 5: Asset management and resilience – the Commission will consider how asset management can support resilience, barriers to investment, and the use of data and technology to improve the way assets are maintained.

Question 13: In what ways will current asset management practice need to improve to support better infrastructure resilience? Your response can cover any number of the Commission's sectors.

Challenge 6: Surface water management – the Commission will consider actions to maximise short-term opportunities and improve long term planning, funding and governance arrangements for surface water management, while protecting water from pollution from drainage.

The Commission will carry out a separate call for evidence on this challenge, as the Commission will deliver this as a separate study and report to government by November 2022, in advance of its other recommendations.

Challenge 7: Waste and the circular economy – the Commission will examine the role of the waste sector in enabling the move towards a more circular economy.

Question 14: What are the barriers to and solutions for expanding recycling capacity, both now and in the future to deliver environmental and net zero targets?

Regulation changes mean recycling is going from being a public-funded 'public service' to private funded which should bring in much-needed funding.[36] There are significant challenges in reducing waste across the region. In the West Midlands, only three out of six LEPs saw an increase in recycling rates between 2010 and 2018. More needs to be done to meet the 2030 target of 55%.[37]

By raising and enforcing statutory recycling targets with deadlines for achieving targeted levels of recycling, the UK could stimulate a need for greater investment into waste prevention and waste management interventions.[38] But, there is a lack of a strong national policy and legislative framework to drive action around circular economy. Nor is there enough strategic planning across the region to support large-scale circular processes. SMEs also often don't have enough resources or capacity to innovate and develop circular products or services.[39] Manufacturing Opportunities in the

[34] https://www.midlandsengine.org/wp-content/uploads/2021/12/Hydrogen-Technologies-Strategy-Dec-21.pdf
[35] https://www.theccc.org.uk/wp-content/uploads/2019/05/Net-Zero-Technical-report-CCC.pdf
[36] WMCA, *West Midlands' Circular Economy Routemap*, September 2021
[37] Sustainability West Midlands, *West Midlands Sustainability Roadmap to 2030*, 2021
[38] UKCCIC, *City Investment Analysis Report*, October 2021
[39] WMCA, *West Midlands' Circular Economy Routemap*, September 2021

Midlands Engine identifies circular economy principles as a significant opportunity for the region, especially for food production and textiles where waste may be able to be used as biomass.

The £130 million UK Battery Industrialisation Centre (UKBIC) near Coventry will focus on the large-scale manufacture of batteries, as part of the nationwide scale-up of UK battery manufacturing.[69] Recycling and repurposing batteries at the end of their life would help make the region a leader in circular economy practices and help overcome supply chain challenges in getting rare materials.[40] This will make the supply chains more resilient to international shocks. The circular economy is critically important in manufacturing and creates new opportunities for value generation. Given its industrial concentration, this represents a challenge and an opportunity for the Midlands to drive industrial decarbonisation. The most carbon-intense metals and materials activities, the manufacture of basic iron, steel and ferro-alloys, rubber and plastic products and aluminium, should be seen as key targets for driving decarbonisation rather than industries that are opposed to it. This is at the heart of the Repowering the Black Country project.[41]

Question 15: What is the likely environmental impact of waste streams from construction across economic infrastructure sectors, over the next 30 years, and what are the appropriate measures for addressing it?

4. Levelling up

Challenge 8: Urban mobility and congestion – the Commission will examine how the development of at scale mass transit systems can support productivity in cities and city regions and consider the role of congestion charging and other demand management measures.

Question 16: What evidence is there of the effectiveness in reducing congestion of different approaches to demand management used in cities around the world, including, but not limited to, congestion charging, and what are the different approaches used to build public consensus for such measures?

We endorse the Midlands Connect response to the question.

Challenge 9: Interurban transport across modes – the Commission will consider relative priorities and long term investment needs, including the role of new technologies, as part of a strategic multimodal transport plan.

Question 17: What are the barriers to a decision making framework on interurban transport that reflects a balanced approach across different transport modes?

We endorse the Midlands Connect response to the question.

[40] Towards net-zero: Exploring the current state of low carbon supply chains in the Midlands, here
[41] Repowering the Black Country (blackcountrylep.co.uk)