

# NHS Executive Summary

## Background

The NHS has produced an NHS England Carbon Reduction Strategy for consultation as part of a broader sustainable development agenda.<sup>1</sup>

To support and inform this process, the Sustainable Development Commission (SDC) has completed a carbon footprinting study covering all NHS England activities.

The carbon footprinting report summarises NHS England carbon dioxide (CO<sub>2</sub>) emissions for the years 1992-2004 in three primary sectors - travel, building energy use and procurement - and their associated sub-sectors.

## Aims

The study and report aim to help prioritise key action areas in the NHS England Carbon Reduction Strategy, and to provide an evidence base for future NHS England carbon management.

## Key findings

The key findings and conclusions of the study are:

1. NHS England's carbon footprint for 2004 was estimated to be **18.61 MtCO<sub>2</sub>**, which represents 25% of England's public sector emissions.
2. We can quantify potential CO<sub>2</sub> reduction targets for NHS England in line with those currently laid out by Government. Starting from 1992 baseline emissions of 16.47MtCO<sub>2</sub> (compared to national emissions targets baseline year of 1990), NHS England would have to limit its emissions as follows:

- 26-32% reduction by 2020: NHS England emissions limit = 11.20-12.20 MtCO<sub>2</sub>
- 60% reduction by 2050: NHS England emissions limit = 6.58 MtCO<sub>2</sub>

3. **The carbon footprint increased by 12% from 1992-2004.** Within this overall period, carbon emissions fell by 5% from 1992-1998, but then rose by 18% from 1998-2004. The key reason was that expenditure in this period outpaced any improvements in energy efficiency, carbon intensity or improved sustainable practices. This resulted in a 3% per year rise in emissions in the latter period.
4. Procurement forms 60% of the emissions for which NHS England is responsible; within the procurement sector pharmaceuticals are the largest sub-sector, making up 22% of total emissions. This is equivalent to either travel or building energy use emissions.
5. Further analysis was carried out into the origins of carbon emissions from the pharmaceuticals industry. This identified that 80% of emissions are directly from the pharmaceutical industry and are mainly due to the energy used in manufacturing plants. It follows that the priority for these industries would be to reduce emissions from energy use in their own manufacturing processes, rather than 'external' areas such as transportation or suppliers.
6. There are significant differences in the carbon intensities (tCO<sub>2</sub>/£) of both pharmaceutical and medical equipment items according to world region of production. The data suggests that whilst purchase of goods from non-OECD countries can be beneficial in economic terms, they may be less attractive on a carbon basis.

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<sup>1</sup> *Saving Carbon, Improving Health* A draft carbon reduction strategy for the NHS in England. NHS England (2008) [www.sdu.nhs.uk](http://www.sdu.nhs.uk)

7. In the travel sector, the majority (60%) of emissions are those from patients/visitors, with NHS travel (e.g. commuting, business and Patient Travel Services travel) accounting for the remaining 40% of travel emissions.
8. Electricity makes up 55% of overall emissions in the building energy sector, with on-site emissions from heating/hot water consumption forming the other 45%. Gas use is estimated to cause 90% of heating/hot water sub-sector emissions.

### Recommendations

We have identified a number of recommendations to NHS England to take action on carbon emissions:

1. NHS England should base its carbon reduction strategy on this carbon footprinting report, and work to develop an ambitious programme of action to cut emissions.
2. NHS England should set a challenging 2020 emissions target in its carbon reduction strategy, and outline policy interventions which will have a real impact on emissions.
3. Within procurement, there should be a focus on the sub-sectors with the largest carbon impacts. Examples of areas of study for the NHS could include:
  - Pharmaceuticals: Examine usage/wastage of pharmaceuticals; work with key manufacturers on lowering emissions; study the carbon intensities (kgCO<sub>2</sub>/£) by world region for generic and R&D based medicines; investigate alternative models of care which may be less drug intensive.

- Medical equipment: Investigate the breakdown of consumption by category – for example assessing the carbon impacts of use of single use items and their alternatives
4. Future input data to the carbon modelling work should be strengthened by:
    - Making mandatory the requirement for building energy use data to be captured via the ERIC system across all NHS England organisations. This could include a requirement for sub-metering to understand consumption patterns, which is important given the 30% increase in building energy emissions between 1998-2004.
    - Requiring annual travel surveys to be conducted across its operations. This would be a very useful tool in helping to compare to the National Travel Survey data, and thus provide more accurate input data
  5. To help assess effective measures which deliver real and achievable carbon reductions, we recommend that a carbon scenario modelling tool is developed, which is similar in principle to that developed for DCSF.<sup>2</sup>

By comparing baseline emissions (i.e. a Business-As-Usual emissions scenario) to 2020 against a desired reduction trajectory, the effect of policies in the strategy can be examined. The quantification of the effect of policies in terms of carbon reduction potential will be a powerful tool in the NHS strategy.

<sup>2</sup> *Saving Carbon, Improving Health* A draft carbon reduction strategy for the NHS in England. NHS England (2008) [www.sdu.nhs.uk](http://www.sdu.nhs.uk)

6. NHS England should work to develop a bottom-up carbon measurement tool, which will enable NHS Trusts and organisations to understand their own carbon footprint, including travel, procurement and building energy emissions, and then develop carbon management techniques to reduce these emissions.