

ENERGYCAPITAL



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INTRODUCING: ENERGYCAPITAL



‘Greater Birmingham and Solihull LEP is delighted to support the Energy Capital initiative. We are home to some of the leading energy research and innovation institutions in the UK including the Birmingham Energy Institute and its Thermal Energy Research Accelerator project at the University of Birmingham and the European Bioenergy Research Institute (EBRI) at Aston University – both of whom are partners in the Midlands’ Energy Research Accelerator. We are also home to the Energy Systems Catapult.

The Energy Capital initiative is all about creating the energy industry and building the markets of the future with an estimated global market demand of circa \$2.7 trillion. Through a programme of demand-led initiatives it will support a culture of innovation and creativity amongst our businesses, improve the quality of life for the people who live here, and make the region a more attractive location for commercial investment. It is strongly aligned with our strategic priorities and directly supports delivery of our Strategic Economic Plan and that of the West Midlands Combined Authority.’

STEVE HOLLIS, CHAIRMAN
GREATER BIRMINGHAM & SOLIHULL
LOCAL ENTERPRISE PARTNERSHIP



‘The Black Country was built on competitive, accessible local energy systems, and Energy Capital is about this region leading in creating the competitive, accessible and clean energy systems which will support 21st century competitiveness and growth.

We have the skills and ambition in this region to design, optimise and deliver these systems both locally and globally. Energy Capital is strongly aligned with our strategic plans. With the strength of the Energy Capital partnership behind us we expect to create a local energy infrastructure which makes it easier for our manufacturers to compete globally while also creating opportunities for our local SMEs to grow and create wealth locally.’

STEWART TOWE, CHAIRMAN
BLACK COUNTRY
LOCAL ENTERPRISE PARTNERSHIP



‘Continued economic growth across Coventry and Warwickshire requires clean, competitive power. Energy Capital creates a virtuous circle of economic opportunity for regional businesses: opportunities for innovators to access the growing \$3 trillion global market for smart energy solutions; opportunities for established businesses to increase productivity and grow faster; and opportunities for new businesses to invest and take advantage of the competitive infrastructure we are creating.

We see Energy Capital as fundamental to supporting delivery of our strategic priorities, particularly around Unlocking Growth Potential and Growing our SMEs.’

JONATHAN BROWNING, CHAIRMAN
COVENTRY & WARWICKSHIRE
LOCAL ENTERPRISE PARTNERSHIP





‘Energy Capital creates a single voice for the West Midlands on energy. It brings together the key institutions, infrastructure providers and public bodies so investors and businesses can connect efficiently with the most promising market opportunities in partnership with our world-leading knowledge base. It will ensure our citizens and businesses of all sizes benefit from global energy system transformation.’

MATTHEW RHODES, CHAIR ENERGY CAPITAL

ENERGY CAPITAL AIMS TO MAKE THE WEST MIDLANDS ONE OF THE MOST ATTRACTIVE LOCATIONS TO DEVELOP AND BUILD INNOVATIVE CLEAN ENERGY TECHNOLOGY COMPANIES IN THE WORLD.

In recent years, a constellation of strategic investments by central government, industry and our great universities has cemented the West Midlands defining role in leading Britain's energy sector.

WE HAVE A BOLD AMBITION TO BUILD ON THIS CRITICAL MASS TO DELIVER ECONOMIC BENEFITS TO THE REGION.



ACCELERATING CHANGE

ENERGY CAPITAL BUILDS ON OUR ESTABLISHED WORLD CLASS INNOVATION ASSETS, PARTICULARLY OUR ACADEMIC INSTITUTIONS, THE ENERGY RESEARCH ACCELERATOR AND ENERGY SYSTEMS CATAPULT.

Across the West Midlands, we are already investing in district energy networks across Coventry, Solihull and Birmingham. The Birmingham District Energy Company has supplied efficient power and heat to central Birmingham for the last decade. Cities across the region are considering establishing their own retail energy companies. Housing providers across all three LEPs have led the way in low carbon retrofit, highly energy efficient new build and offsite manufacturing.

Our approach is to maximise the benefit of the significant investments in HS2, new commercial developments and housing across the WMCA area, by systematically encouraging adoption of leading edge energy solutions. These will be piloted in complementary demonstration facilities at Aston, Tysley, Warwick and Wolverhampton: delivered by local supply chains and nurtured through targeted business support and inward investment.

The WMCA geography represents a uniquely diverse and concentrated market for energy system solutions. Our 4 million people, living in 1.7 million homes at the centre of the UK spend over £10 billion a year on fuel and power to live their lives. The Black Country led the world in finding more efficient ways to use energy for manufacturing, and Birmingham and Coventry led the transport revolution of the early 20th Century. The neighbouring counties of Warwickshire, Staffordshire and Worcestershire are representative of rural communities that cover large parts of the UK and world, and which have led the deployment of many distributed energy technologies in the last 30 years.

ALONGSIDE THESE PROJECTS, WE EXPECT TO UNLOCK A MINIMUM £50-£100 MILLION OF MATCHED FUNDING FROM CORPORATE PARTNERS. THIS INITIATIVE LINKS CLOSELY TO THE WORK BEING DONE BY THE BLACK COUNTRY AND COVENTRY AND WARWICKSHIRE LEPS, EACH OF WHICH BRINGS DISTINCT ENERGY CHALLENGES AND MARKET OPPORTUNITIES (FOR EXAMPLE, IN REDUCING ENERGY COSTS FOR HIGH-ENERGY-USING MANUFACTURING BUSINESSES).

OUR AMBITION IS TO ESTABLISH A POSITION OF GLOBAL MARKET LEADERSHIP IN THE \$2.7 TRILLION MARKET FOR ENERGY TECHNOLOGIES, FOCUSING SPECIFICALLY ON THE SMART AND DISTRIBUTED ENERGY SOLUTIONS THAT WILL SUPPORT THE CONNECTED SMART CITIES OF THE FUTURE.



Image: © HS2Ltd

WEST MIDLANDS: POWERING GROWTH

THE KEY ALIGNMENT WITH THE WEST MIDLANDS COMBINED AUTHORITY WILL MAXIMISE THE POTENTIAL TO INFLUENCE AND BENEFIT FROM REGULATORY AND POLITICAL DEVELOPMENTS AND OPTIMISE THE POTENTIAL FOR CONSTRUCTIVE COLLABORATION BETWEEN STAKEHOLDERS.

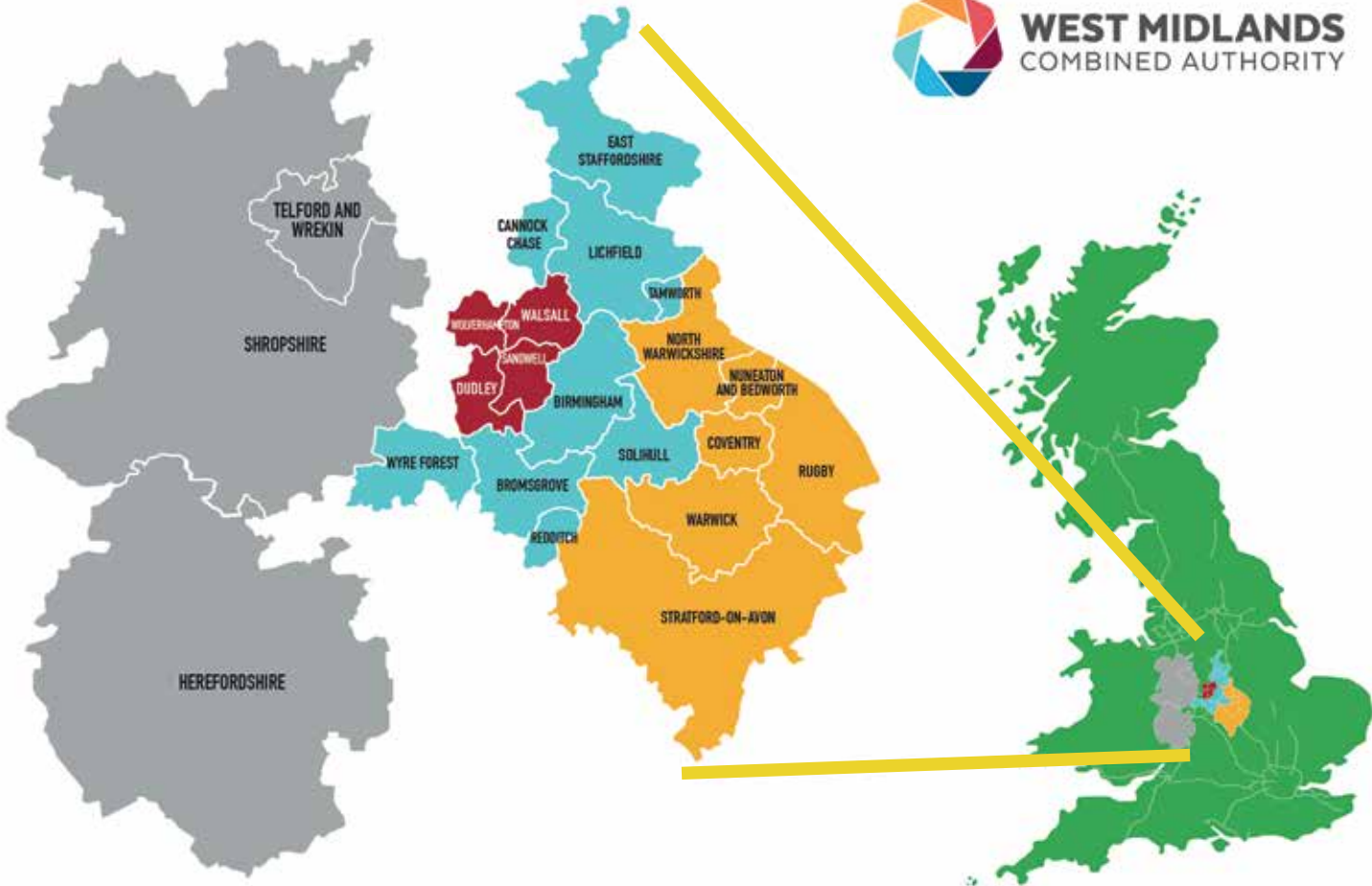
The geographical scope of Energy Capital is the West Midlands Combined Authority geography. Energy Capital complements and supports activity sponsored by central government, the Midlands Engine, Local Enterprise Partnerships and local authorities.

THE PEOPLE AND BUSINESSES OF THE WEST MIDLANDS SPEND MORE THAN

£10 BILLION A YEAR ON ELECTRICITY, GAS AND FUEL.

THE WEST MIDLANDS REGION IS HOME TO:

- 10,000 ENERGY RELATED COMPANIES
- 2240 TRANSPORT RELATED COMPANIES
- ENERGY RESEARCH ACCELERATOR (ERA) IN WHICH THE WEST MIDLANDS UNIVERSITIES OF ASTON, BIRMINGHAM AND WARWICK ARE INVOLVED
- ADVANCED PROPULSION CENTRE
- ENERGY SYSTEMS CATAPULT
- SIGNIFICANT LOW CARBON ENERGY AND BUILDINGS EXPERTISE AT THE UNIVERSITIES OF WOLVERHAMPTON AND COVENTRY, SMART CITIES RESEARCH AT BIRMINGHAM CITY UNIVERSITY, AND THE SERIOUS GAMES INSTITUTE AT COVENTRY UNIVERSITY.



A STRATEGIC APPROACH

TRANSFORMING OUR ENERGY SYSTEM TO MEET THE DEMANDS OF 21ST CENTURY BUSINESSES AND CITIZENS IS A COMPLEX CHALLENGE AND SIGNIFICANT ECONOMIC OPPORTUNITY.

Technologies and systems are not enough. The energy system and economy of the future also needs local democratic consent and appropriate market regulation.

The stakes are high for the transformation of our energy system – underpinning society, our economy and the region's global competitiveness.

Our strategy is to provide a regional context for energy system deployment in which entrepreneurs and university spin outs can thrive, global investors compete to invest, and customers benefit first.

Accelerated low risk transition to future energy systems delivers climate change and environmental benefits, lower cost power to manufacturers as well as sustainable economic advantages for the supply chain.

WE ARE FOCUSED ON GROWING ENTIRE INDUSTRIAL AND LOCAL ENERGY MARKET SYSTEMS, NOT JUST LAUNCHING PRODUCTS AND COMPANIES.

Energy Capital will deliver affordable power for industry, develop distributed energy systems that benefit communities and embed low cost generation and storage technologies close to where energy is being used. In doing so, we will support and nurture the latest innovations; bringing new products, services and business models to the marketplace.

**EVERY YEAR IN THE WEST MIDLANDS MORE THAN
£2.5 BILLION OF CAPITAL
INVESTMENT IS MADE IN ENERGY
TECHNOLOGIES AND INFRASTRUCTURE***

*EXCLUDING BUILDINGS AND TRANSPORT



ENERGY INNOVATION ZONES

ENERGY INNOVATION ZONES WILL PROVIDE COMMERCIALLY MEANINGFUL GEOGRAPHIC AREAS FOR DEPLOYING INTEGRATED SMART ENERGY SOLUTIONS, WITH THE SUPPORT OF LOCAL PEOPLE AND REGULATORS.

**THERE ARE MORE THAN
10,000 COMPANIES
WORKING IN THE ENERGY
SECTOR SUPPLY CHAIN ACROSS
THE WEST MIDLANDS**

The jobs that are created as a result of Energy Capital projects will be highly skilled, requiring a workforce with higher level qualifications and advanced skills. Developing the energy sector's talent base is essential to speeding the innovation cycle and introduction of novel energy technologies. A vibrant energy sector has the potential to make great contributions to the greening of the Midlands' industrial base; resulting in the potential to export energy products and services.

Energy Capital will work with partners and energy customers across the region (and especially in Energy Innovation Zones) to map and identify the best places to invest in innovative energy systems, and the locations where an integrated approach to energy infrastructure planning will deliver the greatest economic benefit to local people and businesses.

Working with the WMCA and government, Energy Capital will bring together BEIS, Ofgem, national and regional system operators and local government to propose a better way to regulate local energy markets.

Energy Innovation Zones are about ensuring innovation is demand-led and meets local market needs. They provide the missing link in the UK innovation eco-system for energy – opportunities to deploy energy innovations commercially and as part of an integrated system at a scale customers can relate to. This will provide the critical link between pilot demonstration and global market success.



OVER 56,000 PEOPLE ARE EMPLOYED IN THE ENERGY SECTOR ACROSS THE BLACK COUNTRY, BIRMINGHAM, SOLIHULL, COVENTRY AND WARWICKSHIRE

INVESTMENT OPPORTUNITIES

**TO DELIVER LOWER COST, CLEANER, MORE FLEXIBLE POWER
TO THE PEOPLE AND BUSINESSES OF THE WEST MIDLANDS
WILL REQUIRE SIGNIFICANT INVESTMENT.**

The West Midlands is well-placed to take advantage of the latest energy systems innovations, with our £10 billion energy economy and more than £50 billion of infrastructure and building investment planned over the next decade.

We have a strong pipeline of investment opportunities, and teams in all our LEPs and local authorities ready to help.

BRIGHT PLACE FOR SYSTEMS INNOVATION

BPSI at Aston University will provide a specially designed technology demonstration and research base for new and integrated low carbon systems technologies and services. It will combine energy, transport and smart city perspectives and deliver aspects of the 'mobility as a service' agenda. The Bright Place will be at the heart of Birmingham's Knowledge Quarter, cementing our world leading position in the energy sector by integrating and expanding the critical mass in university R&D, innovation, education and skills.

TYSELEY ENERGY PARK

The Tyseley Energy & Environmental Enterprise District will become the City of Birmingham's Energy and Waste nexus. Already home to Tyseley energy from waste plant, the location will be home to an innovative energy demonstrator that integrates energy vectors including electricity, heat, liquid air, hydrogen. The site will also be home to a University of Birmingham / Fraunhofer Institute shared research platform and Energy Skills Academy.

HOUSING DEVELOPMENT OF THE FUTURE

The redevelopment of the Wolverhampton Canalside Quarter presents an opportunity for the construction of new best-in-class energy efficient houses. With building-integrated solar, battery storage, EV charging and smart technology for energy monitoring, control and use, this housing estate will provide a template for future energy efficient dwellings.

UK CENTRAL

The creation of a new transport hub for HS2 will add increased connectivity for the West Midlands, creating new opportunities for business and enterprise. With anticipated growth in electric vehicle ownership, the construction of next-generation parking facilities offers a unique opportunity to integrate transport systems and energy networks. Through smart demand-side management and intelligent vehicle to grid technology; the car park facility can be used to help balance the grid.

POWER FOR MANUFACTURING

Our growing manufacturing base urgently needs more power, supplied flexibly and at competitive cost to help regional businesses compete globally. Energy Capital is connecting manufacturers to suppliers of smart local energy solutions and infrastructure providers who can meet this need.



SUPPLY CHAIN ENGAGEMENT

THE DIVERSITY AND FLEXIBILITY OF THE WEST MIDLANDS SUPPLY CHAIN PROVIDES POWERFUL SUPPORT TO ENERGY SYSTEMS INNOVATION ACROSS THE REGION.

Energy Capital includes a focused work stream on supply chain and SME engagement, and headline projects such as Tyseley and the European Bioenergy Research Institute at Aston include significant investments in SME engagement programmes and incubation and innovation space.

Energy Capital will also work closely with energy innovation activities promoted through the Midlands Engine, and support development of wider supply chains across the East and West Midlands.

THE PROPOSED PROJECT SUPPORTED BY THE ENERGY CAPITAL INITIATIVE AT TYSELEY INCLUDES CREATION OF A 40,000 M² INNOVATION CENTRE.

ENERGY CAPITAL WILL WORK WITH THE MANUFACTURING TECHNOLOGY CENTRE ON THE THERMAL ENERGY RESEARCH ACCELERATOR. T-ERA IS DEVELOPING A 'FACTORY IN A BOX' APPROACH TO SUPPORT TECHNOLOGY DEVELOPERS IN SCALING UP INNOVATIONS.



THE PARTNERSHIP

ENERGY CAPITAL IS A UNIQUELY POWERFUL PARTNERSHIP OF GLOBAL MARKET OPPORTUNITIES, ACADEMIC EXPERTISE, PRESSING REGIONAL NEEDS AND PUBLIC DEMAND. IT CREATES A POWERFUL AND EXCITING NEW MECHANISM TO SUPPORT ECONOMIC GROWTH.

PARTNERS



CORPORATE SUPPORTERS





‘PLACE CAN MAKE A DIFFERENCE – THE CLUSTERING OF RESOURCES AND INDUSTRIES IN SPECIFIC LOCATIONS CAN MAKE A CONDUCIVE – AND IN SOME CASES ESSENTIAL CONTEXT FOR SUCCESS.’

GOVERNMENT SCIENCE AND
INNOVATION STRATEGY

ENERGYCAPITAL

For more information contact:
enquiries@energycapital.org.uk
Twitter: @EnergyCapitalUK
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