

NHS England and NHS Improvement Board meetings held in common

Paper Title:	Delivering a Net Zero NHS
Agenda item:	4 (Public session)
Report by:	Dr Nick Watts, Chair, NHS Net Zero Expert Panel (and from 26 October, NHS Chief Sustainability Officer) Ian Dodge, Sponsoring National Director, Primary Care, Community Services and Strategy
Paper type:	For decision

Action required:

The Boards are asked to consider the report of the NHS Net Zero Expert Panel commissioned in January by Sir Simon Stevens, and to endorse the goals outlined in the paper.

Summary/recommendation:

Informed by a responses to an international call for evidence, evidence from the NHS Net Zero Expert Panel, and analysis conducted by NHS England and Improvement and international technical experts, it is recommended that currently credible stretch dates for the NHS to achieve net zero emissions are:

- for the *NHS Carbon Footprint*, net zero by 2040, with an 80% reduction by 2028-2032, and
- for what we define as the *NHS Carbon Footprint Plus*, which includes our wider supply chain, net zero by 2045, with an 80% reduction by 2036-2039.

The Board is invited to endorse the report's recommendations. The full report provides the basis for engagement over the next six months, prior to the UK Government hosting the UN Climate Change Conference in 2021 (COP 26). Our Greener NHS programme is now being scaled up to drive these goals. Dr Nick Watts has been appointed as the NHS Chief Sustainability Officer.

Introduction

1. The climate emergency is also a health emergency. Cutting carbon emissions will save lives, from reduced air pollution, increased physical activity and better diet. The NHS in England is responsible for around 4% of England's carbon footprint. It has the opportunity and obligation to tackle climate change and improve health.

Progress against our Climate Change Act obligations

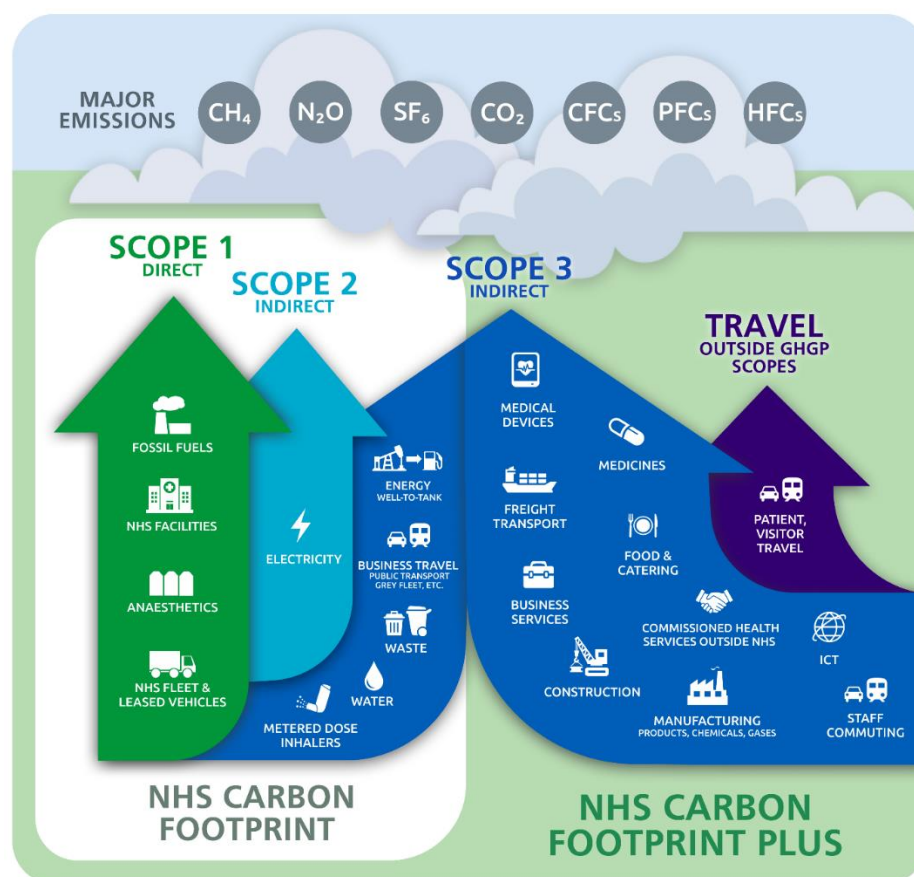
2. To allow comparison against its Climate Change Act targets, a full review of the NHS's carbon footprint has been conducted. Two scopes were considered (Figure 1):

- **NHS Carbon Footprint.** It covers the emissions under NHS direct control. These include on-site and off-site sources, and emissions from purchasing of energy (Greenhouse Gas Protocol Scopes 1 and 2, with parts of 3 in our direct control). Of the two scopes, it most closely approximates our commitments and legal responsibility under the Act.
- **NHS Carbon Footprint Plus.** This adds all emissions from our supply chain and those which are induced by the health service (e.g. patient and visitor travel), and includes all three Scopes including some emissions that are out-of-scope.

NHS emissions since 1990

Carbon Footprint Scope	1990	2010	2015	2019	2020 (est.)
Climate Change Act - Carbon Budget		25%	31%		37%
NHS Carbon Footprint (MtCO _{2e})	16.2	8.7	7.4	6.1	6.1
NHS Carbon Footprint as a % reduction on 1990		46%	54%	62%	62%
NHS Carbon Footprint Plus (MtCO _{2e})	33.8	28.1	27.3	25.0	24.9
NHS Carbon Footprint Plus as a % reduction on 1990		17%	19%	26%	26%

Figure 1. GHGP Scopes in context of the NHS Carbon Footprint



3. **Against a 1990 baseline, the NHS has achieved an estimated 62% reduction by 2020 of the *NHS Carbon Footprint*.** It represents a major achievement by staff across the NHS over the last 30 years.
4. The updated baseline for the more ambitious *NHS Carbon Footprint Plus*, covering emissions beyond the NHS' direct control, demonstrates a 26% reduction over the same period.
5. An independent review by the Lancet Countdown confirms that the carbon footprint methodology used by the NHS "remains the most comprehensive, and sophisticated of any health system to-date".
6. The response to COVID will have short and long-term effects on the carbon footprint, e.g. energy consumption, single-use items, and travel. When data are available, these will be factored into future modelling. Synergies exist between climate change adaptation and future pandemic preparedness, e.g. the provision of remote healthcare.

The NHS Net Zero Process and Expert Panel

7. At the request of Sir Simon Stevens, NHSE/I established a NHS Net Zero Expert Panel to advise on the earliest possible, credible date to achieve net zero. Chaired by Dr Nick Watts, its membership is listed at annex A.
8. A detailed analysis of the potential interventions has been undertaken, with modelled trajectories. 650 submissions, received from patients, staff, and stakeholders were analysed. The conclusions of this work are attached in the report at annex B.
9. The categories of interventions include:

High quality, sustainable care	<ul style="list-style-type: none"> • Optimise the location of care, with more remote consultations • Transform care models
Medicines	<ul style="list-style-type: none"> • Reduce emissions from inhalers • Reduce emissions from two anaesthetic gases- nitrous oxide and desflurane- by switching to other anaesthetic gases where clinically appropriate, reducing waste, and promoting re-capture
Supply chain	<ul style="list-style-type: none"> • Reduce unnecessary waste • Substitute products for low-carbon alternatives where possible • Work with our suppliers to ensure that all of them meet or exceed our commitment to net zero before the end of the decade
Estate and facilities	<ul style="list-style-type: none"> • Support the construction of 40 new 'net zero hospitals', that are digitally flexible to enable the delivery of future models of care, with a new Net Zero Carbon Hospital Standard • Fully phase out all primary heating from coal and oil fuel • Install renewable energy generation and low-carbon heat supply technologies across the estate
Travel and transport	<ul style="list-style-type: none"> • Work towards a zero-emissions emergency ambulance for the UK, with testing by 2022 • Build on the LTP commitments of seeing 90% of the NHS fleet be low-emission vehicles by 2028, and explore the feasibility of a complete transition to zero-emission vehicles by 2032. • In line with 2020/21 guidance, only low- or ultra-low emission vehicles will be considered for all new purchases and leases
Food and catering	<ul style="list-style-type: none"> • Increase the proportion of healthy produce provided on NHS sites, with a view to improving health and nutrition, and decreasing emissions
Workforce	<ul style="list-style-type: none"> • Increase staff engagement, with tackling climate change a core value within the NHS constitution • Include stronger focus within training and education programmes
Governance	<ul style="list-style-type: none"> • All NHS organisations to have a board-level executive lead for net zero • All providers to produce a Green Plan, for approval by its Board, with annual summary of progress towards net zero • Establish the Greener NHS programme to drive and be accountable for delivery

10. The analysis has concluded that currently credible, but ambitious targets for the *NHS Carbon Footprint*, would be net zero by 2040, with an ambition for an interim 80% reduction by 2028-2032, and for what we define as the *NHS Carbon Footprint Plus*, which includes our wider supply chain, net zero by 2045, with an ambition for an interim 80% reduction by 2036-2039 (Figures 2 and 3).

Figure 2. The pathway to net zero for the NHS Carbon Footprint Scope

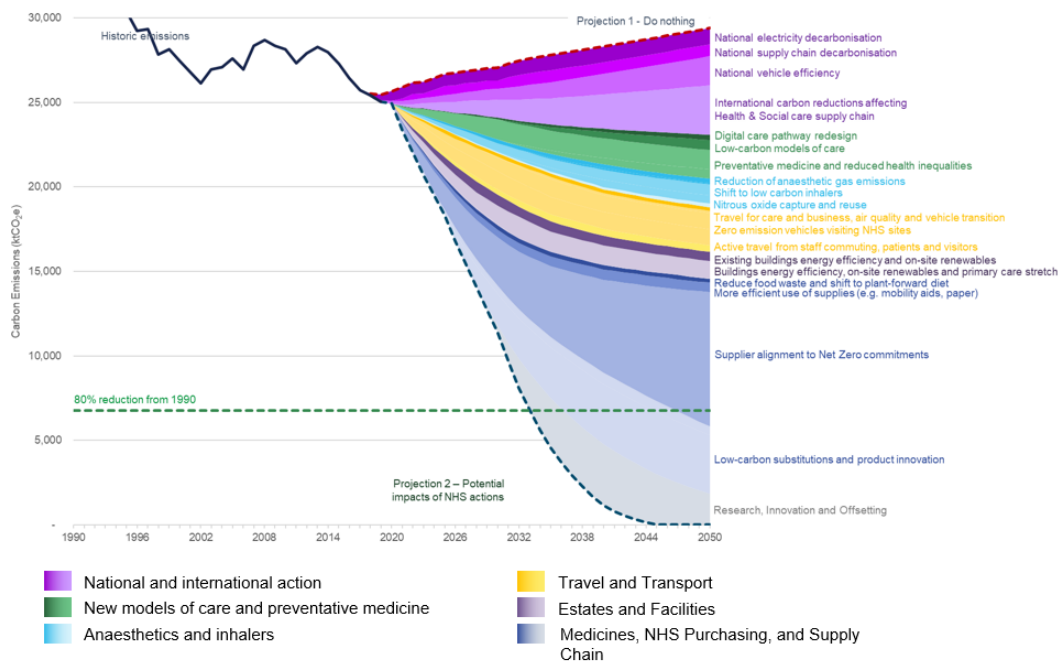
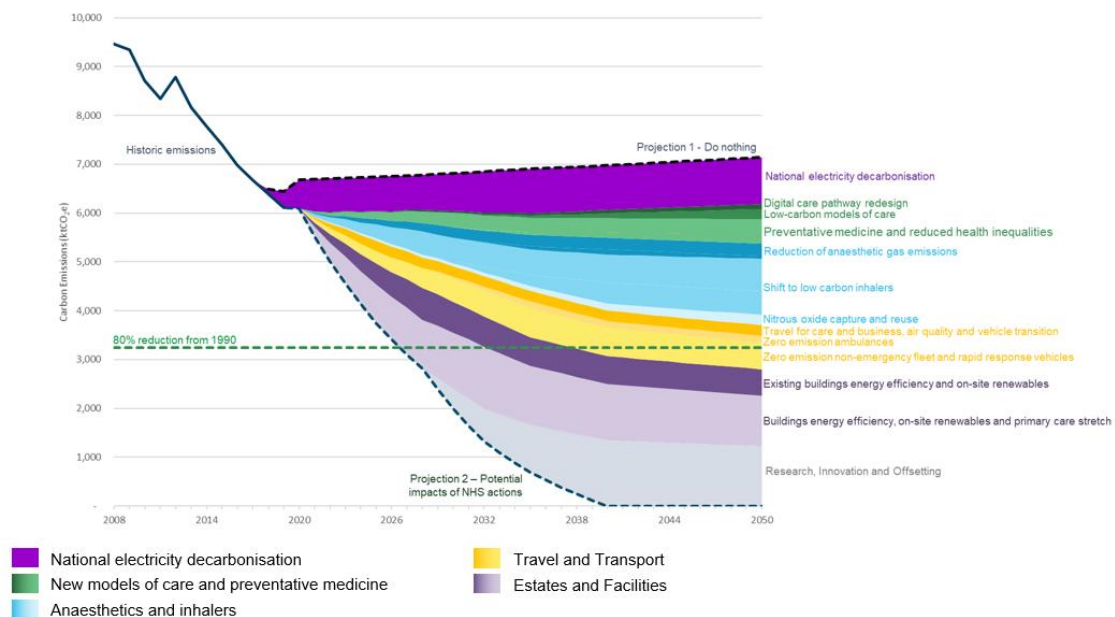


Figure 3. The pathway to net zero for the NHS Carbon Footprint Plus Scope



11. Investment, particularly capital, will be required. The Long Term Plan made commitments on sustainability, for instance LED lighting and smart energy management in 2020/21. The net zero ambitions described in the report necessarily operate on a longer timeframe. Aligning financial policy and decision-making processes will be essential for delivery. A review of best practice from other sectors will be conducted, including options such as internal carbon fees to deliver emissions reductions.
12. In addition to reporting annually, we propose fundamental reviews every five years to revise interventions in light of new evidence and learning - including from wider Governmental action. If feasible, we will make targets more ambitious over time.
13. With the UK Government hosting the UN Climate Change Conference (COP26) in 2021, the NHS is well-placed to finalise its contribution. We will:
 - continue to update and advance our analysis
 - work with Government and the full range of NHS organisations to explore the resources available to deliver a net zero health service;
 - publish our 3rd Health and Social Care Sector Climate Change Adaptation Report, outlining how the health service will become more resilient, as well as the synergies between our mitigation and adaptation efforts;
 - expand our national campaign *For a Greener NHS* to engage with our staff and patients, and to ensure that the health service's commitments on climate change and net zero are clear to the world
 - develop delivery plans during 2021
14. Our report marks a significant moment in the NHS journey towards net zero. It also provides the basis for major ongoing engagement over the next six months with key stakeholders, as we continue to firm up the specific interventions and their phasing, prior to COP26, and always with a view to increasing ambition over time.

Annex A. – NHS Net Zero Expert Panel

Member	Affiliation
Dr Nick Watts (Chair)	Executive Director, The Lancet Countdown on Health and Climate Change
Preeya Bailie	Director of Procurement Transformation & Commercial Delivery, NHS England and NHS Improvement
Kay Boycott	CEO, Asthma UK and British Lung Foundation Partnership
Dr Isobel Braithwaite	Public Health Registrar and Academic Clinical Fellow, University College London
Professor Paul Cosford	Emeritus Medical Director, Public Health England
Dame Jackie Daniel	Chief Executive, Newcastle upon Tyne Hospitals NHS Foundation Trust
Professor Mike Davies	Professor of Buildings Physics and the Environment, Bartlett School of Environment, Energy & Resources, University College London
Ian Dodge	National Director, Primary Care, Community Services and Strategy, NHS England and NHS Improvement
Professor Piers Forster	Professor of Climate Physics, University of Leeds
Dr Fiona Godlee	Editor in Chief, British Medical Journal
Sara Gorton	Head of Health, UNISON
Professor Hilary Graham	Professor of Health Sciences at the University of York
Prerana Issar	Chief People Officer, NHS England and NHS Improvement
Richard Murray	CEO, The Kings Fund
Professor Donal O'Donoghue	Registrar, Royal College of Physicians
Sonia Roschnik	International Climate Policy Director, Health Care Without Harm
Professor Harry Rutter	Professor of Global Public Health, University of Bath
Professor Emily Shuckburgh	Director of Cambridge Zero, University of Cambridge
Dr Richard Smith	Chair, UK Health Alliance on Climate Change
Professor Helen Stokes-Lampard	Chair, Academy of Royal Medical Colleges
Dr Madeleine Thomson	Interim Head, Our Planet, Our Health, the Wellcome Trust
Dr Matthew Tulley	Director of Built Environment, Imperial College Healthcare NHS Trust