

SSAC NHS DECARBONISATION SCOPING AGREEMENT

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Project Overview

NHS Scotland needs to decarbonise to address its significant contribution to climate change and to safeguard public health. As one of the largest public sector organisations in the country, the NHS Scotland is responsible for substantial carbon emissions through its energy use, transport, procurement, and clinical practices. Decarbonising NHS Scotland will align with national net zero targets, and its core mission of promoting health and wellbeing. There is also significant scope for reducing operational costs in the long term, therefore contributing to its resilience.

NHS Scotland has advanced its thinking on decarbonisation pathways. The “NHS Scotland Climate Emergency and Sustainability Strategy: 2022-2026” sets out plans for NHS Scotland to reduce its greenhouse gas emissions and impact on the environment, adapt to climate change and to better contribute to the United Nation sustainable development goals. Annual Climate Emergency and Sustainability reports record emissions. However, internally, there is uncertainty amongst members of the Climate Emergency and Sustainability Board around the directionality of some elements of NHS Scotland’s decarbonisation pathway due to the pace of change in relation to technological solutions. Some concerns were raised around the benefits of electric vehicles relative to internal combustion engines and what consideration should be given to hydrogen, both for transport and buildings.

NHS Scotland plans its infrastructure development on a long-term basis, and decarbonisation will be large scale and contingent on financial stability/availability. Therefore, NHS Scotland are seeking independent advice in relation to its decarbonisation pathway. This project will explore state-of-the-art evidence to inform a decision on the extent to which NHS Scotland should consider use of hydrogen across transport and buildings compared with other technologies, and across the diverse contexts and conditions in which it operates. This includes attention to the central question of “how likely is it that hydrogen is going to be economically/scientifically viable for NHS Scotland operations”?

Aims and Objectives

The project may consider:

- Vehicle fleet decarbonisation including concerns for non-exhaust particle emissions and the practicality of electric vehicles in remote and rural locations.
- The relative potential of hydrogen or other technologies for the NHS Scotland estate, potentially including but not limited to:
 - Interim solutions for buildings in need of replacement heating e.g., hydrogen-ready systems;
 - The feasibility of hydrogen transport and safety during its distribution,
 - Cooling requirements (with simultaneous heat pumps being a technology which is already being considered within NHS Scotland);

- Infrastructure depreciation and maintenance costs;
- Contingencies around electricity network capacity;
- A flexible, place-based roll out including across the highly diverse building estate.

Project Relevance

The project aligns with previous and ongoing work e.g., the 2022 SSAC hydrogen report and ongoing energy demand flexibility project. It is likely to reflect on there not being a one size fits all approach to this, but rather a flexible, place based roll out.

Note: This project will exclude consideration of the emissions related to materials used in the NHS. We acknowledge the ongoing work by the NHS itself on the circular economy.

Methodology

- An SSAC Working Group (WG) has been established and is meeting fortnightly to discuss an initial horizon scanning exercise to explore existing Scottish Government materials and documentation in the public domain.
- The above will also include desk-based research on topics including the characterisation of NHS sites, grid capacity at sites and possible alternatives. There will also be case study deep dives of 2 to 3 sites as well as learning gathered from outside Scotland.
- Informed by the horizon scanning and desk-based research, a questionnaire will be developed along with a list of key stakeholders from industry, academia and the wider public sector.
- The questionnaire will inform a roundtable discussion and 1-2-1 interviews with key stakeholders.
- The Working Group will use the outputs of the above to produce a report for Scottish Government on the considerations listed above.

Timeline

- Create working group – 2 weeks
- Desk-based research (background) – 6 weeks
- Desk-based research (site typology) – 4 weeks
- Desk-based research (comparators) – 4 weeks
- Questionnaire / roundtable – 6 weeks
- Write-up – 5 weeks