

Local Industrial Strategy for the West Midlands

Low Carbon and Environmental Technology Sector Action Plan

Introduction

This Action Plan outlines the strengths, barriers to growth and opportunities for the Low Carbon and Environmental Technologies (LCET) sector in the West Midlands. It proposes a set of interventions that can build on these strengths, overcome the barriers and take advantage of the opportunities, in order to put the West Midlands at the forefront of clean growth economy.

The Action Plan is part of the West Midlands Industrial strategy. It is based on consultations with over 80 local LCET businesses and stakeholders and its proposed interventions cover the three Local Enterprise Partnerships of West Midlands Combined Authority (WMCA): Greater Birmingham and Solihull LEP, Coventry and Warwickshire LEP and Black Country Consortium.

Scope

The Action Plan is aimed at businesses and organisations who are currently located wholly or in part in the West Midlands or are planning to relocate to the region, and who provide or intend to provide solutions and services necessary to support the transition towards a low carbon economy.

It provides qualitative evidence behind the required actions necessary to create new markets, enable the Low Carbon and Environmental Technologies Sector (LCET)'s growth and put the West Midlands at the forefront of clean growth economy.

Although this action plan does not specify actions aimed to meet the regional carbon reduction target, the proposed interventions are in line with WMCA's decarbonisation agenda.

Methodology

This Action Plan has been developed on the basis of evidence gathered from stakeholder consultations with sector representatives across the three LEPs, as well as the examination of existing sources of data for the sector. The consultations involved a desk research, an online survey, six locally-based focus group sessions and a summary workshop delivered by Ecuity Consulting Ltd.

Regional LCET sector strengths

- ‘The Local Industrial Strategy identifies the Low Carbon Technology sector within the WMCA area as the most productive. The scale of the sector is often hidden as existing businesses diversify into this market place, but could make up over £9 billion or 10% of the WMCA economy’.¹
- ‘There are more than 10,000 companies working in the energy sector supply chain across the West Midlands. Over 56,000 people are employed in the energy sector across the Black Country, Birmingham, Solihull, Coventry and Warwickshire’.²
- The West Midlands is ‘home to the UK headquarters of some of the most significant energy and water businesses in the country (for example National Grid, Cadent, E.ON, Severn Trent)’.³
- In 2017 the Low Carbon & Environmental Technologies has shown a 13.8% growth in jobs in the WMCA.⁴
- LCET sector is expected to grow by 11% per year between 2015-2030 across the UK, which is 4 times the growth rate of the UK economy overall.⁵
- The local energy sector contributes approximately £2.1bn of GVA to the regional economy, most of this is earned outside the region (it is dominated by companies like E.ON, who sell energy nationally).⁶
- According to the West Midlands Science and Innovation Audit (2017), the region has ‘significant potential in the development and commercial application of a range of technologies in energy storage including batteries (materials and chemistry), and hydrogen storage’.⁷
- Every year more than £2.5 billion of capital investment is made in energy technologies and infrastructure (excluding buildings and transport) across the West Midlands.⁸
- The core Low Carbon & Environmental Tech sector contributes £3.3bn GVA in WMCA, 4% of the region’s total (the smallest of the 10 sectors) of which the Energy sub-sector £2.1bn (63.7%) and Water & Waste Activities £1.2bn (36.3%). In the UK overall, the sector only takes up 2.5% of total GVA.³
- Low Carbon & Environmental Tech is the most productive sector both in the UK and WMCA and it is the only sector in which the WMCA has a higher GVA per employee than the UK

¹ West Midlands State of the Region 2019

² <http://www.energycapital.org.uk/wm-energy-facts/>

³ West Midlands Industrial Strategy Sector Evidence Full Pack (September 2018)

⁴ West Midlands State of the Region 2019

⁵ Committee on Climate Change & Ricardo Energy and Environment, ‘UK business opportunities of moving to a low-carbon economy’, (March 2017)

⁶ Energy Capital, A Regional Energy Strategy for the West Midlands, (November 2018)

⁷ SQW, A Science and Innovation Audit for the West Midlands (June 2017) p.76

⁸ <http://www.energycapital.org.uk/wm-energy-facts/>

overall. All 3 LEP areas have a higher GVA per employee in the sector than the UK overall, with CWLEP: £148,000, BCLEP: £130,000 and GBSLEP: £132,000. ⁹

- £6.7bn is spent annually on energy by West Midlands businesses and households. Within this the largest segments are household (domestic) energy bills and transport costs. Over £960m is spent by the industrial and manufacturing sectors and £0.54bn by the remainder of the commercial and industrial sector. ¹⁰
- WM has an inbuilt natural global competitive advantage in its energy infrastructure, energy sector skills, diversity of local markets and innovation asset base in energy systems. ¹¹

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⁹ West Midlands Industrial Strategy Sector Evidence Full Pack (September 2018)

¹⁰ Energy Capital, A Regional Energy Strategy for the West Midlands, (November 2018)

¹¹ West Midlands Industrial Strategy Sector Evidence Full Pack (September 2018)

Challenges, opportunities and interventions

Proposed interventions are grouped under each of the five ‘foundations of productivity’ headings that underpin the government’s approach to the industrial strategy: Ideas and Innovation, Business Environment, People, Infrastructure and Place. Under each, the challenges and opportunities explain the rationale for the specific interventions proposed.

Some interventions are linked to multiple foundations of productivity. Any cross-foundation links is detailed in Appendix 1 of the document.

Action Themes

Ideas	Business Environment	Infrastructure	Place	People
1. Encourage development and commercialisation of low carbon innovation.				
	2. Provide ad-hoc support to existing LCET businesses and to the ones that aim to become LCET business.			
	3. Enhance Business Leadership and visibility of the LCET sector in the region.			4. Increase the Low Carbon workforce.
5. Maximise impact of public sector investment in LCET and local procurement.				

Ideas and Innovation

Opportunities

- The West Midlands has nationally leading research expertise through the Energy Research Accelerator (ERA) led by six Midlands universities, including University of Birmingham and Aston University, with a £180m investment for innovation in energy research. It is also home to the Energy Technologies Institute, Energy Systems Catapult

and UK Climate KIC, European Bioenergy Research Institute and Birmingham Energy Institute.¹²

- The West Midlands Science and Innovation Audit (2017) concluded that the region has ‘significant potential in the development and commercial application of a range of technologies in energy storage including batteries (materials and chemistry), and hydrogen storage’.¹³
- There are unique opportunities for the sector to benefit from cross-sectoral collaborations, for example between transport, energy, construction and digital sectors, and the transfer of know-how from sectors such as advanced manufacturing and logistics to construction and energy. The West Midlands has strengths across all these areas which presents the region with a unique opportunity to be at the forefront of low-carbon sector development.¹⁴

Challenges

- There is a wealth of support and resources for innovators in the region, however these lack visibility and often do not effectively reach out to SMEs who could benefit from such support.

Proposed interventions	
Intervention 1.1	Extend or set-up funding support to existing regional commercialisation / accelerator programmes and innovation networks, such as the Innovation Alliance for West Midlands (IAWM), and seek to maximise local collaboration between research and innovation entities and businesses.
Intervention 1.2	Set-up a dedicated match making service or individual within LEPs to signpost and/or connect innovators with investors.
Intervention 1.3	Provide innovators with the opportunity to test their product on the market, ensure the visibility of novel products and approaches, and create the pathways for innovators to secure their first customer and their first investment.
Intervention 1.4	Set up mentoring programme, workshops, case studies to demonstrate ways of working across sectors and share knowledge and skills between them.

Business Environment

¹² GBSLEP Low Carbon Energy Plan (2016)

¹³ A Science and Innovation Audit for the West Midlands, SQW, (June 2017), p.76

¹⁴ Energy Capital, A Regional Energy Strategy for the West Midlands, (November 2018), p68

Opportunities

- The LCET sector is expected to grow dramatically in response to the escalating concern about climate change and the need to move to a low carbon economy. The projected growth across the UK is 11% per year between 2015-2030, which is four times the growth rate of the UK economy overall.¹⁵
- There is an opportunity to promote the low carbon transformation by making use of public procurement and capital expenditure to bolster demand for LCET services.
- Evidence suggests that LCET businesses benefit from targeted business support that focuses on building networks and partnerships.¹⁶ Thus local networks for LCET businesses, supported by the public sector, could be an excellent means of supporting growth of the sector.

Challenges

- Commercialisation of new products and services remains extremely difficult. SMEs' resources (time, money, knowledge) are often scarce and the eligibility criteria for funding applications can be confusing. Making a business case for low carbon alternatives can also be challenging.
- The LCET sector is a small (3.1% of the WMCA's GVA) but rapidly expanding part of the economy. It remains underdeveloped in terms of business representation and business 'voice', compared to more established sectors such as business services or automotive sector.¹⁷
- Where available, business support often comes from a range of sources each with different expectations, making it difficult for businesses to understand who does what, who to go to and what support are they eligible for.

Proposed interventions	
Intervention 2.1	Set up a dedicated point of contact online, telephone and in person for sector enquiries.
Intervention 2.2	Develop a programme of mentoring and support to help low carbon businesses to improve their competitiveness, achieve relevant green accreditation that could help strengthen bid submissions, find suitable funding or finances, identify joint ventures opportunities and up-skill their workforce.

¹⁵ Committee on Climate Change & Ricardo Energy and Environment, 'UK business opportunities of moving to a low-carbon economy' (March 2017)

¹⁶ How cities go low carbon while supporting economic growth, Centre for Cities (December 2013), <http://www.centreforcities.org/wp-content/uploads/2014/08/13-12-17-Delivering-change-How-cities-go-low-carbon-while-supporting-economic-growth.pdf>

¹⁷ West Midlands Industrial Strategy Sector Evidence Full Pack, September 2018.

Intervention 2.3	Enable the creation of partnership between larger and smaller businesses and promote existing networks to increase opportunities for LCET businesses to engage with potential partners, customers or investors.
Intervention 2.4	Provision of advisory services across the region that can assist businesses (particularly small businesses) including: <ul style="list-style-type: none"> a. General Business Advisory Services for general admin, mentoring, coaching, accountancy, regulations and standards, bid writing, HR, finance, etc. b. Commercial Support Services for market analysis, business plan writing, business model evaluation, competitor analysis, marketing, sales, IP, etc. c. Match making services to attract private finance. d. Find workspaces to test, pilot technology, hot desk, etc.
Intervention 2.5	Carry out a research exercise to identify: <ul style="list-style-type: none"> a. existing mapping of organisations in the region and their role within the LCET sector, for example mapping research has been undertaken by Energy Systems Catapult, Climate KIC and others. b. Available funding programmes in the region that support the transition to low carbon economy, and their eligibility criteria. c. existing low carbon networks for businesses in the sector to learn from each other and to communicate any challenges, concerns, opportunities and suggestions and establish new groups where demand exist.
Intervention 3.1	Support a “Green Adopters 100” network to build relationships and growth.
Intervention 3.2	Work with existing green business networks and WMCA toward the creation of a “West Midlands Green100” publication and annual awards event, which highlights LCET businesses in the region.
Intervention 3.3	Establish a locally led “steering committee” (LEP Sector Board/Task and Finish Group) represented by low carbon business leaders and facilitated by the LEPs, to steer priorities for the low carbon sector in the future.
Intervention 3.4	Develop governance and organisational arrangements among local partners to encourage a collaborative approach to delivering this action plan.
Intervention 3.5	Create a regional platform to enable businesses to adopt circular business model and facilitate the exchange of resources and materials.

People

Opportunities

- Public interest in energy and climate change issues has never been higher. Young people are at the forefront of activities to change behaviour and encourage more sustainable choices. There is a clear opportunity to harness enthusiasm for making a difference to the environment into valuable skills and rewarding careers.
- The shift towards a low carbon economy is increasing the demand for low carbon jobs and skills. Existing skills and competences will need to be redirected to respond to this new demand. Alongside investment in younger people through schools, colleges and universities, mid-career workers in fossil-fuel-intensive industries could be offered opportunities to re-train.
- ‘Circular Economy could create 45,000 net jobs across England’¹⁸ and require a variety of higher-level skills.

Challenges

- Skills shortages, particularly around advanced engineering and manufacturing, are an impediment to growth in the LCET sector with 36% of vacancies nationally attributed to skills shortages – a higher percentage than in any other sector.¹⁹ The sector is heavily reliant on rapidly evolving technologies and it is a challenge to ensure that the curriculum keeps up with technological progress.
- There is currently limited information on LCET sector careers accessible to young people.
- Limited knowledge about the existing sector skill provision and gaps in the region.

Proposed interventions	
Intervention 4.1	LEPs to map current local skills provision and pathways for the LCET sector.
Intervention 4.2	LEPs to work with LCET businesses to identify where the skill gap is.
Intervention 4.3	Promote the work of the Enterprise Adviser Networks ²⁰ who provide advice on LCET sector education and careers, and encourage local businesses to participate in their programmes.
Intervention 4.4	Identify low carbon energy leaders and share successful case studies.
Intervention 4.5	Appoint a Low Carbon Director to sit across the 3-LEP boards and Executive Officers on each LEP to drive the delivery of this action plan.

¹⁸ The Route to Clean Growth – Using Local Industrial Strategies to drive change, Localis and Green Alliance (November 2019).

¹⁹ Energy & Utility Skills Sector Council <<http://www.euskills.co.uk/2018/02/09/skills-strategy-impacts-energy-utilities-sector-ahead-first-anniversary/>>

²⁰ <https://bep.education/home/wellbeing-enrichment/birmingham-enterprise-adviser-network/>

Intervention 4.6	Seek to increase the number of LCET sector apprenticeship standards delivered within the region and encourage regional employers to get involved in apprenticeship design
Intervention 4.7	Expand scale of Knowledge Transfer Partnerships and SME/graduate job matching schemes in LCET sector.
Intervention 4.8	Engage directly with schools and colleges to disseminate information on what the LCET sector really looks like and set up “T” Level programmes in LCET.
Intervention 4.9	Work with existing training providers to develop re-training programmes for those working in fossil fuel intensive sources of energy who wish to learn new skills in the low carbon sector.
Intervention 4.10	Increase participation of LCET businesses in the design of sector education, apprenticeship programme and up-skilling courses.

Infrastructure

Opportunities

- The 2018 BEIS Clean Growth Strategy set out how infrastructure development across transportation, power, communications, district heating and buildings can support economic growth alongside emissions reduction. The West Midlands is pursuing the control of regional infrastructure investment and regulation through the work of Energy Capital.
- Energy Innovation Zones are set to facilitate place-based approaches to energy innovation and infrastructure in constrained zones.²¹
- In the West Midlands, around £1.25bn is invested every year in the energy infrastructure, including network investments such as gas pipes, heat mains, wires and substations; key energy conversion technologies such as domestic boilers; and local energy generation assets such as solar farms, district heating and waste to energy plants.²²
- There is a substantial opportunity to retrofit energy efficiency measures across private, public sector estates and domestic buildings. The roll-out of low carbon heating technologies and district heating offers further opportunities for LCET businesses across the region.
- ‘Energy efficient buildings improve the quality of life for occupants and cut energy bills, freeing up money for consumers and businesses to spend on other goods and services, boosting the economy, A retrofit programme also provides additional construction

²¹ West Midlands Industrial Strategy Sector Evidence Full Pack (September 2018)

²² Energy Capital, A Regional Energy Strategy for the West Midlands, (November 2018)

sector jobs. A review of over 20 studies found that every £1 million invested in retrofitting homes provides the equivalent of 23 years of full-time employment for one person'.²³

- ‘Directs local involvement in clean energy projects and services is an opportunity to help futureproof local energy industries and, potentially, retain a higher proportion of the income they generate in local areas’.²³
- Major transport initiatives (such as the Sprint rapid bus transit network, HS2 and the Metro extension) can further bolster the development of low carbon transport technologies.

Challenges

- Businesses identify specific challenges around power network capacity and availability of EV charging infrastructures.
- There are limited opportunities for the development, operation and management of local low carbon assets that can support the creation of a local supply chain.
- Congestion on the roads and limited alternative for freight is adding costs of transport for businesses.
- Battery manufacturing capacity, like the large scale Gigafactories, could help to anchor domestic production and potentially help to secure 250,000 UK jobs in the sector. But none are currently planned in the UK.²³

Proposed interventions	
Intervention 5.1	Ensure future LEP capital funding applications are assessed against higher environmental standards and resource efficiency targets to encourage development of low carbon physical and digital infrastructures above regulatory requirements and adoption of the latest low carbon and energy technologies in the construction and maintenance of buildings.
Intervention 5.2	Ring-fence future LEP capital funding (i.e. UK Shared Prosperity Fund) for projects that can deliver infrastructures and supply chains necessary for decarbonisation. ²⁴
Intervention 5.3	Support Energy Capital with its ambition to create a regional energy infrastructure putting the region at the leading edge of the global energy and transport systems transition (A Regional Energy Strategy for the West Midlands ²⁵)

²³ The Route to Clean Growth, Using Industrial Strategies to drive change, Localis and Green Alliance (November 2019)

²⁴ The Route to Clean Growth, Using Industrial Strategies to drive change, Localis and Green Alliance (November 2019)

²⁵ <https://www.energycapital.org.uk/wp-content/uploads/2019/01/A-Regional-Energy-Strategy-for-the-West-Midlands-FINAL.pdf>

Intervention 5.4	Through the Midlands Energy Hub (MEH), develop and scale-up: <ul style="list-style-type: none"> a. EV charging infrastructure b. Hydrogen refuelling infrastructure. c. Energy storage. d. Local smart energy systems within the Constraint Management Zones defined by Western Power Distribution.
Intervention 5.5	Work with key anchor institutions like universities, councils, NHS and large businesses to encourage adoption of low carbon and environmental procurement criteria in their tender processes.
Intervention 5.6	Support the establishment of public-private joint ventures and partnerships for investment in the delivery of low carbon infrastructure projects.
Intervention 5.7	Work with partners to introduce criteria in procurement processes in favour of LCET from local businesses to enable local growth. This is recommended by the Centre for Local Economic Studies to bolster the demand for the services of LCET in the region ²⁶ .
Intervention 5.8	Scale-up existing energy efficiency programmes, such as the Low Carbon SMEs programme run by Aston University, the EnTRESS programme run by the University of Wolverhampton and (SME Support) Coventry and Warwickshire Low Carbon Programme run by Coventry City Council , and continue to fund calls ‘Supporting the Shift Towards a Low Carbon Economy in All Sectors’ (ref. ERDF Priority Axis 4).

Place

Opportunities

- WMCA has set a target to achieve net-zero carbon emissions by 2041. The declaration of a Climate Emergency by WMCA, many local authorities and a host of private and public organisations, as well as increased public awareness and concerted action from local residents means that the demand for LCET products and services is set to grow. A substantial opportunity exists to identify, develop and procure products and services from local LCET businesses.
- Major developments in the region such as the introduction of a Clean Air Zone (CAZ) in Birmingham, the construction of HS2 and a potential for pioneering smart energy trials all provide opportunities for LCET businesses.
- The Regional Energy Strategy for the West Midlands proposes the introduction of a series of Energy Innovation Zones (EIZs) – ‘defined areas operating with specified flexes in energy and planning regulations to encourage competitive innovation in energy

²⁶ CLES, Community Business and Anchor Institutions, (February 2019)

infrastructure systems and meet local needs'.²⁷ This pioneering place-based approach to energy strategy represents an opportunity for the LCET sector to benefit from preferential regulations and the proximity to other businesses, thus facilitating knowledge sharing and the emergence of a pool of talent with sector-relevant skills.

- The 2022 Commonwealth Games in Birmingham and the 2021 Coventry Capital of Culture events offer the region an opportunity to deliver excellence on the world stage. These events also offer local businesses a platform to engage and be part of low-carbon initiatives that will potentially be exposed to global audiences. These events will have a long-lasting impact and stakeholders agree that the legacy should contain messages around low-carbon and sustainable initiatives.
- The West Midlands has been selected as the UK's first large-scale 5G testbed presenting an opportunity for smart energy solutions across its cities.
- The Black Country has bid for Global Geopark status through UNESCO which has recently received international backing. The Geopark which will offer an incredible opportunity to boost the local economy and encourage investment in environmental infrastructures and services.

Challenges

- Presenting opportunity in good time for LCET Sector businesses to participate in the procurement process for service delivery and infrastructure development.

Proposed interventions	
Intervention 5.9	Support the successful delivery of EIZs with Executive Officers allocated for each of the areas and contribution to executive team supporting EIZs.
Intervention 5.10	Work with local membership organisations and advocacy groups to discuss how the Commonwealth Games and any other future initiatives can create demand for local LCET businesses.
Intervention 5.11	Support innovative SMEs to develop and test new products and services addressing air quality and electrification challenges by taking advantage of the Birmingham CAZ.
Intervention 5.12	Connect low carbon industry leaders and sector experts with decision makers when discussing future place developments.

²⁷ A Regional Energy Strategy for the West Midlands, Energy Capital (November 2018), p34

References

- The Route to Clean Growth – Using Local Industrial Strategies to drive change, Localis and Green Alliance (November 2019).
- A Regional Energy Strategy for the West Midlands, Energy Capital (November 2018)
- A Science and Innovation Audit for the West Midlands, SQW (June 2017)
- Low Carbon Energy Plan, GBSLEP (March 2016)
- Powering West Midlands Growth: A regional approach to clean energy innovation, Energy Capital (March 2018)
- West Midlands – State of the Region, WMCA (June 2019).
- West Midlands Industrial Strategy Sector Evidence Full Pack, WMCA (September 2018).
- Energy as an Enabler: Linkages between Local Energy Strategy, productivity and growth, Black Country Consortium (March 2018).
- The Clean Growth Strategy: Leading the way to a low carbon future, BEIS (October 2017, as amended April 2018).

Appendix 1

Summary of interventions

Action Themes	Interventions	IS Foundation/s	Value (£)	Priority	Roles & Responsibilities
1. Encourage development and commercialisation of low carbon innovation.	1.1. Extend or set-up funding support to existing regional commercialisation / accelerator programmes and innovation networks, such as the Innovation Alliance for West Midlands (IAWM), and seek to maximise local collaboration between research and innovation entities and businesses.	Ideas; Business Environment	Existing funding	Medium	LEPs Existing Networks Universities
	1.2. Set-up a dedicated match making service within LEPs to signpost and/or connect innovators with investors.	Ideas; Business Environment	<£1m	High	LEPs through IAWM, SWM
	1.3. Provide innovators with the opportunity to test their product on the market, ensure the visibility of novel products and approaches, and create the pathways for innovators to secure their first customer and their first investment.	Ideas	<£1m	Medium	LEPs through ESC
	1.4. Set up mentoring programme, workshops, case studies to demonstrate ways of working across sectors and share knowledge and skills between them.	Ideas, Business Environment	Existing funding	High	LEPs through IAWM, SWM

2. Provide ad-hoc support to existing LCET businesses and to the ones that aim to become LCET business.	2.1. Set up a dedicated point of contact online, telephone and in person for sector enquiries.	Business Environment	Existing funding	High	LEPs through Growth Hubs
	2.2. Develop a programme of mentoring and support to help low carbon businesses to improve their competitiveness, achieve relevant green accreditation that could help strengthen bid submissions, find suitable funding or finances, identify joint ventures opportunities and up-skill their workforce.	Business Environment	£1- 10m	Low	LEPs through Growth Hubs
	2.3. Enable the creation of partnership between larger and smaller businesses and promote existing networks to increase opportunities for LCET businesses to engage with potential partners, customers or investors.	Business Environment; Ideas	<£1m	Medium	LEPs through IAWM, SWM
	2.4. Provision of advisory services across the region that can assist businesses (particularly small businesses) including: <ul style="list-style-type: none"> a. General Business Advisory Services for general admin, mentoring, coaching, accountancy, regulations and standards, bid writing, HR, finance, etc. b. Commercial Support Services for market analysis, business plan writing, business model evaluation, competitor analysis, marketing, sales, IP, etc. 	Business Environment	£1- 10m	Medium	LEPs through Growth Hubs

	<ul style="list-style-type: none"> c. Match making services to attract private finance. d. Find workspaces to test, pilot technology, hot desk, etc. 				
	<p>2.5. Carry out a research exercise to identify:</p> <ul style="list-style-type: none"> a. existing mapping of organisations in the region and their role within the LCET sector, for example mapping research has been undertaken by Energy Systems Catapult, Climate KIC and others. b. Available funding programmes in the region that support the transition to low carbon economy, and their eligibility criteria. c. existing low carbon networks for businesses in the sector to learn from each other and to communicate any challenges, concerns, opportunities and suggestions and establish new groups where demand exist. 	Business Environment	<£1m	High	LEPs through Growth Hubs
3. Enhance Business Leadership and visibility of the LCET sector in the region.	3.1. Support a “Green Adopters 100” network to build relationships and growth.	Business Environment	<£1m	High	LEPs with industry leaders
	3.2. Work with existing green business networks and WMCA toward the creation of a “West Midlands Green100” publication and annual awards event, which highlights LCET businesses in the region.	Business Environment	<£1m	Medium	LEPs with industry leaders

	3.3. Establish a locally led “steering committee” (LEP Sector Board/Task and Finish Group) represented by low carbon business leaders and facilitated by the LEPs, to steer priorities for the low carbon sector in the future.	Business Environment	<£1m	High	LEPs with industry leaders
	3.4. Develop governance and organisational arrangements among local partners to encourage a collaborative approach to delivering this action plan.	Business Environment	<£1m	Low	LEPs lead
	3.5. Create a regional platform to enable businesses to adopt circular business model and facilitate the exchange of resources and materials.	Business Environment; Ideas	<£1m	Low	LEPs through Circular Economy partners
4. Increase the Low Carbon workforce	4.1. LEPs to map current local skills provision and pathways for the LCET sector.	People	<£1m	High	LEPs through Enterprise Adviser Networks
	4.2. LEPs to work with LCET businesses to identify where the skill gap is.	People	<£1m	Medium	LEPs
	4.3. Promote the work of the Enterprise Adviser Networks ²⁸ who provide advice on LCET sector education and careers, and encourage local businesses to participate in their programmes.	People	Existing funding	High	LEPs through Enterprise Adviser Networks
	4.4. Identify low carbon energy leaders and share successful case studies.	People	<£1m	High	LEPs
	4.5. Appoint a Low Carbon Director to sit across the 3-LEP boards and Executive	People	£1- 10m	High	LEPs

²⁸ <https://bep.education/home/wellbeing-enrichment/birmingham-enterprise-adviser-network/>

	Officers on each LEP to drive the delivery of this action plan.				
	4.6. Seek to increase the number of LCET sector apprenticeship standards delivered within the region and encourage regional employers to get involved in apprenticeship design.	People	<£1m	Medium	LEPs in collaboration with education providers
	4.7. Expand scale of Knowledge Transfer Partnerships and SME/graduate job matching schemes in LCET sector.	People	Existing Funding	Medium	LEPs through Enterprise Adviser Networks
	4.8. Engage directly with schools and colleges to disseminate information on what the LCET sector really looks like and set up “T” Level programmes in LCET.	People	<£1m	Medium	LEPs in collaboration with education providers
	4.9. Work with existing training providers to develop re-training programmes for those working in fossil fuel intensive sources of energy who wish to learn new skills in the low carbon sector.	People	Existing Funding	Medium	LEPs in collaboration with education providers
	4.10. Increase participation of LCET businesses in the design of sector education, apprenticeship programme and up-skilling courses.	People	<£1m	High	LEPs in collaboration with education providers
5. Maximise impact of public sector investment in LCET and local procurement.	5.1. Ensure future LEP capital funding applications are assessed against higher environmental standards and resource efficiency targets to encourage development of low carbon physical and digital infrastructures above regulatory requirements and adoption of the latest	Infrastructure; Business Environment	Existing Funding	High	LEPs

	low carbon and energy technologies in the construction and maintenance of buildings.				
	5.2. Ring-fence future LEP capital funding (i.e. UK Shared Prosperity Fund) for projects that can deliver infrastructures and supply chains necessary for decarbonisation. ²⁹	Infrastructure; Business Environment	Existing Funding	High	LEPs
	5.3. Support Energy Capital with its ambition to create a regional energy infrastructure putting the region at the leading edge of the global energy and transport systems transition (A Regional Energy Strategy for the West Midlands ³⁰).	Infrastructure; Ideas	>£10m	High	LEPs to support Energy Capital
	5.4. Through the Midlands Energy Hub (MEH), develop and scale-up: a. EV charging infrastructure b. Hydrogen refuelling infrastructure. c. Energy storage. d. Local smart energy systems within the Constraint Management Zones defined by Western Power Distribution.	Infrastructure	>£10m	High	LEPs in collaboration with MEH and Energy Capital
	5.5. Work with key anchor institutions like universities, councils, NHS and large businesses to encourage adoption of low	Infrastructure; Business Environment	<£1m	Low	LEPs to lead

²⁹ The Route to Clean Growth, Using Industrial Strategies to drive change, Localis and Green Alliance (November 2019)

³⁰ <https://www.energycapital.org.uk/wp-content/uploads/2019/01/A-Regional-Energy-Strategy-for-the-West-Midlands-FINAL.pdf>

	carbon and environmental procurement criteria in their tender processes.				
	5.6. Support the establishment of public-private joint ventures and partnerships for investment in the delivery of low carbon infrastructure projects.	Infrastructure; Business Environment	<£1m	High	Midlands Energy Hub
	5.7. Work with partners to introduce criteria in procurement processes in favour of LCET from local businesses to enable local growth. This is recommended by the Centre for Local Economic Studies to bolster the demand for the services of LCET in the region ³¹ .	Infrastructure: Business Environment	<£1m	Low	LEPs to lead
	5.8. Scale-up existing energy efficiency programmes, such as the Low Carbon SMEs programme run by Aston University, the EnTRESS programme run by the University of Wolverhampton and (SME Support) Coventry and Warwickshire Low Carbon Programme run by Coventry City Council , and continue to fund calls ‘Supporting the Shift Towards a Low Carbon Economy in All Sectors’ (ref. ERDF Priority Axis 4).	Infrastructure: Business Environment	Existing funding	Medium	LEPs
	5.9. Support the successful delivery of EIZs with Executive Officers allocated for each of the areas and contribution to executive team supporting EIZs.	Places Ideas	£1- 10m	Low	LEPs supporting the lead of Energy Capital

³¹ CLES, Community Business and Anchor Institutions, (February 2019)

	5.10. Work with local membership organisations and advocacy groups to discuss how the Commonwealth Games and any other future initiatives can create demand for local LCET businesses.	Places Ideas	<£1m	Low	LEPs to enable
	5.11. Support innovative SMEs to develop and test new products and services addressing air quality and electrification challenges by taking advantage of the Birmingham CAZ.	Places; Business Environment	<£1m	Low	LEPs through Growth Hubs
	5.12. Connect low carbon industry leaders and sector experts with decision makers when discussing future place developments.	Place: Business Environment	<£1m	Low	LEPs in collaboration with Local Authorities and WMCA

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