



Coolnomix Report

National Health Service (NHS) in
England

Report compiled by David Groves



**‘I’m sold on Coolnomix,
I need no further convincing!’**



Tom Stewart

Net Zero Carbon Technical Innovations Manager
NHS England

Annual Savings so far across NHS England



18,599.6 kWh
representing a reduction
of 22% per year in
energy consumption



5,226.49kg
or
5.2 tonnes



Financial Saving
of **£6509.86**

Coolnomix®

Reduce the energy consumption of your air-conditioning and refrigeration without affecting the output you need. Our technology is maintenance free and can be easily installed by our qualified engineers with no disruption to your operation

We keep your people, equipment and produce cool, and your energy budget from overheating

About

The National Health Service (NHS) in England was established with the National Health Service Act of 1946, and came into effect on 5th July 1948. The founding principles of the NHS were that services should be comprehensive, universal and free at the point of use for residents of the United Kingdom.

The NHS across the United Kingdom sees one million patients every 24 hours and with 1.7 million staff, it is the fifth largest employer in the world, as well as being the largest non-military public organisation in the world.

Overview

Emissis and a number of NHS Sites across England agreed to run a pilot trial, installing Coolnomix on several Air Conditioning and refrigeration units. These units were installed at: NHS North Devon, NHS Broomfield, NHS Hull and NHS North Tees, along with a new pilot beginning at NHS Huddersfield at the end of September

Trial

In order to accurately measure the kWh consumption of these units, smart meters were connected to the system compressor of the Air Conditioning units and the external condensers of the refrigeration units

These readings are downloaded in half hourly segments and analysed either four hourly or daily and are available upon request

The units were installed and activated across a number of months in 2022, set to run in weekly cycles of Coolnomix OFF followed by Coolnomix ON for 4 weeks or 28 days in total



Conclusion

The pilot accurately confirms energy savings for kWh and CO2 reductions with Coolnomix installed on the AC and refrigeration units. The financial savings have been based on an electricity supply cost of 0.35p per kWh. With average electricity prices set to rise beyond 0.40p per kWh over the next few months and with further inflation forecast over the coming years the savings model and Coolnomix payback period will only improve.

Spread over an AC and refrigeration estate across NHS England, consisting of 100 suitable units, the annual benefits of installing Coolnomix based on the pilot results will be as follows:-

Energy Reduction & Savings Forecast (based on 100 Coolnomix units installations)

Year 1

kWh (based on an average of 3.18 kWh per day) = 116,247.48 kWh per year
CO2 saving = 32,665.54kg or 32 tonnes
Financial savings = £40,686.62

After 5 years

kWh = potentially over 580,000 kWh hours saved
CO2 = 160+ tonnes saved
Financial savings = £200,000+ saved

After 10 years

kWh = potentially over 1.1 million kWh saved
CO2 = 320+ tonnes saved
Financial savings = £400,000+ saved

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