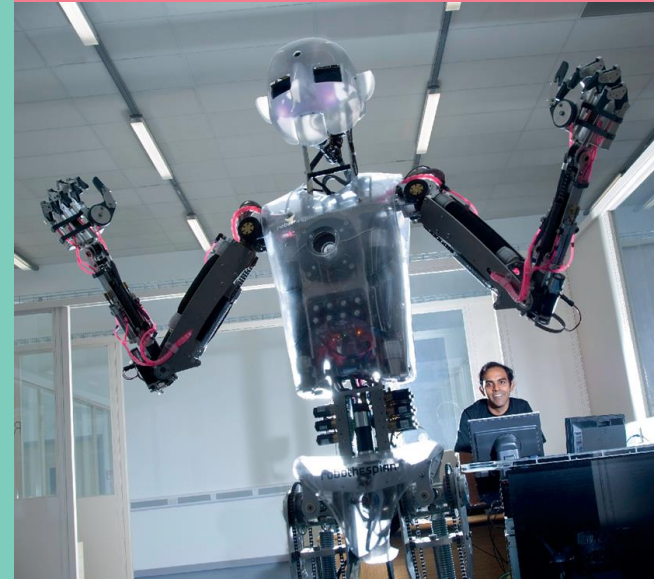


# ENERGY STRATEGY



- 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
- Energy Strategy a BEIS requirement of all LEPs. BEIS keen that LEPs '*show leadership and influence to effect local change*'
- Clean growth is at the heart of our operating framework and emerging Local Industrial Strategy
- Paris Agreement to the United Nations Framework Convention on Climate Change (UNFCCC) to pursue efforts to limit the rise to 1.5 degrees Celsius

# 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 carbon (meeting legally binding targets)

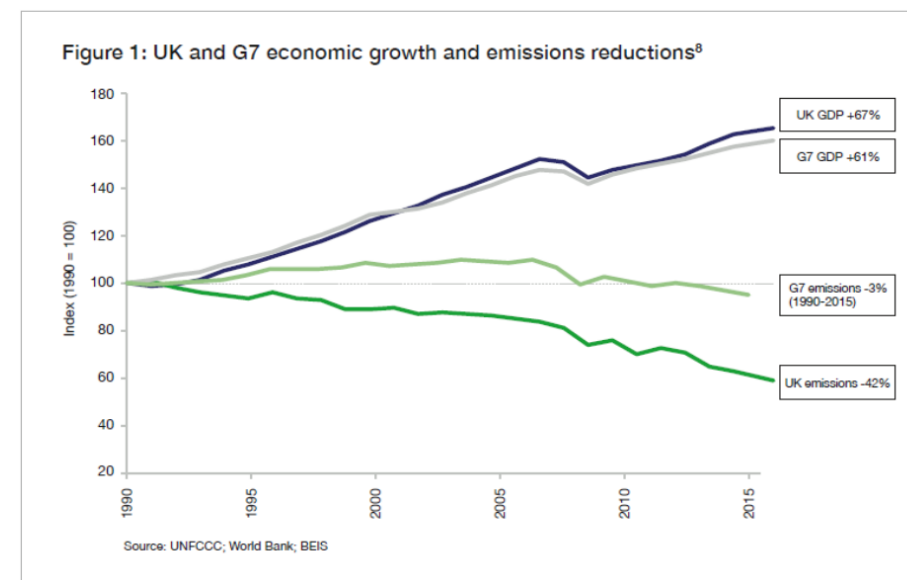
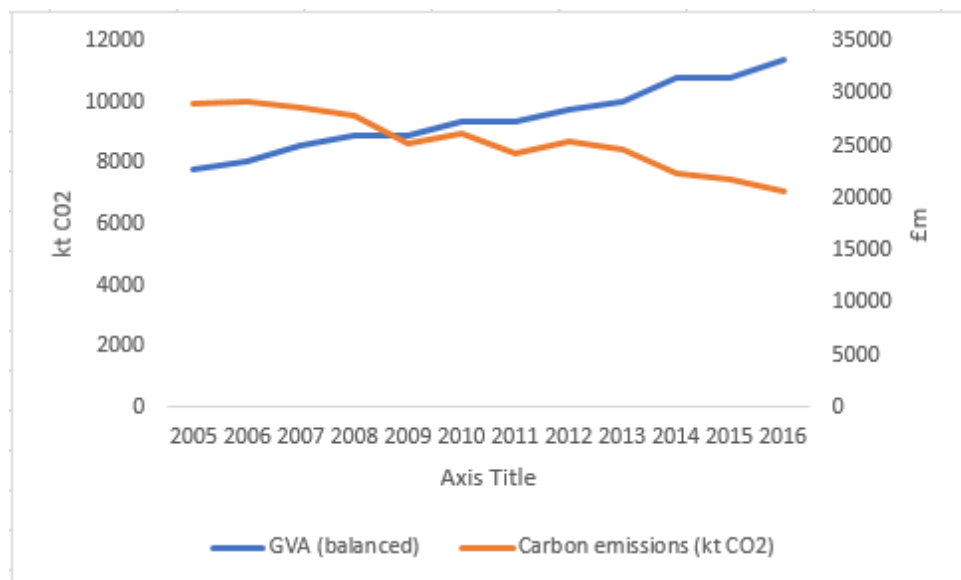
# PURPOSE OF WOE ENERGY STRATEGY

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

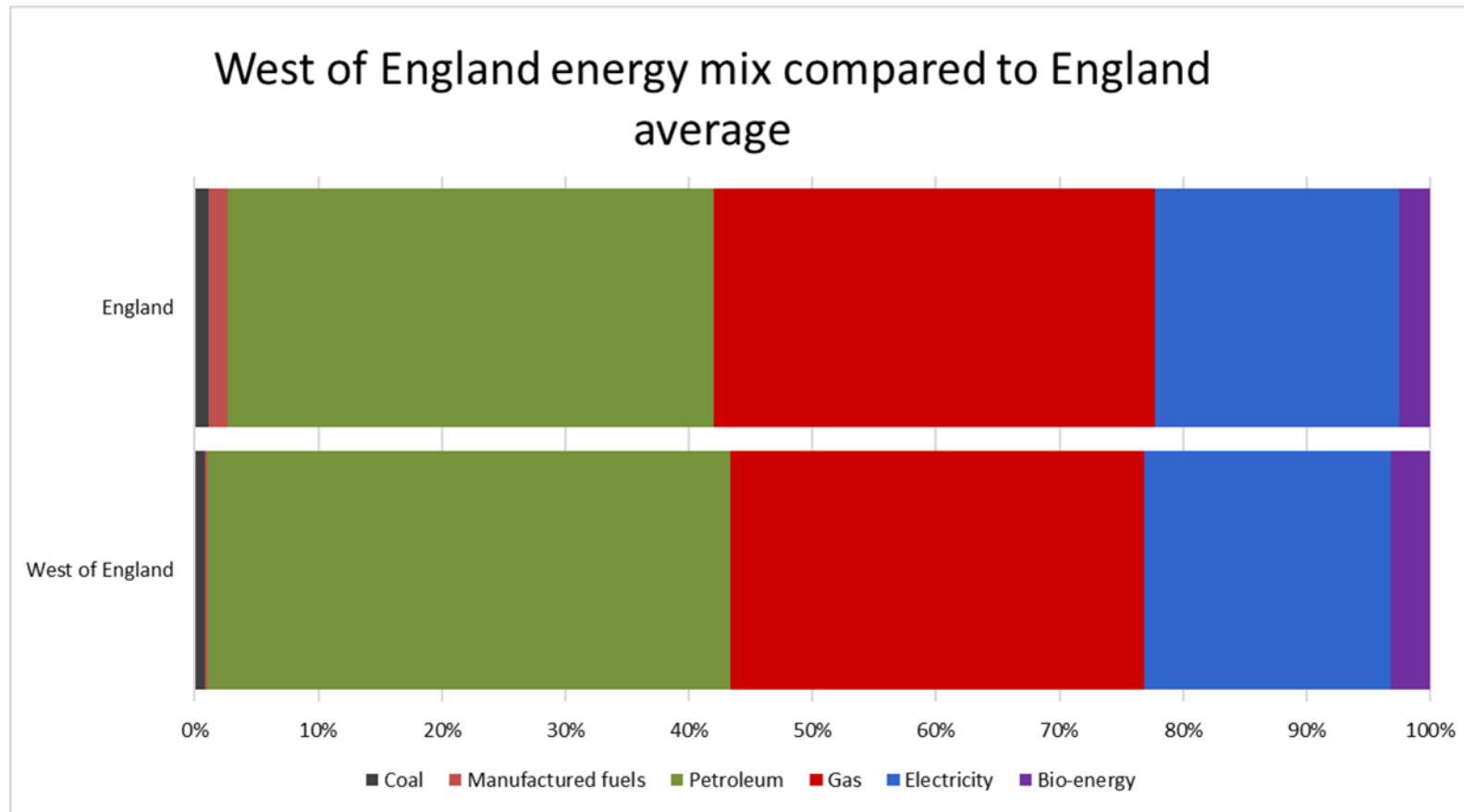
- Upgrade energy infrastructure to underpin clean and inclusive economic growth as set out in local industrial strategy
- Drive energy efficiency measures to keep costs down for businesses and local people
- Increase the local production of clean energy that is sustainable and resilient
- Invest in science,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

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

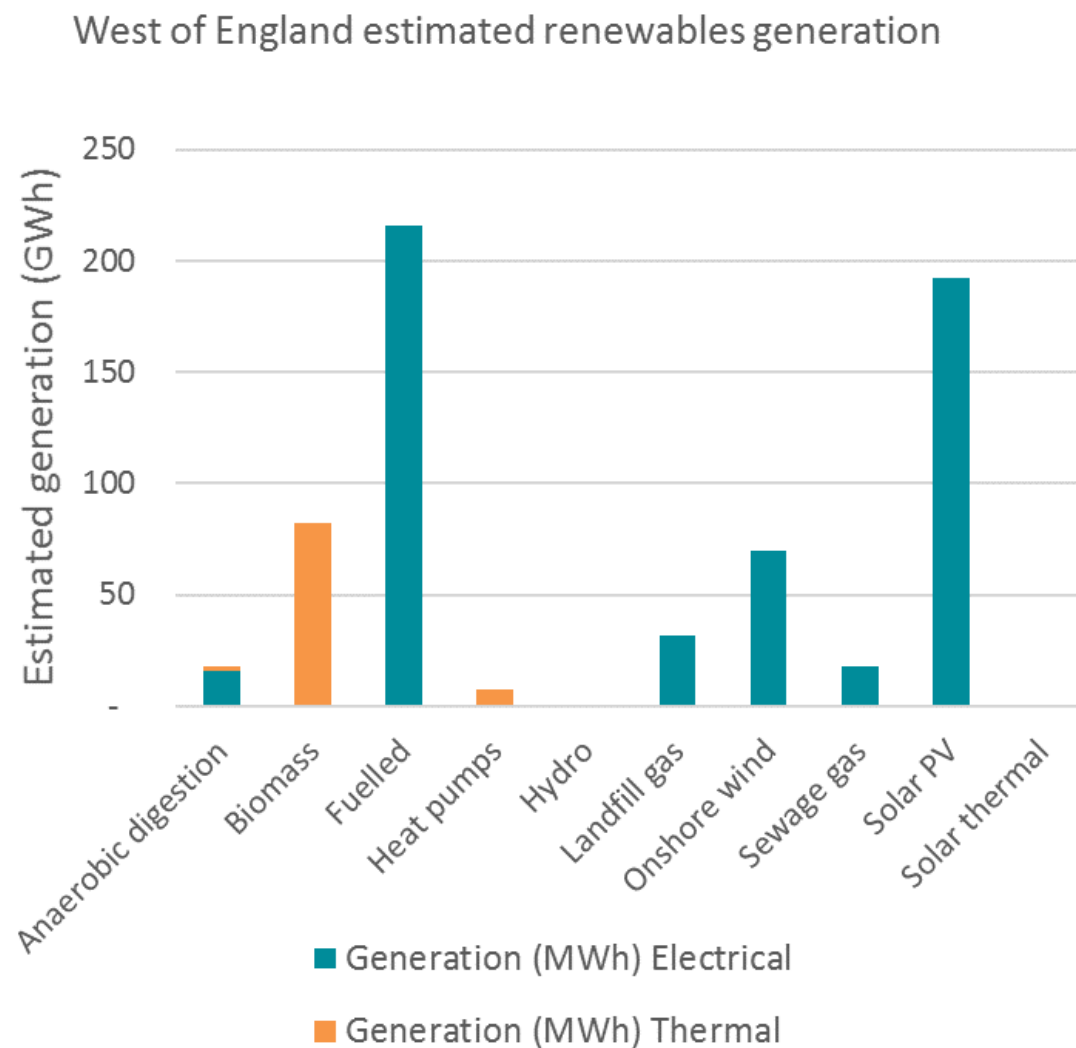
# OUR ECONOMY IS GROWING, WHILE OUR EMISSIONS ARE GOING DOWN



# OUR ENERGY MIX



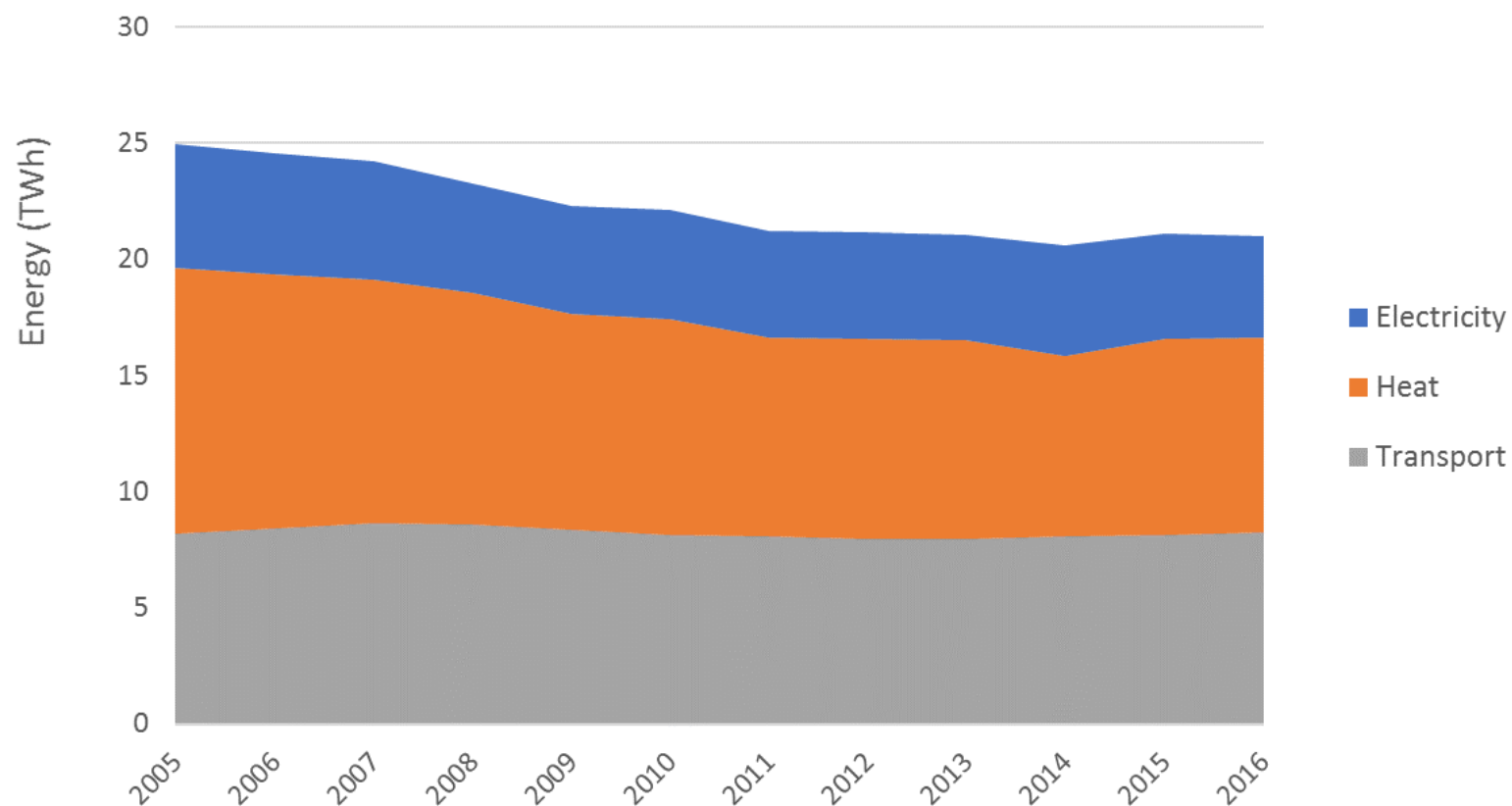
# RENEWABLES IN WEST OF ENGLAND





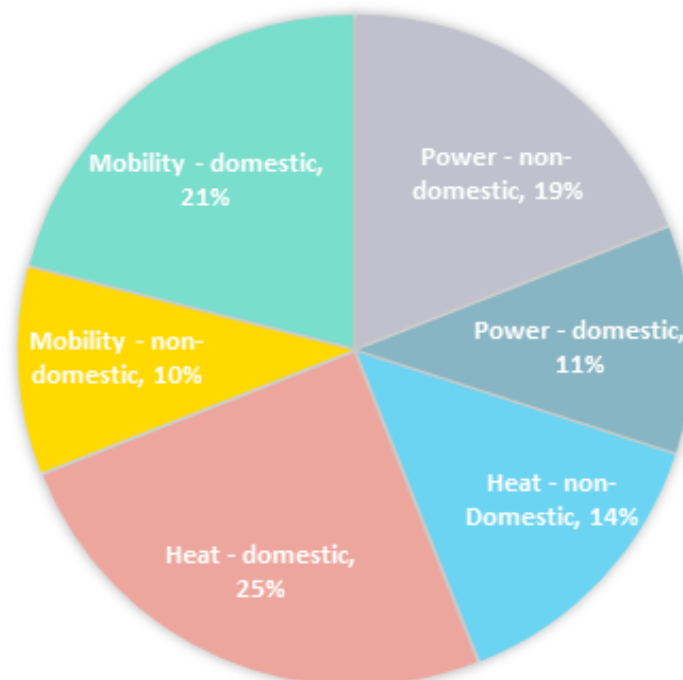
# HOW WE USE OUR ENERGY

West of England energy consumption  
over time by use

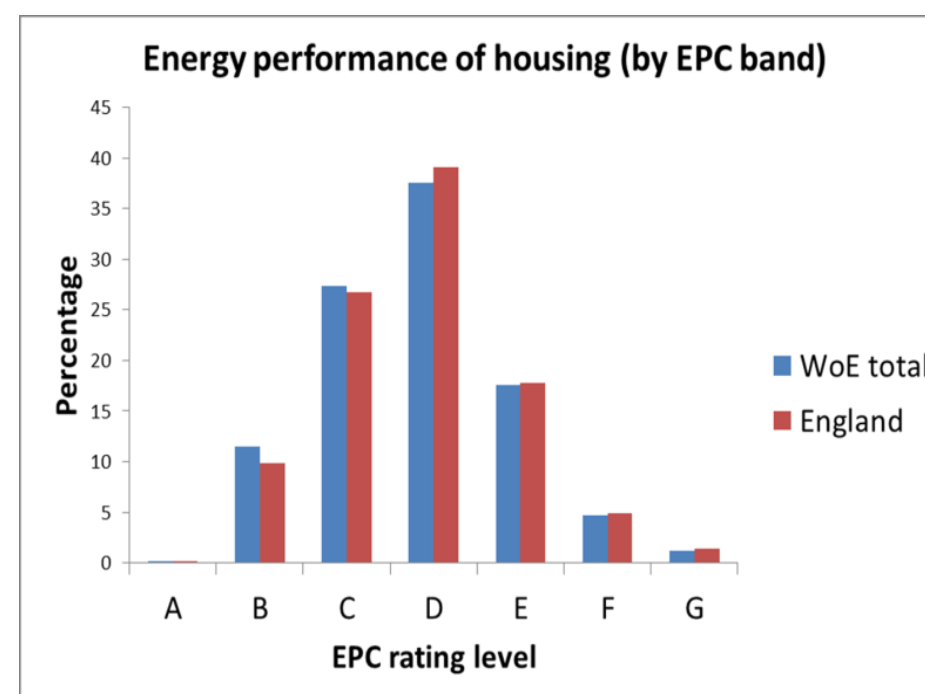
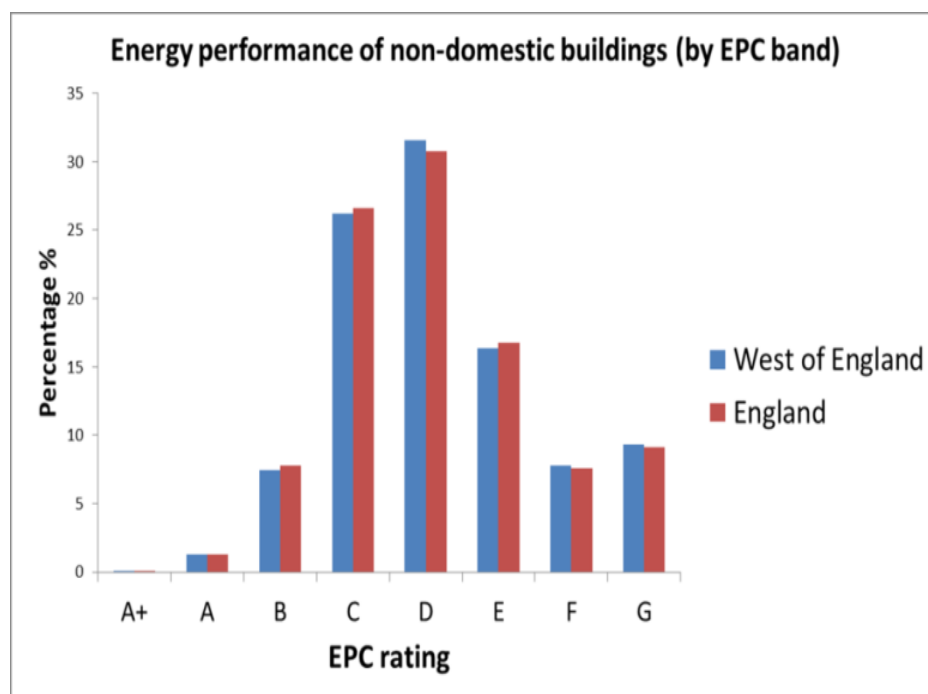


# CARBON EMISSIONS

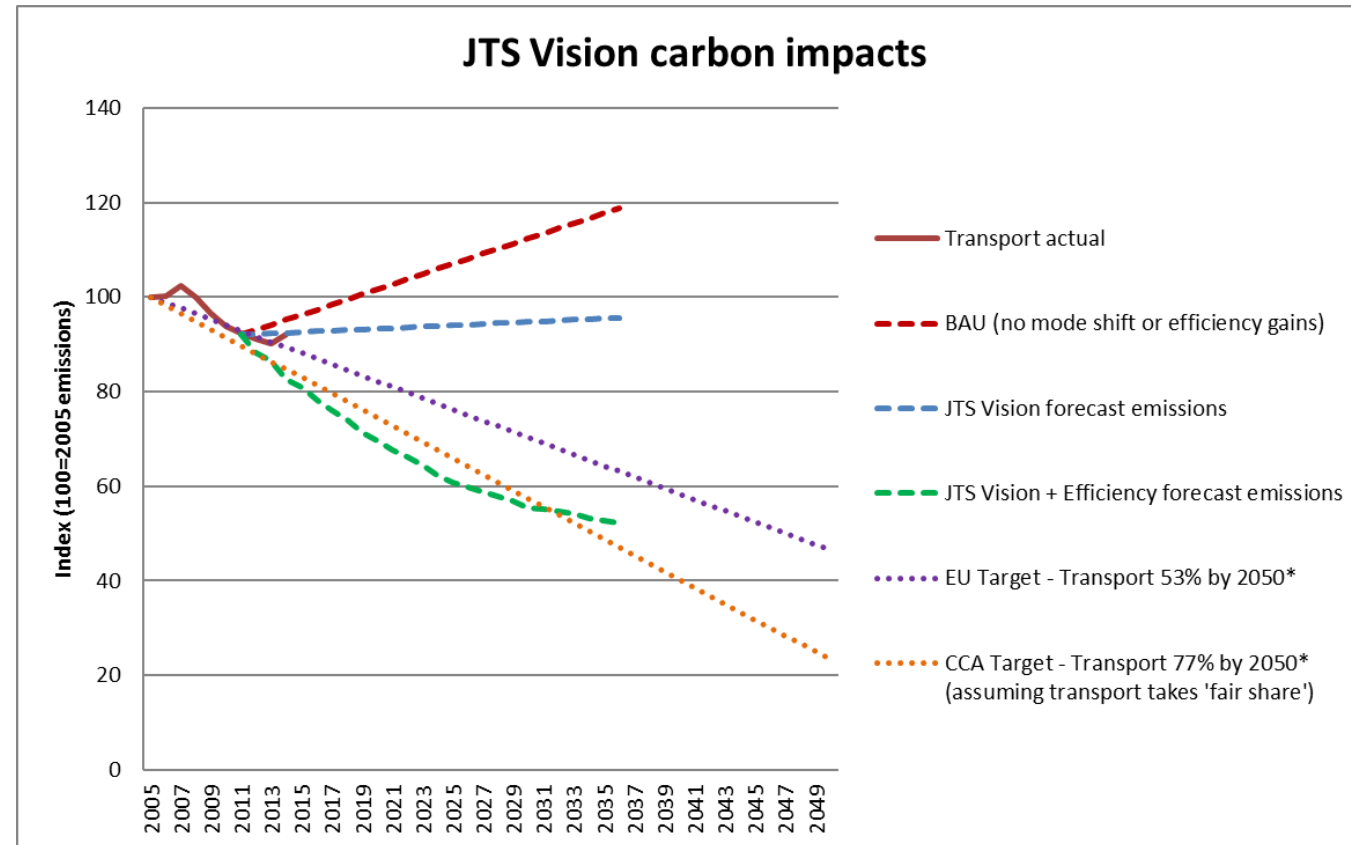
**WOE ENERGY RELATED CARBON EMISSIONS BY  
APPLICATION AND SECTOR**



# OUR BUILDINGS COULD BE MORE ENERGY EFFICIENT

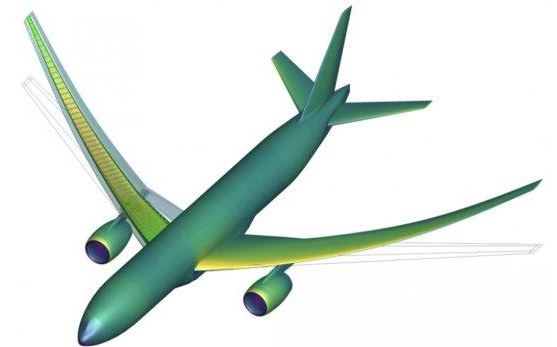
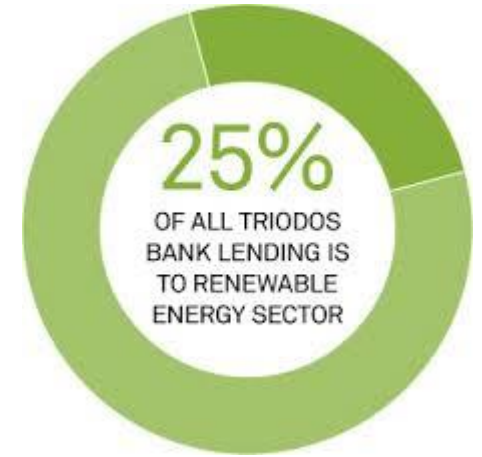


# CARBON EMISSIONS IMPACT OF THE JOINT LOCAL TRANSPORT PLAN



# LEADER IN CLEAN GROWTH INNOVATION

- 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

# 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	Actions	Owner
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.	Analysis of the regions commercial and industrial building stock to identify suitable opportunities for improvement	WECA/LEP/ Commercial and Industrial sector
		65% of non-domestic buildings perform below Government’s 2030 energy efficiency target.		Establish a mechanism in the West of England for improved energy use in SME's (Low carbon challenge fund)	WECA/LEP/ UA’s
				Use available regulations, such as Minimum Energy Efficiency Standards (MEES), to improve energy efficiency standards in commercial and industrial buildings	UA’s
		Make representation to national government on energy issues	UA’s / WECA /LEP		
		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	Use waste heat produced in industrial processes in the roll out of heat networks  Map and coordinate plans to decarbonise heat in the region	Bristol/ South Glos/ Commercial and Industrial stakeholders  WECA/LEP/UA’s/ Stakeholders



Theme	National Goal	Evidence Base	Objectives	Actions	Owner
Improving Our Homes	As many homes as possible are improved by EPC Band C by 2035	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.	Accelerate the development of the low carbon retrofit market and supply chain	All
				Explore the potential of the Private Rented Sector Minimum Energy Efficiency Standards (PRS MEES) to secure greater investment in energy efficiency.	UA's
				Make representations to national government on improvements to PRS MEES	WECA/LEP UA's
		1 in 9 homes (52,000) in fuel poverty	Improve energy efficiency in all households identified as fuel poor by 2030	Establish basis of a regional approach to tackling fuel poverty to secure more funding from Energy Company Obligation (ECO)	UA's
	Halve the energy usage of new buildings by 2030	150k homes off gas network	Increase the number of homes and businesses taking up renewable heat opportunities	Map and coordinate plans to decarbonise heat in the region	WECA/LEP UA's/ Stakeholders
				Identify options to overcome barriers to the uptake of renewable heat in off gas properties.	UA's / Community
		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]	Map and coordinate plans to decarbonise heat in the region  Local plans to 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]  Ongoing roll out of district heating networks	UA's  UA  WECA/LEP/ UA's/ Stakeholders

Theme	National Goal	Evidence Base	Objectives	Actions	Owner
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	Deliver the Joint Local Transport Plan (JLTP) to achieve a significant mode shift from the car in the region and develop a more efficient, resilient transport network.	WECA/LEP/UA's
		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	Create the enabling conditions to increase new ULEV vehicles registrations	Develop work to deliver the required infrastructure to accelerate the mass adoption of Ultra Low Emissions Vehicles (ULEV)	UA's
		Governments aspiration is that all new vehicles will be EVS by 2040		Accelerate the take up of low emissions taxi and buses. (Ultra Go West)	UA's
		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	Leverage the region's position to support the development of Ultra Low Emissions Vehicle (ULEVS) infrastructure , such as Hydrogen highways and ultra fast EV charging network.	WECA/LEP/UA's

Theme	National Goal	Evidence Base	Objectives	Actions	Owners
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	<p>Build an investable pipeline of renewable energy projects.</p> <p>Support community groups, public sector and business to develop renewable energy projects</p> <p>Support communities to include sustainable energy in their Neighbourhood Plans.</p> <p>New local plans to identify suitable (and not unduly constrained) locations for new renewable energy developments</p>	<p>UA’s / South West Energy Hub/ South West Energy Unit/ Community Energy Groups</p> <p>UA’s/ Communities</p> <p>UA’s / Communities</p> <p>UA’s</p>
		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	<p>Explore options for establishing smart energy demonstration zones or Energy Innovations Zones</p> <p>Stimulate the establishment of a smart energy cluster to facilitate the development of sector led growth in the region</p>	<p>UA/s/ Smart energy Stakeholders</p> <p>UA’s/ Smart Energy Stakeholders</p>

Theme	National Goal	Evidence Base	Objectives	Actions	Owners
Leading in the Public Sector	Carbon emissions to be reduced by 80% by 2050	<p>The public sector has demonstrated good progress in reducing energy use.</p>	<p>UA's have different carbon emissions reductions targets measured from different baselines</p> <ul style="list-style-type: none"> <li>BANES reduce carbon emissions 80% by 2050 on a 1990 baseline</li> <li>Bristol reduce carbon emissions by 60% by 2035 on a 2005 baseline</li> <li>North Somerset reduce carbon emissions by 50% by 2035 on a 2014 baseline</li> <li>South Gloucestershire reduce by 50% by 2025 on a 1990 baseline</li> </ul> <p>The aggregated carbon emissions of the West of England UA's reduced by 50% by 2035 (on 2014 levels)</p>	<p>Explore options to boost energy management capacity in the public sector to reduce public sector expenditure.</p> <p>Region's authorities to identify opportunities to work together to increase take up of renewables and energy efficiency measures</p> <p>Monitoring and reporting delivery of energy strategy</p>	<p>UA's</p> <p>UA's</p> <p>WECA/LEP</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	Integrate energy strategy into skills and training programmes	UA's / WECA/LEP
		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.	<p>Engage with stakeholders to enable further energy efficiency measures and renewable energy</p> <p>Define and make representations to national government on behalf of the region</p>	<p>ALL</p> <p>ALL</p>

# NEXT STEPS

- Energy Strategy approval

10<sup>th</sup> January CEOs

18<sup>th</sup> January LEP Board

23<sup>rd</sup> January WECA Scrutiny

25<sup>th</sup> January Infrastructure Advisory Board

1<sup>st</sup> February Joint Committee

- Energy Strategy oversight and implementation
  - Oversight via existing WECA / LEP governance structures [WECA/ LEP Directors, CEOs, Infrastructure Advisory Board, LEP, Joint Committee, Scrutiny]
  - Action planning and implementation coordinated by WECA officers but responsibility for delivery will be mixed