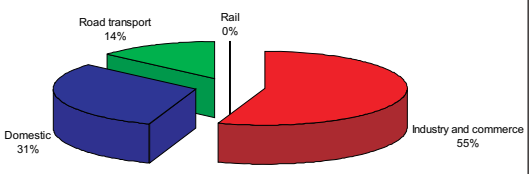
LOCAL AREA CO_2 EMISSIONS MONITOR
A Local Economy

cambridge econometrics
connecting you to the future

Current Position

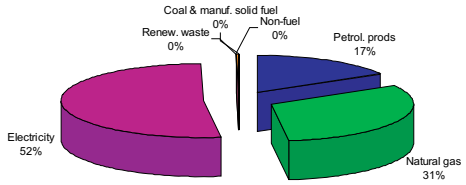
- In 2007, the local economy caused the emission of 744,000 tonnes of CO_2 either directly or (in the case of electricity consumption) indirectly. Of this, industry and commerce were responsible for 55% and households around 30%.
- Energy use in the local economy in 2007 was the equivalent to 222,000 tonnes of oil. Of this, industry and commerce accounted for almost half, and households more than a third.
- Just over half of the emissions are associated with the consumption of electricity, while around 30% results from use of natural gas.
- Households currently account for around 25% of consumption of electricity in the economy and a little over 50% of natural gas.

SOURCES OF CO_2 EMISSIONS IN LOCAL AREA: 2007



Source(s) : Local and Regional CO2 Emissions Estimates, AEA (for DECC).

SOURCES OF CO_2 EMISSIONS IN LOCAL AREA: 2007

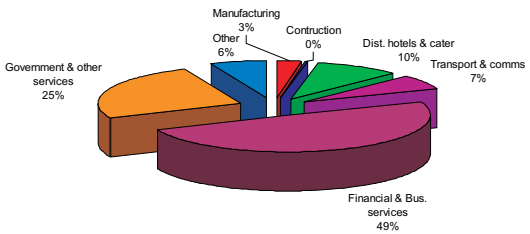


Source(s) : Local and Regional CO2 Emissions Estimates, AEA (for DECC).

Economic Prospects

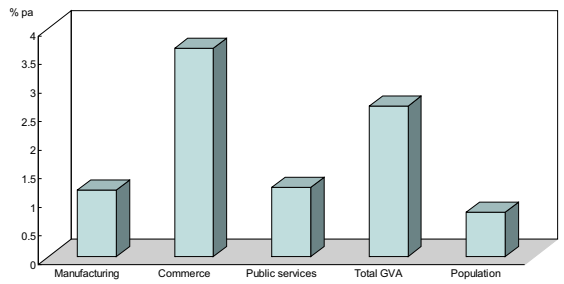
- The local economy is dominated by services. Financial & business services make up almost half of the economy, with public services contributing a further 25%. Distribution, hotels & catering accounts for 10% and manufacturing only 3%.
- The underlying prospects are for strong growth in the local economy. Output is projected to rise by just over 2½% pa over 2009-20, supported by strong growth in commerce. Manufacturing output is projected to rise by little more than 1% pa over the period, slower growth than is projected for public services.
- The population is projected to rise by just under 9% over 2009-20.

SOURCES OF VALUE ADDED IN LOCAL AREA: 2007



Source(s) : Cambridge Econometrics.

PROSPECTS FOR GROWTH IN VALUE ADDED IN THE LOCAL ECONOMY, 2009-2020



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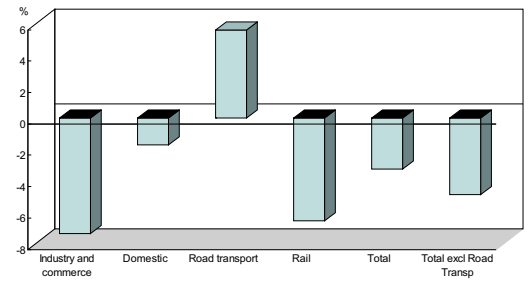
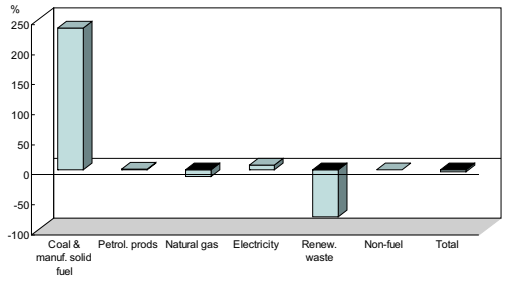
Future Trends in Energy Use

- While the economy is projected to grow at just over 2½% pa, energy use in the local economy is projected to fall by ¼-½% pa over 2009-20.
- Energy use from transport is projected to rise alongside economic growth and increases in the population, though this is expected to be more than offset by declines in energy use by industry & commerce and households.
- Domestic energy use is expected to fall despite the strong growth in the population as a whole in response to national policy frameworks focused on improving the energy efficiency of housing. Energy used by industry and commerce is expected to fall, as the effect from expected efficiency improvements outweigh the impact of economic growth.
- As a result of the changing source of energy use and an expectation of a switch from other fuels to electricity, the use of electricity is expected to increase and the consumption of natural gas to fall. The use of petroleum products is set to increase over time alongside the increase in transport activity. However, expected improvements in vehicle efficiency and a the decline in demand by industry & commerce will limit the rate of increase in the fuel's use.

GROWTH IN FUTURE ENERGY USE IN LOCAL AREA, 2009-2020



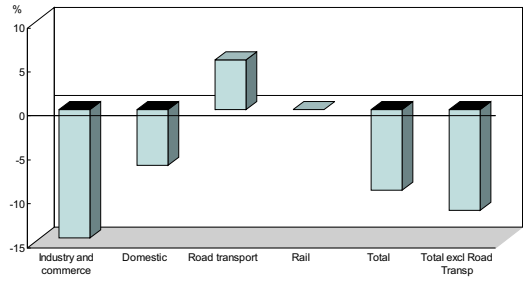
GROWTH IN FUTURE ENERGY USE IN LOCAL AREA, 2009-2020



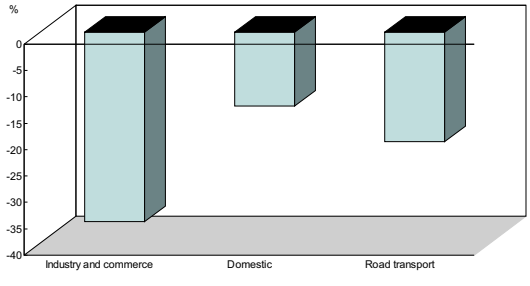
Future Trends in CO_2 Emissions

- CO_2 emissions in the local area are projected to fall slightly, by 10% over 2009-20. To put this in context, if the UK is to achieve its target of cutting CO_2 emissions to 20% below 1990 levels by 2020, this implies a 8¾% reduction from 2009 levels. In the local area, emissions from industry and commerce are projected to fall by 16% as a result of the fall in energy use and those from households by 7%. Each more than offsets the rise in emissions from transport.
- The CO_2-intensity of the economy is therefore expected to fall (improve) on a number of measures. The CO_2-intensity of the industrial and commercial sector is expected to fall sharply. Per capita emissions from households are projected to fall by around 15% over 2009-20.

GROWTH IN FUTURE CO_2 EMISSIONS IN LOCAL AREA, 2009-2020



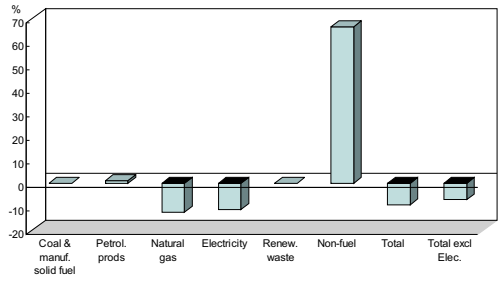
CHANGE IN FUTURE CO_2-INTENSITY OF ACTIVITIES, 2009-2020



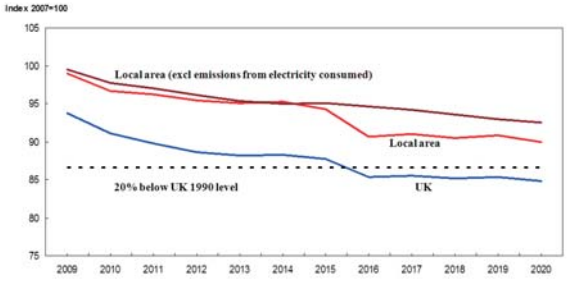
Future Trends in CO_2 Emissions

- The growth in emissions from road transport is also expected to be weaker than overall economic growth.
- CO_2 emissions per unit of energy use in the local area are projected to fall, mostly a result of a switch to electricity from other fuels, although the carbon-intensity of electricity generation is expected to fall as the UK meets its target for 20% of generation coming from renewable (ie zero carbon) sources by 2020. As a result, emissions associated with electricity use in the local area are expected to fall even though the overall use of electricity is expected to rise slightly.

CHANGE IN FUTURE CO_2 EMISSIONS BY FUEL IN LOCAL AREA, 2009-2020



CHANGE IN CO_2 EMISSIONS IN LOCAL AREA AND UK, 2009-2020



Key national policies included in the projections

The local area CO_2 projections draw on projections of national trends in energy use, which have in turn taken into account the following national policies:

- UK's membership of the EU Emissions Trading System (ETS)
  - this has an important impact on the power generation and energy-intensive sectors
- the Renewables Obligation (RO)
  - including the banding system that was introduced in 2009
- the Renewable Transport Fuels Obligation (RTFO)
- the Climate Change Levy (CCL)
  - including the rates announced in Budget 2009
- associated Climate Change Agreements (CCAs) including the extension of these to 2017 also announced in Budget 2009
- Carbon Emissions Reduction Target for households and the Carbon Reduction Commitment for commerce

Produced March 2010.

These projections are consistent with the economic prospects for the UK and its regions published by Cambridge Econometrics in *Economic Prospects for the Nations and Regions of the UK, February 2010* and underlying trends for future energy use published by Cambridge Econometrics in *UK Energy and the Environment, September 2009*. They utilise detailed data on energy use and associated emissions in the regions commissioned by SCPnet[1].

1 http://www.scpnet.org.uk/