

National Priorities for the UK Energy Sector

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Powering Up!

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Objectives

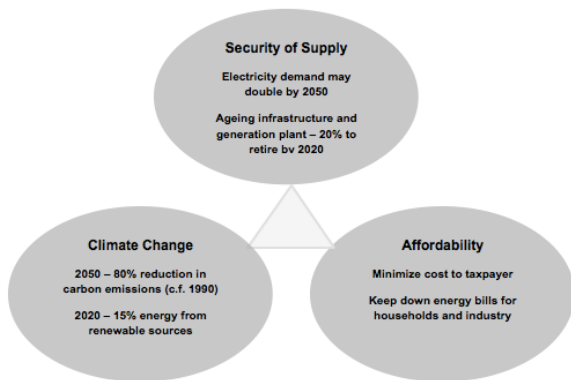
- * Overview of UK energy policy
- * Identify opportunities for East Midlands

UK energy policy has three objectives

- * **Security of supply** - keeping the lights on
- * **Sustainability** - transition towards a low-carbon world
- * **Competitiveness** - maintain affordability for consumers and industry

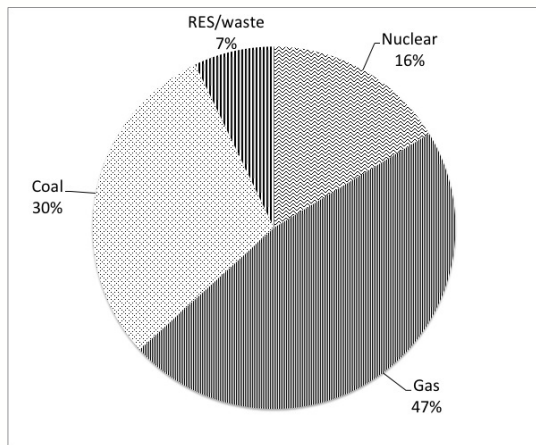
... which have profound implications for electricity sector

UK context is particularly challenging



And the transition requires vast investment

UK Electricity Generation Mix 2010



Some distance from low-carbon generation sector

£110bn required investment by 2020

£75BN new generation capacity

£35BN transmission/distribution



New policy framework to attract investment in renewables - fast

Electricity Market Reform

Feed in Tariffs with Contracts for Difference

- guaranteed price over project life for low-C generation

Capacity mechanism

- keep lights on by incentivising investment in flexible capacity

Emissions performance standard

- 450g CO₂/KWh - carbon capture and storage on new coal stations

Carbon price floor

- boost EUETS carbon price giving more certainty on carbon price - reduces investment risk

RIIO

- Incentivise innovation through new regulatory framework for transmission and distribution

What is likely to happen?

- * Diversification of electricity generation sources
 - Biomass
 - New nuclear
 - Clean coal - with carbon capture and storage
 - Offshore wind
 - Solar PV
- * Energy efficiency “fifth fuel” - buildings
- * Distributed generation e.g. rooftop solar
- * Grid upgrades - to cope with large volumes renewables and distributed generation

Strong emphasis on technology - renewables and clean fossil

In fact it is already happening

- * £1bn to commercialise carbon capture storage
- * Significant funds already committed
 - Convert to biomass £3.8bn lifetime cost
 - Offshore wind £12.8bn lifetime cost
- * National Grid upgrades - 7000 new jobs (mainly construction) in England
- * UK seen as outstanding centre for renewable energy
 - Siemens investing £310m Hull wind turbine factory 1,000 direct jobs
 - Drax investing £800m in biomass storage and links to Immingham saving 1,200 direct jobs

UK reforms receiving qualified support

IEA 2012 Review UK Energy Policy

- * Pioneering
- * Untested combination of policies

ONS 2014

- * Early contracts for renewables awarded by DECC on non-competitive basis
- * 58% funds for renewables already awarded

“If we don’t change direction soon, we’ll end up where we’re heading” (IEA 2012)

£110bn investment is a **HUGE** opportunity for a region with strong low carbon energy credentials -
the East Midlands