

---

Liverpool City Region  
**Energy Strategy Workshop**

**TUESDAY 6<sup>th</sup> MARCH 2018**



This event invited key stakeholders to discuss a new Energy Strategy for Liverpool City Region.

**The LEP would like to thank all who attended for their contribution to the debate and WSP who led the facilitation the workshop sessions.**

An Energy Strategy and Road Map is presently being drafted. The strategy will ultimately be adopted as guidance by the City Region Mayor, Combined Authority and partner organisations.

This engagement event took place at the midpoint of and previewed initial findings.

# WELCOME

---



**Thank you all for coming – some familiar faces who I know are very knowledgeable about the agenda, and we have a broad audience which we have targeted in an effort to cover as many aspects of this large subject as possible.**

**This workshop was advertised to all, and I hope that we can keep the debate free of too much jargon and accessible to everyone.**

**This workshop has been organised by the Liverpool City Region LEP. The purpose of today is to have a dialogue about the energy agenda, because the LEP is developing an energy strategy for the region, working with and on behalf of the City Region Mayor, the Combined Authority and other local institutions.**

**We have been going through a period of evidence gathering. There is a great deal of existing information. WSP have been brought on board as expert advisors to help us identify gaps and make recommendations about best practice.**

# TODAY'S AGENDA

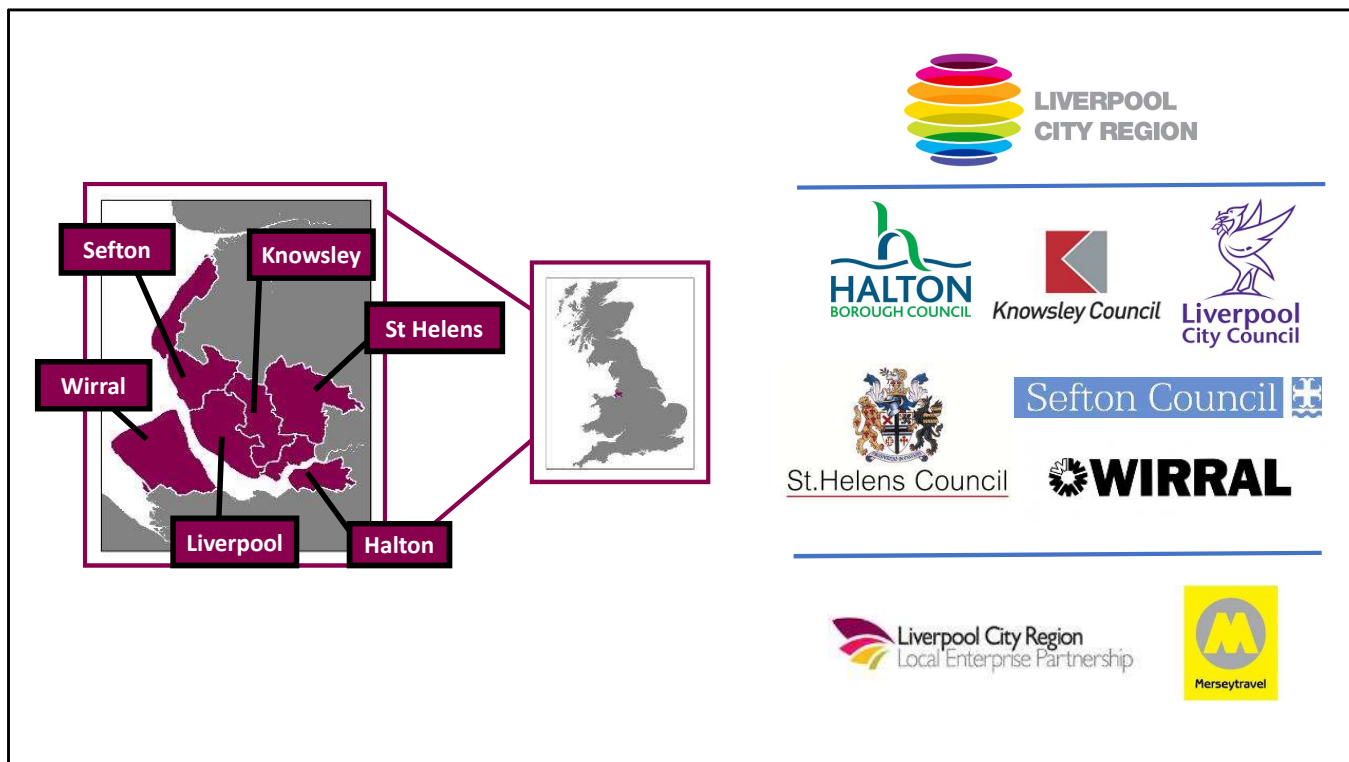
---

- 1. AN ENERGY STRATEGY FOR LIVERPOOL CITY REGION**
- 2. ENERGY STRATEGY THEMES**
- 3. AUDIENCE PARTICIPATION**

**First - I am going to try to answer the question – Why an energy strategy for Liverpool City Region?**

**WSP are then going to briefly cover some of headline issues under a range of topic areas.**

**WSP will then facilitate a workshop session, asking us all some overarching questions, and then with each table will tackle a particular topic.**



The Liverpool City Region – not a geography many of the local population will be aware of, let alone those further afield.

But the creation of a Metro Mayor and Combined Authority does give real political weight to the entity. Government budgets for transport, skills, housing and more are now devolved down to this level.

Inserting a political infrastructure between government and local authorities is about scale.

Liverpool City Region captures an area with an interlinked Economic geography. People commute around the area to work and study. Big decisions about transport or planning in one brought have an impact on another.



**2.3%**  
Population

**0.5%**  
Land

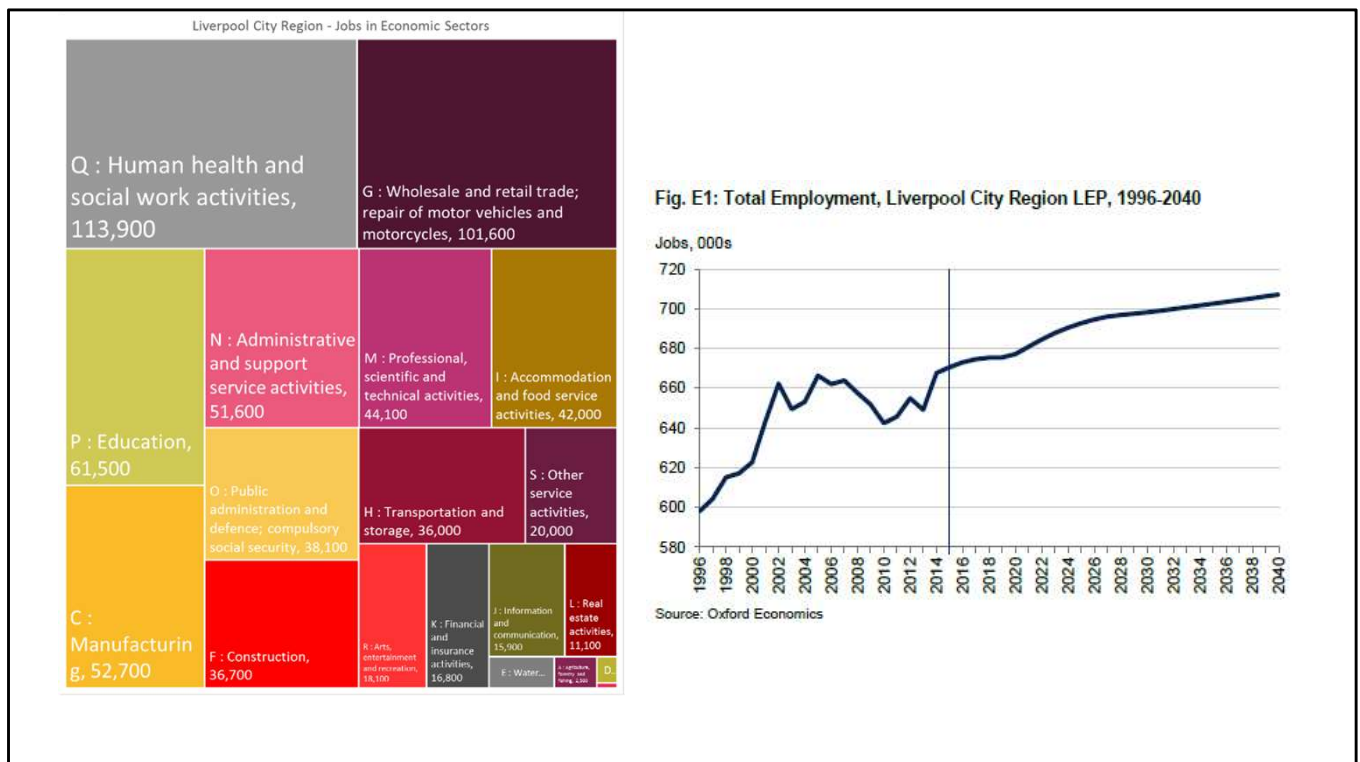
**1.8%**  
GVA

**Liverpool City Region comprises the old county council area of Merseyside, plus Halton Local Authority area.**

**The population is 1.5 million. That is 1 in every 50 people in the UK. It encompasses one of the eight large urban conurbations of the UK and several major towns in their own right.**

**It is a very densely populated area – less than 100<sup>th</sup> of the land area.**

**We cannot forget that it is a coastal location, with a storied maritime history one of the world's largest dock systems.**



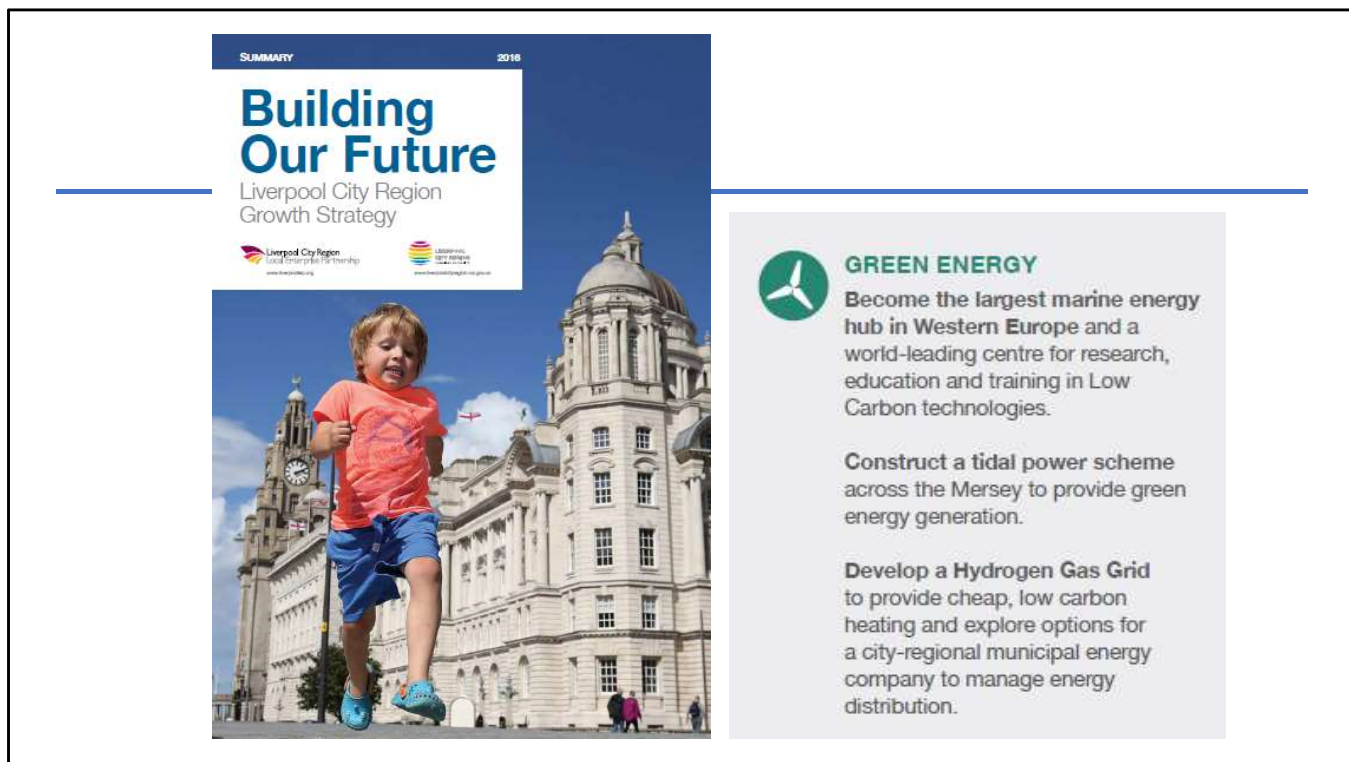
The City Region has a mixed economy, with heavy industry, manufacturing, and logistics warehouses linked to the docks. Liverpool ranks in the top 10 as a visitor destination.

There is also a large public sector. The region is a centre of excellence for health, health sciences and education.

A recent science and innovation audit provided to Government identified that we are world class in vaccines, big data and materials science.

Like much of the NW, taxes raised in the area do not match taxes spent by the exchequer. There is a net contribution of £3000 per person.

Grant funding to the regions has been waning. Government is more minded with discretionary funding to favour areas that argue the business case and demonstrate value for money. We are competing to attract government support.



The city region is rebounding from tough economic times - and is one of the faster growing regions of the UK with a successful decade since the Capital of Culture in Liverpool.

A strategic body such as a combined authority has to look past current circumstances and envisage a future over the next several decades. And that includes thinking about its infrastructure: Transport, Digital and Energy.

The population is set to grow and the Mayor has announced the intention to build 25,000 new homes in the next 5 years.

The city region is an attractive place for inward investment. Orsted, global developer of offshore wind has recently established an operations centre here to serve the Irish Sea. The region is an attractive place to live and work.





**CLEAN GROWTH:** Liverpool Bay has one of the largest offshore wind clusters in the world featuring the world's biggest turbines and first energy storage project. LCR companies are now exporting products and services around the world.

**£6bn investment**  
underway in the Irish Sea

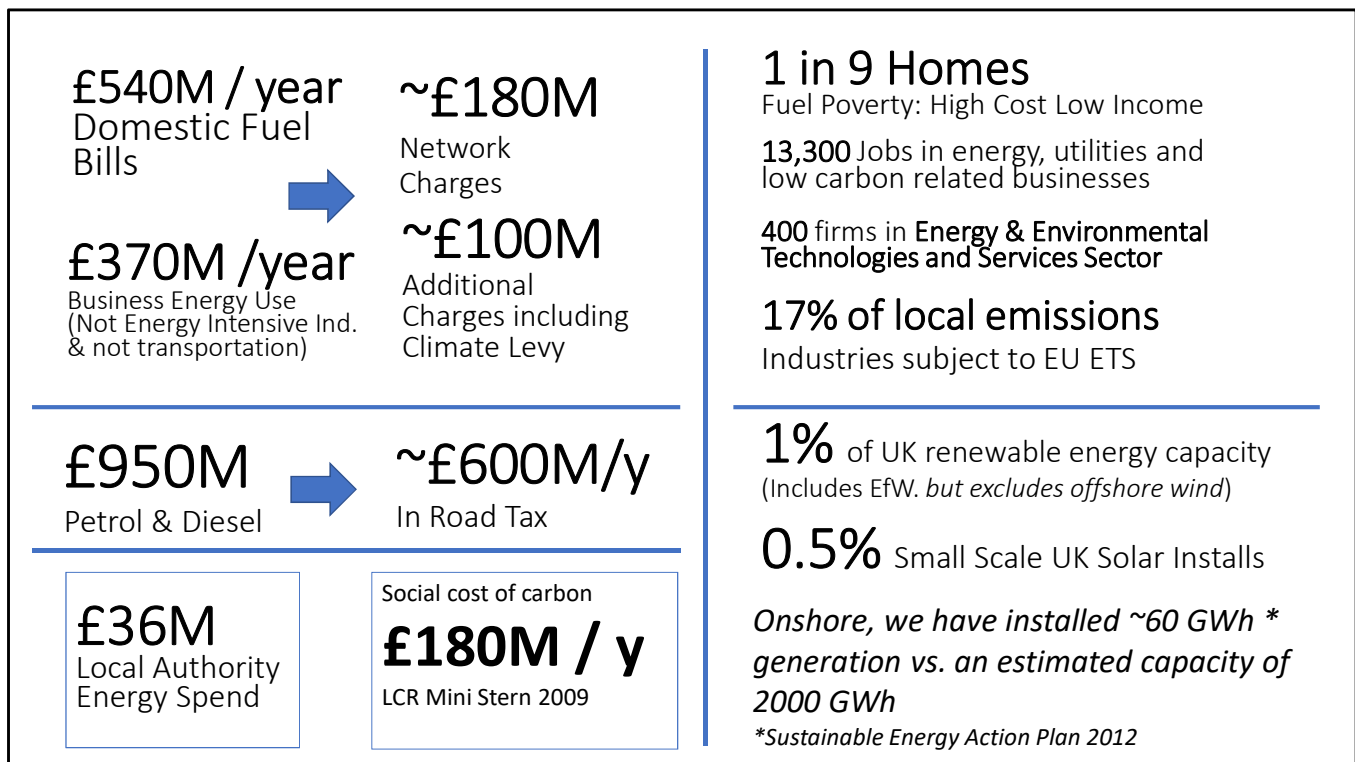
*So, does the city region need an energy strategy alongside other policy documents?*

Something is clearly happening. Investment in renewable technology is outstripping spending on fossil fuel forms of generation.

Offshore Wind is the success story. Wind is now regularly providing over 50% of national electricity requirements.

Recognising that renewables and flexible demand management are going to change the grid to a distributed model, and also that the electrification of the transport will as much as double electricity use – our local power network is considering moving from a network operator model (DNO) to a system operate model DSO).

That means smart interactions with systems on the consumer side of the meter. Their latest estimate of the price tag for the next funding period runs into the Billions in our region alone.



**Energy infrastructure carries a cost to us all and a great deal of tax and levies are raised on the use of energy.**

**The City Region has seen investment in energy both onshore and off. But we are only really at the start of a decades long period of investment in decentralised green energy.**

**There is a cost to not acting, one that is widely acknowledged. A mini Stern for our region in 2009 put the cost at £180M per annum. But it is hard to socialise this cost.**

# THE CLEAN GROWTH STRATEGY 2017

## **BUSINESS & INDUSTRY EFFICIENCY 25% of Emissions**

- Energy productivity improved by 20%
- International Leadership on CCS
- Invest £162M in research and innovation

## **IMPROVING OUR HOMES 13% of UK Emissions**

- £3.6 Bn by 2028 (ECO)
- Energy Performance Band C 2030 Ambition
- Smart Meters
- Roll out low carbon heating

## **SHIFT TO LOW CARBON TRANSPORT 24% of UK Emissions**

- End the sale of conventional petrol and diesel by 2040
- World leading EV Charing
- £1.2Billion for cycling and walking
- Shift freight from road to rail

DEVELOPING WORLD LEADING GREEN FINANCE



**Without much fanfare really, the Clean Growth Strategy was published in October 2017**

**It is a legal requirement on government to have a plan as far as 2032 along the route of the UK Climate Change Act, which commits the UK to remove most of the carbon by 2050.**

**The Paris Agreement has upped the global commitment since the UK Climate Act was introduced. It is not legally binding unless a particular nation legislates it to be so, but it suggests the coming of a more aggressive set of carbon reduction targets that we have seen so far. The UK has not legislated for Paris yet.**

**DELIVERING CLEAN  
SMART FLEXIBLE POWER**

**21% of UK Emissions**

- Implement a smart systems plan to use energy flexibly
- Consider cap on tariffs across the whole market
- New Nuclear Power
- £900m public funds for innovation

**VALUE OF OUR NATURAL  
RESOURCES**

**15% of UK Emissions**

- New system of agricultural support delivering environmental outcomes
- Zero avoidable waste by 2050
- Invest £99m in innovation

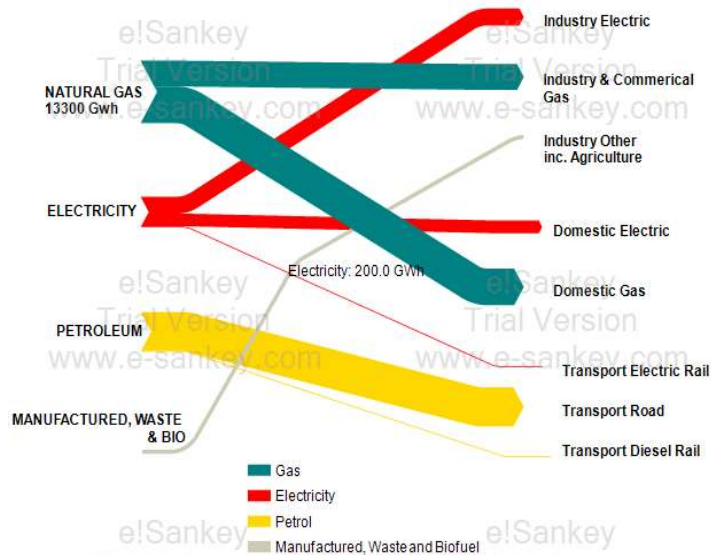
**LEADING IN THE PUBLIC  
SECTOR**

**2% of UK Emissions**

- Agree tighter targets for central government
- Voluntary public sector target of a 30% reduction
- £255m of funding in England to support Energy Efficiency

**GOVERNMENT LEADERSHIP IN DRIVING CLEAN GROWTH**

### Liverpool City Region Energy Flows 2015 Simplified Sankey Schematic - GWh per annum



In the City Region have installed our relative share of renewable power generation. The City Region is on track to meet a carbon reduction aspiration for 2020 that was set in 2011.

But the UK is not on track to meet the 2020 target of 15% energy from renewables.

Natural Gas still satisfies 85% of heating requirements. Renewable sources of heat are not taking off.

Transport has become much more efficient over time, but we are travelling more. Carbon emissions have not fallen since 1990.



**Projecting into the future is fraught with uncertainty**

**The National Grid Future Energy Scenarios- relied on by government for some policy making, consider various trajectories but all feature a strong role for nuclear power.**

**By the most optimistic estimate – assuming land around the country were freed up from agriculture to be covered with renewables – wind, sun, sea and plant growth could provide less than half what we presently use.**

**The Centre for Alternative Technology says we can provide all energy from renewables using current technology, and without nuclear – but only if we reduce our use by 60%.**

**Internationally, agencies agree that Carbon Capture and Storage will have to come to the rescue if we are to meet targets. This is an untried technology at scale.**

**Marine sources such as tidal energy is figured into all those scenarios that look to 2030 to 2050 where action to deliver the climate act is taken.**





**You might say that Energy networks are a regulated system in private hands. The cost to bring energy to our homes and businesses is a standing charge buried in our bills. Five reasons among many others**

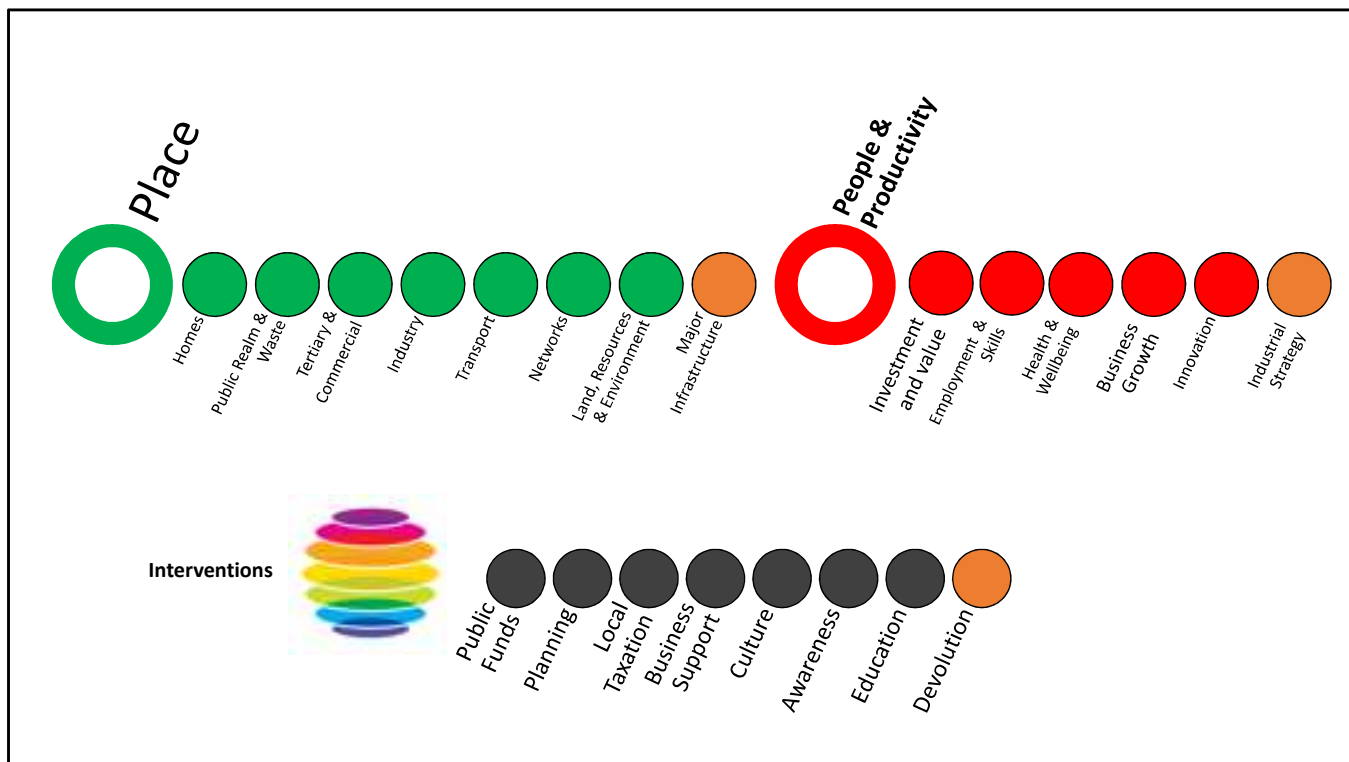
**Because there is a strong desire among individuals to act and they want to work at the level of the community and neighbourhood to make change**

**Because a place based approach with partnership working is the only way realise district scale opportunities like heat networks**

**Because Innovative Businesses based here can be helped to grow, and forward-thinking Business will want to invest here**

**Because powers over infrastructure, planning and local taxation might be leveraged to enable large infrastructure projects otherwise inconceivable – such as tidal power projects.**

**Because there is local determination over public transport and that is a good opportunity for ultra-low emissions vehicles.**



What makes delivery of any energy strategy complicated is that the issues belong to everyone but the solutions must be led on an action by action basis by institutions that empowered to act.

Our powers to intervene locally are not boundless. In England, only 15% of taxes raised in an area are passed down from national government for local determination.

We can for example:

- Consider use of local planning powers
- Direct the use devolved taxes to strategic outcomes
- Make the case for value for money investment
- Use soft powers to convene and raise awareness
- Plan for utilities and transport infrastructure that is future proof



## DEVOLUTION AGREEMENT 2015

The agreement secured £900m of funding over 30 years, which was additional to existing significant funding from the Local Growth Fund and other sources until 2021, along with the transfer of powers and responsibilities from central government.



LIVERPOOL  
CITY REGION



• Constitutional and Governance accountable	• Finance	• Research data and Information sharing	• European funding and Brexit	• Culture	• Low Carbon Energy and environment	• Transport	• Justice, Fairness and Social Inclusion	• Strategic Housing/Spatial Planning	• Employment and Skills,	• Economic Development and Business Growth
---	-----------	---	-------------------------------	-----------	-------------------------------------	-------------	--	--------------------------------------	--------------------------	--

***Liverpool City Region to be at the forefront of environmental conservation and sustainability, tackling, pollution, congestion and environmental degradation***

The 2015 Devolution Agreement established Energy & Environment as one of the areas in which we want to enter into discussions with government.

The City Region Mayor made the Green Agenda one of the pillars of his manifesto. This is reflected in the combined authority political portfolio Energy and Renewables which is championing the development of a strategy.

We are at the front of the pack in Devolution to sub-regions of England, with one of the 6 metro mayors. That opens up the opportunity for more powers and responsibilities later.

A first step will be to align our existing strategies and ambitions. We are preparing an energy strategy as a first step to acting at the sub-regional level.

# TIDAL COMMISSION

---

- Devolution agreement with Government 2015
- Metro Mayor Priority
- Tidal Commission established 2017
- Commission Chair Brent Cheshire
- New Studies Commissioned 2018



A tidal commission has been established by the Mayor and will undertake work in 2018 to update past work.

# Energy Strategy Terms of Reference

---

**Stage 1: Reviewing the evidence base, updating intelligence and identifying gaps** **MARCH 2018**

**Stage 2: Strategy Development including sectoral approaches** **JUNE 2018**

Setting out long-term ambitions, aims and objectives to develop our energy industries

Identifying opportunities to invest in energy efficiency and low carbon generation

Identifying infrastructure constraints

Growing the sector through business support and eco-innovation.

Sector specific carbon reduction proposals for our energy economy

**Stage 3: Implementation Plan** **AUGUST 2018**

We are at the information gathering stage of the energy strategy and that is why we want to hear from you today about the big questions the strategy must try to address.

## Hydrogen train to be tested in the UK by 2020

12 Feb 2018



UK: The Rail Safety & Standards Board is working with Alstom with the aim of piloting a hydrogen powered train in late 2019 or early 2020, RSSB Chief Executive Mark Phillips said on February 12.

BBC Sign in News Sport Weather iPlayer TV Radio

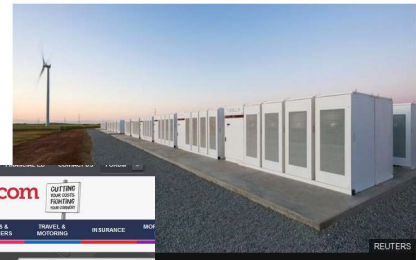
## NEWS

Home UK World Business Politics Tech Science Health Family & Education En  
World Africa Asia Australia Europe Latin America Middle East US & Canada

## Tesla mega-battery in Australia activated

1 December 2017

f t b e Share



THE TIMES

## Floating wind farm excels

Greg Cameron, Scottish Business Editor

February 16 2018, 12:01am, The Times

Energy



The Humbly Grove floating wind farm operated at 45 per cent of its capacity during the first three months of winter season.

The world's first floating wind farm has survived winter storms and generated more electricity than expected.

**MoneySavingExpert.com**  
Founder & Chief, Martin Lewis, Editor-in-Chief, James Mills

CREDIT & LOANS | FREEDOM & SAVINGS | UTILITIES & PHONES | HOMES & VOUCHERS | DEALS & MOTOCARDS | INSURANCE

**MSE News** Search News...

Home > News > Energy switching hits nine-year high as consumers flood to smaller suppliers

## Energy switching hits nine-year high as consumers flood to smaller suppliers

By Andrew Capstick, Energy Analyst

1 Mar 2018

f t b e Share

More than five million customers switched their energy deals last year and over half moved to smaller suppliers, according to the latest data.

New data from energy regulator Ofgem shows that energy switching has hit a nine-year high as over five million customers switched their electricity supply and four million switched their gas during 2017.

**Clean Energy was identified as one the ten key themes of the Industrial Strategy.**

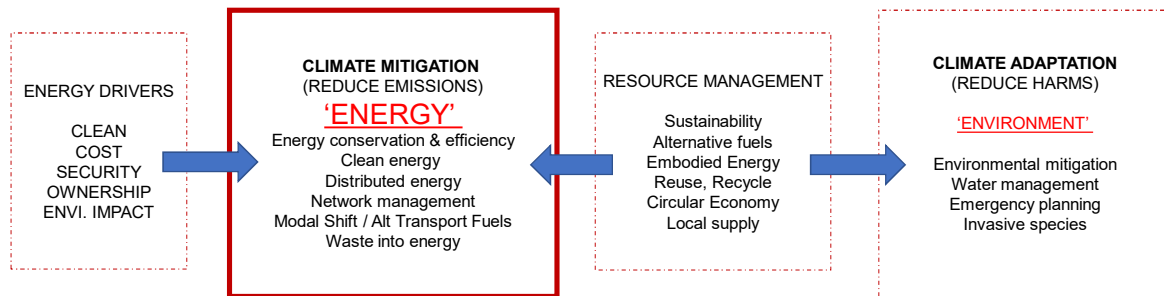
**It is also one four pillars named in the Norther Powerhouse Strategy.**

**The Department of Business Energy and Industrial Strategy has recognised the need for local action on energy strategy and is funding every LEP in the country to produce one.**

**We want to look ahead and track out a strategy for the short term, and you have to do that by looking to the long term, which is why the strategy will consider energy use in the city region until 2040**

**But the future will surprise us. Floating wind turbines are in the news this week and other disruptions to business as usual are bound to appear.**

## CLIMATE AGENDA (Energy & Environment)



I should clarify that what we are working on is an Energy Strategy, one that speaks to policy from BEIS and is concerned with our place in the energy system of the UK.

That is not to forget that Sustainable Energy is one facet of the environmental agenda. Climate action is one of the drivers of sub-regional energy policy

The City Region if it wants to demonstrate progress to an international audience, such as through the global covenant of mayors, it will also need in due course to develop a Resilience Strategy that considers Climate Adaptation.

---

## THANK YOU

James Johnson  
Sustainable Energy Projects Manager  
**Liverpool City Region Local Enterprise Partnership**  
james.Johnson@liverpoollep.org  
T +44 (0)151 237 3531  
M +44 (0)7766 526877

