

City of Leicester Climate Change Strategy

Summary Version

February 2003

Leicester Partnership

Leicester Environment Partnership

CITY OF LEICESTER CLIMATE CHANGE STRATEGY

The City of Leicester recognises the implications that climate change has for the continuing prosperity and the environmental and social well being of the city. In order to minimise the impacts of climate change the Leicester Partnership and the Leicester Environment Partnership has developed a Climate Change Strategy for the City. It is hoped that the Strategy will help to stimulate a public debate and raise awareness of the issues surrounding Climate Change in the City.

The main objectives of the Climate Change Strategy for Leicester are to:

- Assess the contribution that Leicester makes towards the causes of climate change.
- Identify how the climate in Leicester has already changed and is predicted to change over the next 80 years.
- Review progress on the target contained within the 1994 Leicester Energy Strategy and assess whether the target needs to be changed.
- Identify the best way forward to reduce greenhouse gas emissions within Leicester and also how the City should adapt to best deal with the predicted changes in climate.
- Develop an action programme to achieve the target greenhouse gas emissions and to adapt to the impacts of climate change.
- Set up a monitoring framework to assess progress towards the target.

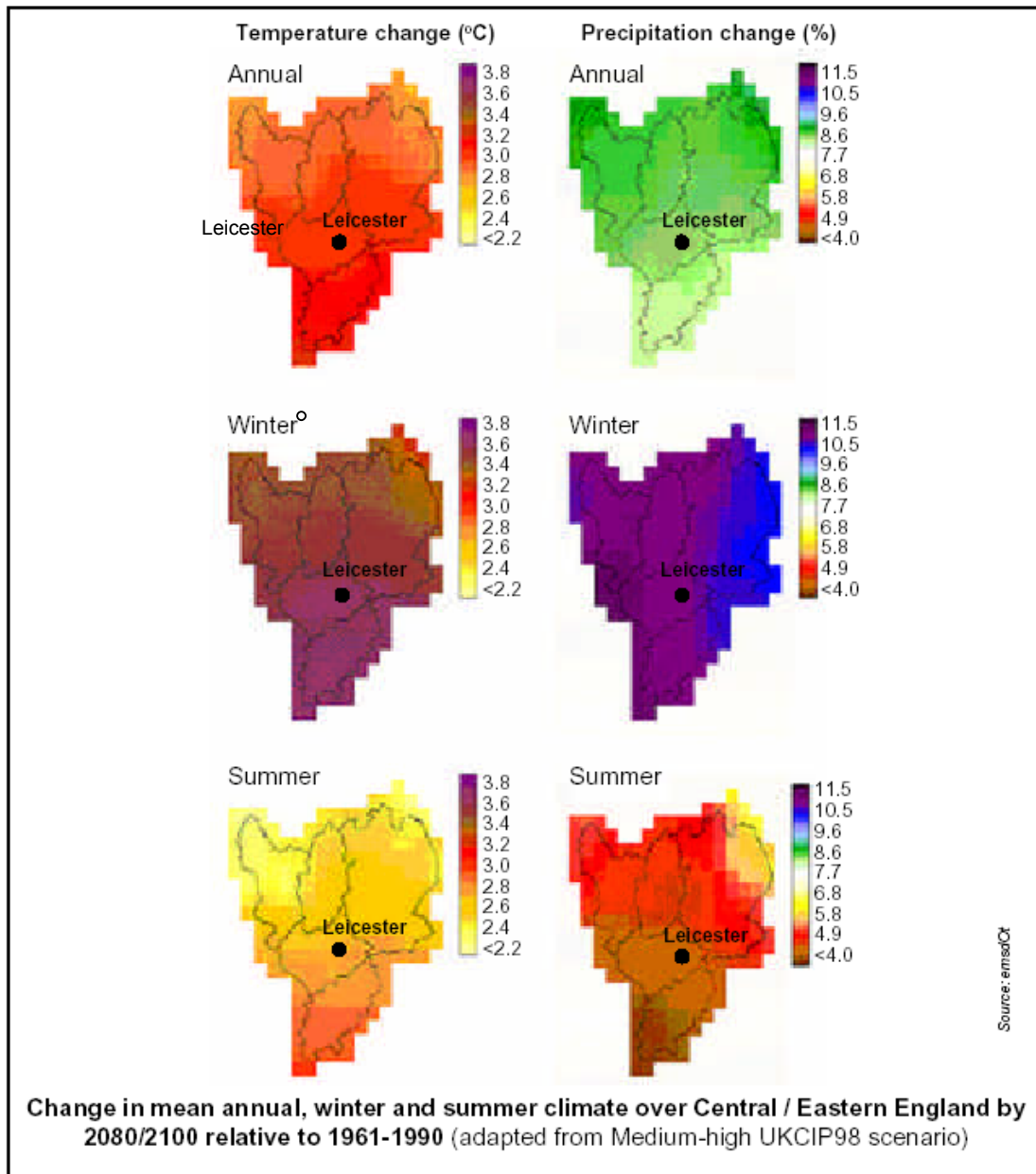
Climate change

Climate Change is caused by the release of "greenhouse gases" into the atmosphere". The International agreement reached at Kyoto led to targets for the reduction of six main greenhouse gases.

The most significant greenhouse gas is carbon dioxide (CO₂) and its contribution to global warming is as much as the other entire human produced greenhouse gases combined. The main source of CO₂ is from the burning of fossil fuels such as coal, gas and oil (including petrol and diesel used in vehicles). The Strategy concentrates on the reduction of energy related CO₂ emissions in Leicester.

Impacts of climate change

Recent scientific research has been carried out that identifies the "Potential Impacts of Climate Change in the East Midlands" (East Midlands Sustainable Development Round Table, 2000). This work has provided valuable information about how the climate in Leicester may change over the next 80 years. The results indicate that people in Leicester should expect a more unpredictable climate in the future. Weather conditions will be more varied and erratic across the year. There will be higher temperatures in summer and milder weather in winter. The annual rainfall for the City is not predicted to change but the pattern of rainfall is. Summers will be drier and winters wetter, with fewer, but heavier bursts of rain. The following diagram gives an indication of how our weather may change by 2080 within the context of the East Midlands Region.



These changes are likely to affect all facets of local life from our businesses, human health and care of our parks and open spaces to what we plant in our gardens and pay for building insurance.

People in Leicester are, in part, responsible for these impacts of climate change through the energy they use in their homes and businesses, the fuel they burn in their vehicles and the waste they produce that ends up in landfill sites. There is consequently a real need for all Leicester people to act, to reduce global greenhouse emissions as well as the need to adapt to the impacts of climate change that are expected to affect Leicester.

Leicester's approach to reducing greenhouse gas emissions

Leicester has a long history of action on environmental issues and has particularly focused on sustainable energy use and identifying the non-energy benefits of energy efficiency and renewable energy policies. In addition, the City has engaged in national and international programmes aimed at reducing carbon dioxide emissions. In the 1990's Leicester was part of the International Cities for Climate Protection network and is currently Vice President of the Energy Cities Network of European Energy and Environmentally conscious cities. Most recently Leicester has become

one of 24 UK local authorities to become part of the Councils for Climate Protection (CCP) Pilot Programme.

Since 1994 Leicester has undertaken actions in many areas such as combined heat and power (CHP) schemes, energy efficiency improvements, renewable energy, municipal energy management, education and training, transportation and waste management.

Our greenhouse gas emissions

One of the key elements of a climate change strategy is to have an accurate assessment of greenhouse gas emissions for a baseline year against which progress can be measured. This enables you to identify the main energy using sectors, set reduction targets and provide a benchmark to measure the effectiveness of actions and programmes adopted and progress towards targets.

As part of the 1994 Leicester Energy Strategy the City Council successfully modelled energy usage in the city from which our emissions could be calculated. This included energy used by transport, in our homes, businesses and through the production of waste. This baseline figure was used to develop the target of a 50% reduction on 1990 levels of CO₂ emissions within the City by 2025.

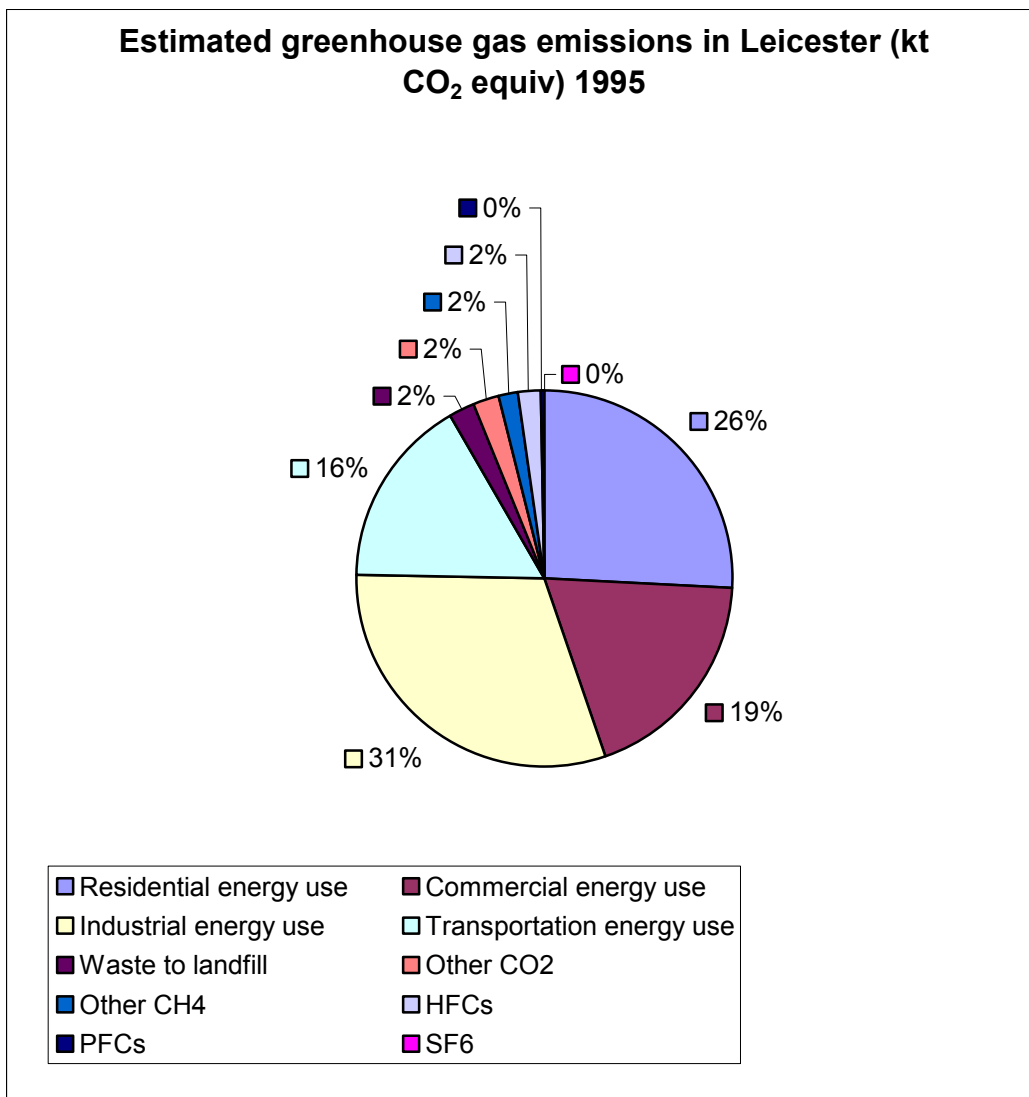
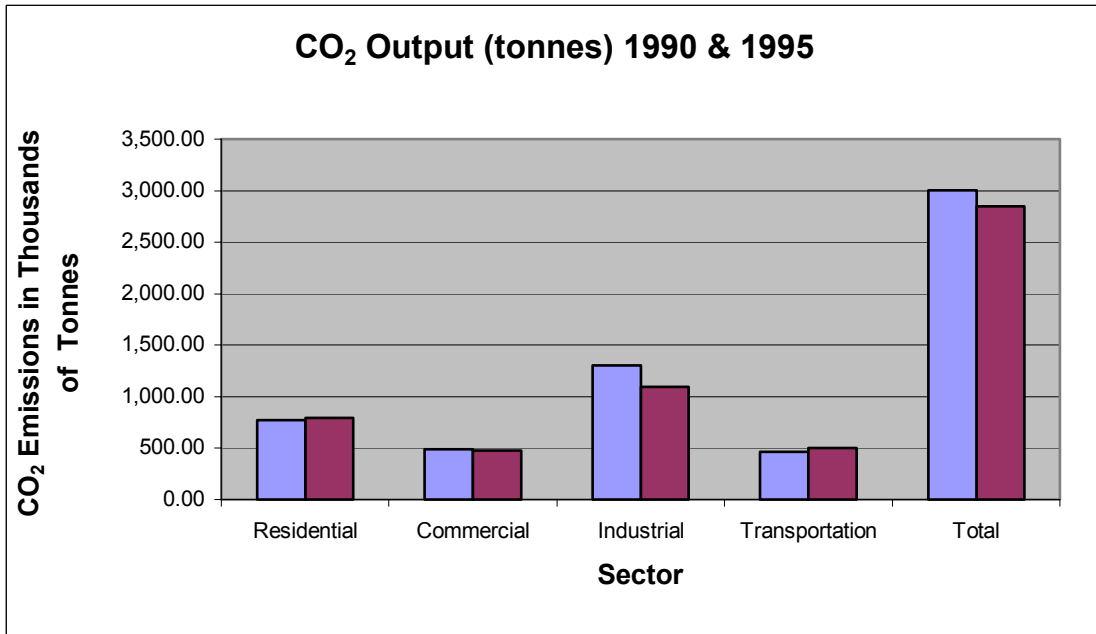
Between 1990 to 1995 the overall energy usage within the City increased by 1,716TJ, representing an increase of 4.8% in energy usage. However the CO₂ emissions have decreased by 154,358 tonnes, a 5.1% decrease on 1990 levels. The increase in energy usage suggests that savings are due primarily to fuel switching, that is the “dash for gas” in the early 1990s. The following diagrams show the progress made by the various sectors between 1990 and 1995 and the breakdown of the sources of the City's greenhouse gas emissions in 1995.

Leicester's target of reducing citywide CO₂ emissions by 50% of 1990 levels by 2025 is equivalent to an average reduction in emissions of 1.4% of 1990 levels each year up to 2025. Whilst we were initially on track to achieve this target the signs are that this is not longer the case. Over the three years of programmes from February 1996 to February 1999 the estimated overall emissions saving is about 1% of Leicester's 1990 CO₂ emissions. Whilst emissions from the industrial sector are declining those from the residential and transport sectors continue to rise

Despite this Leicester continues to make good progress when compared to other cities. In 2001 Leicester was singled out as one of only a handful of cities to be invited to participate in the climate change Best Practice Exchange in Toronto as the City's progress was shown to be comparable to that of some of Europe's leading cities in this area such as Copenhagen, Helsinki, and Berlin.

This Strategy proposes that the target set in the 1994 Energy Strategy, whilst ambitious, is achievable and should be retained. Other leading national and international local authorities have adopted equally challenging targets. A step change in progress in reducing our emissions will be needed and the strategy sets out a way forward to achieve this.

Comparison of Leicester's carbon dioxide (CO₂) emissions in 1990 & 1995



Attitudes and awareness

Leicester has a long history of engaging the public in discussions about energy. For example the city was the first to have a low energy show home (now located at the Eco House at Western Park) and has run major public awareness initiatives. One such initiative was based on 'eco feedback' where householders were invited to take regular electricity and gas meter readings and set targets for weekly electricity and gas consumption.

The Strategy has found that there is still a need to raise awareness and general understanding of the issues surrounding climate change both in terms of how our daily activities contribute towards the problem and how we are likely to be affected by its consequences. This is reinforced by the results of a public survey carried out as part of the research for the Strategy that revealed there is sometimes a gap between people's willingness and their perceived ability to carry out certain climate-change related actions.

The way forward

Leicester now needs to build upon its previous experience to achieve the necessary step change in progress. It is clear that no one individual, group or institution can effect the changes necessary to meet the challenging target put forward in this Strategy. The delivery of emissions reductions needs a partnership approach across the city, with all relevant sectors engaging in taking forward the Action Plan.



St Andrews CHP plant

The Strategy proposes that the single most effective action that the city can take is to establish an Energy Services Company (ESCO) to supply heat and power to homes and businesses in Leicestershire (subject to a favourable feasibility study and sound business plan). An ESCO would be based around the co-generation of both heat and power (combined heat and power plant) - a highly energy efficient approach that is already proven in the City's District Heating Schemes. An ESCO can attract finance for investment in energy efficiency measures and thereby help make our businesses more competitive and combat fuel poverty by reducing energy costs. This action would also help us make significant progress to meet the target of halving the City's 1990 level of carbon dioxide emissions by 2025.

This is supported by a wide range of other actions that will help to further mitigate our emissions. This includes setting a 'Leicester Standard' for new development and building upon our programmes to improve public transport, recycle more of our waste and make our homes more energy efficient.

It is also vital that as a City we are prepared for the impacts that climate change will inevitably bring. There are clear signs that some of these impacts are already having an effect on aspects of our life and the council's services. Our businesses, organisations and residents need to be aware of these impacts so that we can adapt in a way that supports the well-being of the City.