Appendix 2 – Energy state of the Leeds City Region: Summary of key findings

The emissions produced in the City Region are a direct result of the energy consumed; this means that emissions from electricity generated within the City Region are excluded from the analysis presented. The emissions considered are Scope 1 and Scope 2 only, this includes emissions as a direct result of fuel burnt and electricity consumed by end users. Our Region's large power stations are therefore excluded from this analysis.

The City Region consumed 64,232 GWh of energy in 2015 a decrease of 22 percent compared to 2005 levels. The level of consumption roughly equates to 48 percent of Yorkshire and Humber and 5.5 percent of England's total consumption. Consumption was roughly equal across the domestic, industrial and commercial, and transport sectors.

As would be expected given the intrinsic link between energy consumption and emissions, between 2005 and 2015 emissions also decreased by 38 percent to 16.5 million tonnes of CO_2. This equates to roughly 60 percent of total emissions within the Yorkshire and Humber and 6.5 percent of total emissions in England.

The decrease in both energy consumption and emissions can be attributed in the main to increases in energy efficiency, a shift in the type of industry in the City Region and a decarbonisation of the UK electricity grid.

Over the period of the SEP (to 2036) energy consumption is forecast to increase by 13 percent (on 2015 levels) as a result of an increasing population, construction of more homes, continual growth in number of vehicles on the road network, increased mileage and more freight being carried via road.

Within the forecasts industrial and commercial energy consumption is forecasted to decrease due to a move to less energy intensive industries and a drive to increase efficiency to reduce operating costs.

In contrast to consumption emissions are forecast to decrease by 13 percent over the period to 2036. This is due to a move to less carbon intensive fuels, further electrification of processes, more efficient homes and appliances and further decarbonisation of the UK electricity grid.

While overall emissions are forecasted to decrease the transport sector is expected to reverse this trend with a 28 percent increase in emission over the period to 2036. This is likely to be caused by minimal changes to the internal combustion engine, the move back to petrol cars from diesel, and a lack of growth in the electric vehicle market.

Currently the City Region generate three times as much energy as it consumes making it a net exporter of energy. Historically this position has been as a result of the concentration of coal power stations in the City Region. While two of the three large coal power stations have recently closed down it is likely that developments on these sites coupled with the continued operation of Drax, will lead to the City Region remaining as a net exporter of energy into the future, albeit at a reduced level than historically.

Jobs and skills

The energy sector in the City Region represents 1.5 percent of the economy (£918 million) and employs approximately 7,900 people. This is forecast to increase by 1.5 percent per year to £1.237 billion and to 10,200 people by 2036.

While contributing a small element of the City Region economy employees within the energy sector are typically higher skilled relative to the average for all industries e.g. management, professional and associate professional / technical occupations.

In the City Region, similar to the national picture, faces significant challenge around skills shortages, with skilled trades, management, professional and operative occupations all susceptible to skills shortages. In the future it is likely that the sector will have difficulties in obtaining the skills that it needs, especially where it competes with other sectors in specific areas like engineering. Brexit is also likely to have an impact on the ability of employers in recruiting the right skills due to the current significant reliance on migrant workers from the EEA.

A significant level of higher education provision directly relevant to the skills required by the energy sector is hosted in the City Region. However only a small number of total graduates go on to work in the energy sector with the majority going on to take up employment in the manufacturing and professional services sectors.