

ENERGY STRATEGY



- Policy context
- Purpose of an Energy Strategy
- What we know about our energy system
- Direction of travel
- Next steps

POLICY CONTEXT



- The Climate Change Act [2008] commits the UK to reducing greenhouse gas emissions by at least 80% by 2050 [when compared to 1990 levels]
- National Industrial Strategy 2017
- National Clean Growth Strategy 2017
- UN Intergovernmental Panel on Climate Change [IPCC] report to limit the impacts of climate change to 1.5 degrees Celsius

Locally

- Clean growth is at the heart of our operating framework and emerging Local Industrial Strategy

GOVERNMENT REQUIREMENT



- Government requirement that all LEPs develop local Energy Strategies [granted £50k]

Local Energy Strategies should:

- Provide local leadership and influence ...
 - towards an integrated, smart, resilient and secure energy system
 - towards greater affordability (to alleviate fuel poverty and increase business productivity)
 - to reduce greenhouse gas emissions (meeting legally binding national targets)

PURPOSE OF WOE ENERGY STRATEGY

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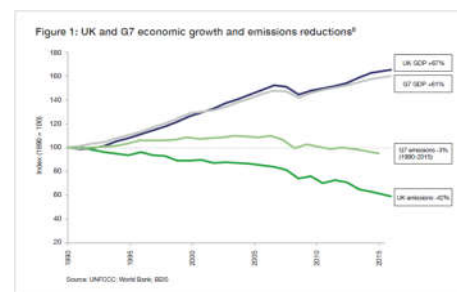
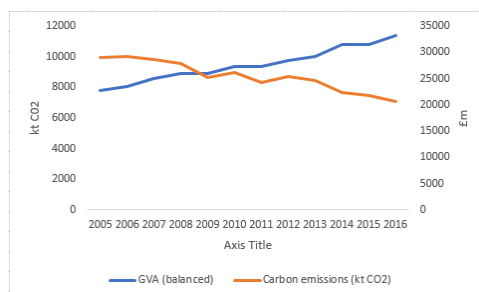
A diverse, resilient, and affordable energy system that enables economic growth whilst reducing greenhouse gas emissions in line with national targets

- Upgrade energy infrastructure to underpin clean and inclusive economic growth as set out in local industrial strategy
- Drive energy efficiency measures to keep costs down for businesses and local people
- Increase the local production of clean energy that is sustainable and resilient
- Invest in science, research and innovation, including energy storage and grid technologies

Success will mean cleaner air, lower energy bills, lower emissions and greater economic security

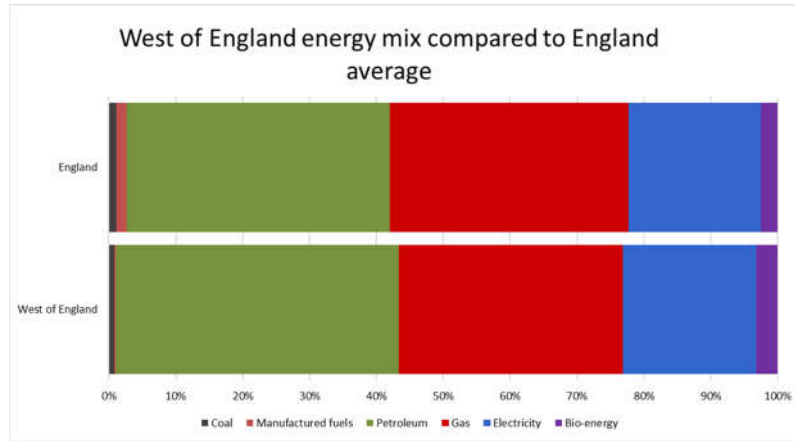
OUR ECONOMY IS GROWING, WHILE OUR EMISSIONS ARE GOING DOWN

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OUR ENERGY MIX

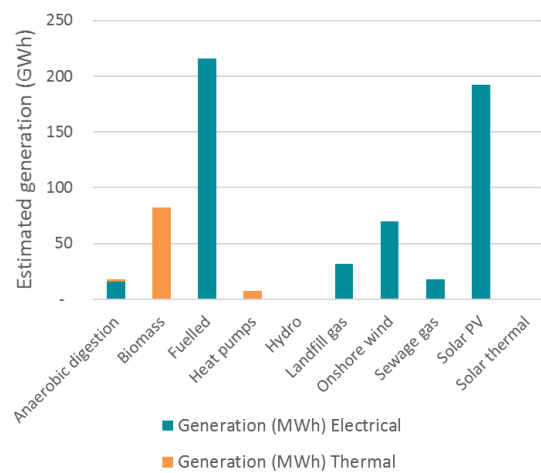
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RENEWABLES IN WEST OF ENGLAND

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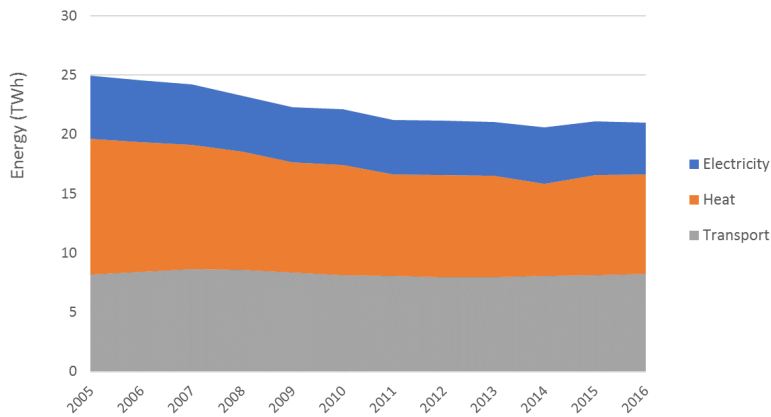
West of England estimated renewables generation



HOW WE USE OUR ENERGY



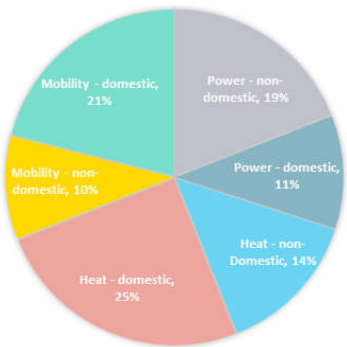
West of England energy consumption over time by use



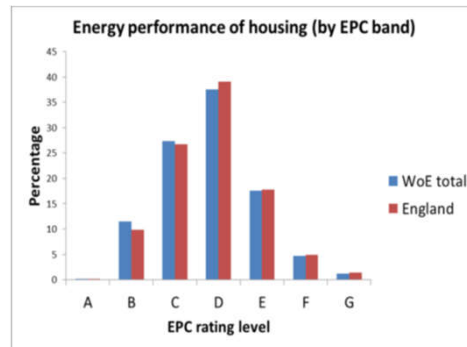
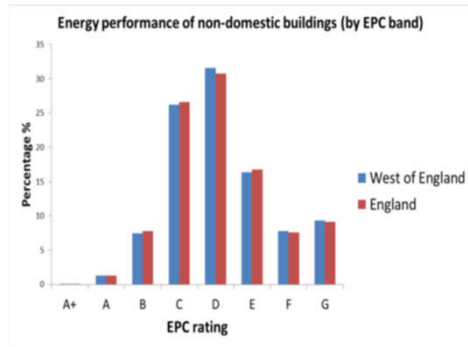
CARBON EMISSIONS



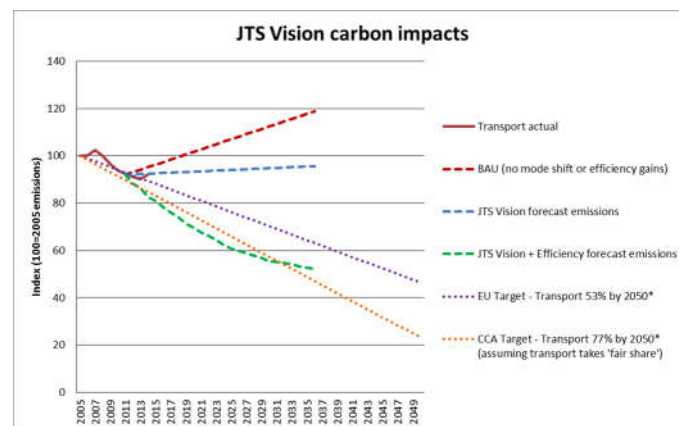
WOE ENERGY RELATED CARBON EMISSIONS BY APPLICATION AND SECTOR



OUR BUILDINGS COULD BE MORE ENERGY EFFICIENT



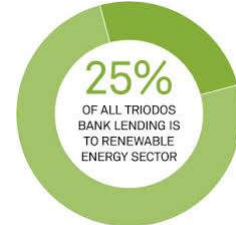
CARBON EMISSIONS IMPACT OF THE JOINT LOCAL TRANSPORT PLAN



LEADER IN CLEAN GROWTH INNOVATION

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- Low Carbon sector in WoE employs over 19,000 people, generating £2.4 billion, more than any other English region
- Global leader in green finance - Triodos Bank
- Low Carbon high value design - Leonardo helicopter blades, Airbus wings of the future, NCC light weight materials
- University spin outs - Robial 'pee power'
- R&D - UoB battery storage and nuclear, UoBath smart tech and IAAPS
- High tech cluster - creates the platform for smart energy tech



DIRECTION OF TRAVEL

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CLEAN GROWTH STRATEGY



Improving Business and Industry Efficiency and Supporting Clean Growth



Improving our Homes



Accelerating the Shift to Low Carbon Transport



Delivering Clean, Smart, Flexible Power



Enhancing the Leading in the Public Sector

Theme	National Goal	Evidence base	Objectives
Improving Business and Industry Efficiency	Enable businesses and industry to improve energy efficiency by at least 20 per cent by 2030. Halve the energy usage of new buildings by 2030	Energy use from Industry and Commercial sector has reduced 27% 2005-2016	Reduce energy use in commercial and industrial buildings across the region by at least 20% by 2030 from a 2015 baseline.
		65% of non-domestic buildings perform below Government's 2030 energy efficiency target.	
		40% of regions energy consumption is for heating Parts of the West of England has areas producing significant quantities of waste heat	Recycle waste heat produced in industrial processes to provide benefits to local businesses and populations

Theme	National Goal	Evidence Base	Objectives
Improving Our Homes	As many homes as possible are improved by EPC Band C by 2035 Halve the energy usage of new buildings by 2030	60% of homes in West of England perform below Government's 2035 energy efficiency targets	All homes to meet the governments 2035 energy efficiency target where practical, cost-effective and affordable.
		1 in 9 homes (52,000) in fuel poverty	Improve energy efficiency in all households identified as fuel poor by 2030
		150k homes off gas network	Increase the number of homes and businesses taking up renewable heat opportunities
		105,500 new homes by 2036, will increase energy demand across the region 40k new homes granted planning permission will add 7% to current housing-related carbon emissions in the region	Minimise energy demand and maximise the use of renewable energy, where viable meeting all demands for heat and power without increasing carbon emissions [JSP policy 5, point 6]

Theme	National Goal	Evidence Base	Objectives
Accelerating the Shift to Low Carbon Transport	30% reduction in emissions in transport by 2032	Transport is the largest energy consumer in the West of England, consumption from transport has not reduced since 2005.	Reduce energy consumption in transport
		The delivery of the new homes being planned in the West of England to 2036 could result in a 22% increase from 2014 transport emissions Governments aspiration is that all new vehicles will be EVs by 2040	Create the enabling conditions to increase new ULEV vehicles registrations
		The region occupies a key location on strategic road network and has increasing interactions with major conurbations e.g. Cardiff City region and Greater London.	Enable increased use of Ultra Low Emissions Vehicles (ULEV) for users of strategic road network

Theme	National Goal	Evidence Base	Objectives
Delivering clean, smart and flexible power	85% of electricity supply from clean sources by 2032	12% of electricity in the West of England is generated from 'within-region' renewables.	25% of electricity generated in the region supplied by local renewable generation by 2032
		Smart energy is an emerging opportunity and potential area of strength for the West Of England	The West of England to develop it's position as a leader in smart energy

Theme	National Goal	Evidence Base	Objectives
Leading in the Public Sector	Carbon emissions to be reduced by 80% by 2050	The public sector has demonstrated good progress in reducing energy use.	<p>UA's have different carbon emissions reductions targets measured from different baselines</p> <ul style="list-style-type: none"> BANES reduce carbon emissions 80% by 2050 on a 1990 baseline Bristol reduce carbon emissions by 60% by 2035 on a 2005 baseline North Somerset reduce carbon emissions by 50% by 2035 on a 2014 baseline South Gloucestershire reduce by 50% by 2025 on a 1990 baseline <p>The aggregated carbon emissions of the West of England UA's reduced by 50% by 2035 (on 2014 levels)</p>
		The region boasts continued investment and world leading examples of bringing innovation, research, renewable energy products and processes to the market	Take ambitious action to catalyse low carbon market in the regions
		The region has proactive community and business sectors which have demonstrated leadership in energy efficiency, and renewables	Actively engage stakeholders to deliver actions and sustain a common strategic purpose and mutual benefit from collaborative action.

DIRECTION OF TRAVEL ON ACTIONS



- Detailed action planning against the objectives

Potential actions to be considered:

- Support to encourage SMEs to take up energy efficiency measures [Low Carbon Fund]
- Better use of existing regulation, such as Minimum Energy Efficiency Standards [MEES]
- Heat Networks [recycling waste industrial heat]
- Support for the low carbon retrofit market [skills development]
- JSP commitment reflected in Local Plans [Minimise energy demand and maximise the use of renewable energy, where viable meeting all demands for heat and power without increasing carbon emissions [JSP policy 5, point 6]
- Support communities to include sustainable energy in their Neighbourhood Plans

To deliver this we will need to actively lobby Government for funding

NEXT STEPS



Governance process

- 18th January LEP Board
 - 23rd January WECA Scrutiny
 - 25th January Infrastructure Advisory Board
 - 1st February Joint Committee
- Ongoing governance oversight via existing LEP / WECA structures