

Humber and North Yorkshire
Health and Care Partnership

Dr Matt Sawyer



See Sustainability

Decarbonising general practice - Energy

Your guide to a net-zero
action plan for non-clinical
emissions



**Humber and
North Yorkshire**
Integrated Care Board (ICB)



Humber and North Yorkshire
Health and Care Partnership

Energy



Your energy footprint

Energy is used for space and water heating and electrical equipment, lighting etc. Energy often has a high financial and carbon emissions cost for a practice.

Do you want to save money, energy or carbon? You can do all three simultaneously!

$$\text{£260} = 233 \text{ kg CO}_2\text{e}^* = 1\text{MWh electricity}^{**}$$

Reductions in use can be achieved through behaviour change and technological advances.

A recent survey of GPs revealed the majority were *more* interested in reducing their carbon emissions than reducing their expenditure.

CO₂

Energy use contributes to around 25% of the non clinical carbon emissions from primary care.

In 2020, primary care emitted 250,000 tonnes of greenhouse gases through energy use.



How much does our practice spend?

An annual electricity bill of £6,000 is equal to emissions of **over 5 tonnes** of CO₂e each year.

Why address your energy footprint?

1. It offers huge financial opportunities – up to 25% savings on energy bills in the first 1-2 years.
2. Energy often has the highest non-clinical emissions footprint
3. It is the easiest way to have a big impact on carbon emissions
4. Reporting of energy use and greenhouse gases emissions is **mandatory** for companies with more than 250 employee. More information is available [here](#).

Energy hierarchy triangle

The Energy Hierarchy triangle is a classification of energy options with the most sustainable at the top.

Following the hierarchy approach helps to reduce the environmental impact of the energy use of the practice.

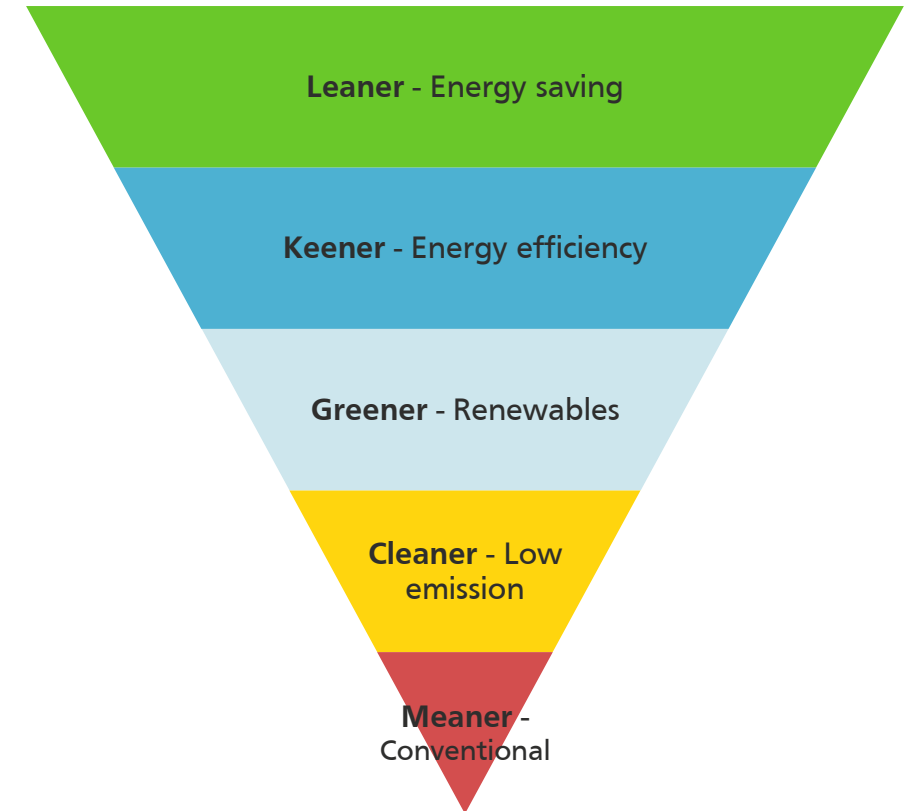
Leaner – The top priority under the Energy Hierarchy is energy conservation or the prevention of unnecessary use of energy. **The cheapest unit of energy is the unit of energy you don't use.**

Keener – The second priority is to ensure the energy that is **used is consumed efficiently.**

Greener – Thirdly, **BUY Green.** The energy that is used is from a renewable energy source. This describes naturally occurring, theoretically inexhaustible sources of energy e.g., 'elemental energy' from the sun, wind, wave, tide or rain (hydropower).

Cleaner – Fourthly, low impact energy production such as nuclear or fossil fuel with carbon capture and storage (not available at scale currently).

Meaner – Finally, energy production using unsustainable sources, such as unabated burning of fossil fuels.



Top actions you can take

1. Understand your current energy use better:

- Carry out an energy audit.
- Install a smart meter for better monitoring.

2. Make a plan and incorporate the energy hierarchy:

- Making every kWh count: Investing in no-regrets energy saving measures
- Preparing buildings for electricity-led heating: Upgrading building fabric
- Switching to non-fossil fuel heating: Investing in innovative new energy sources
- Increasing on-site renewables: Investing in on-site generation



What is your current energy usage?

Knowing the current energy use (gas and electricity) and identifying heavy users or wasted energy can help put plans in place to reduce use and bills.

How to monitor and measure

- Carry out an Energy audit (see box)
- Interrogate your bills for your annual gas and electricity use
- Calculate your practice floor print
- Use your practice floor print to work out energy per m²
- Compare your results to RIBAs 2030 Climate Challenge figures (see [RIBA targets for energy use](#))

Energy audit

1. Record the floor space of the practice
2. Use the bills to identify total use/expenditure
3. Identify equipment for heating and cooling (air conditioning, room heaters, fridges etc)
4. Measure the energy use of the equipment
5. Identify air leaks around doors, windows
6. Measure loft insulation
7. Identify type of windows (double glazed, single glazed)
8. Check lighting and other appliances



Plug in energy monitors can help understand the energy use of different pieces of equipment. Measure heating and cooling equipment first.

Find monitoring tools [here](#).

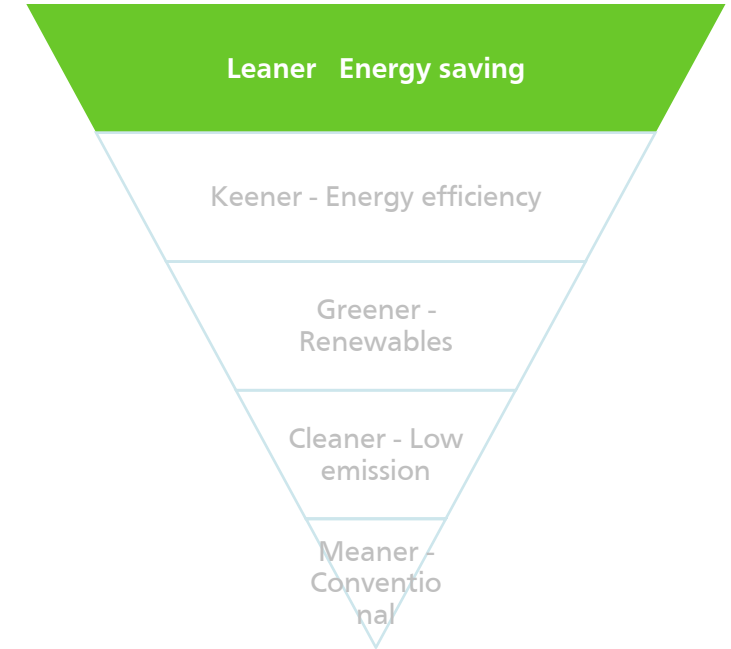
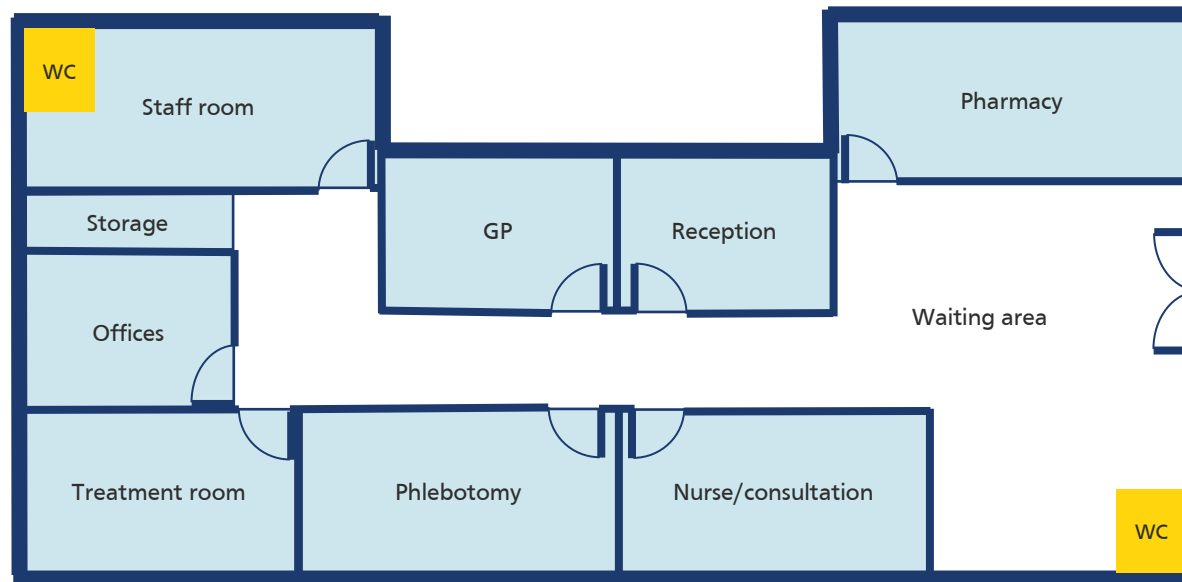
| Energy | Current annual use (kWh) | Annual expenditure (£) | Practice floor print (m ²) | Current benchmark (kWh/m ²) OR (£/m ²) |
|-------------|--------------------------|------------------------|----------------------------------------|----------------------------------------------------------------|
| Gas | | | | |
| Electricity | | | | |

Step 1: Energy saving

Reduce energy use through behaviour change

General Practice Energy Management Floorplan

This energy management floorplan can be used as a guide for ensuring that all rooms/areas have the correct energy saving options available. Sites can apply this as practically as possible, noting different estates types may allow for different solutions.



Treatment and phlebotomy rooms

- Ensure computers and printers/peripherals are switched off every night eliminating standby settings
- Set all PC monitors to go to sleep after 5 or 10 minutes of inactivity - a third of a PC's energy is used by the monitor.
- Use thermostats on radiators to control room temperatures

GP and nurse consulting rooms

- Close doors and window where possible
- Avoid electric heater as they can affect thermostats
- Reducing your PC monitor brightness from 100% to 70% can save up to 20% of the energy the monitor uses.
- Open blinds for natural light

Non-clinical areas

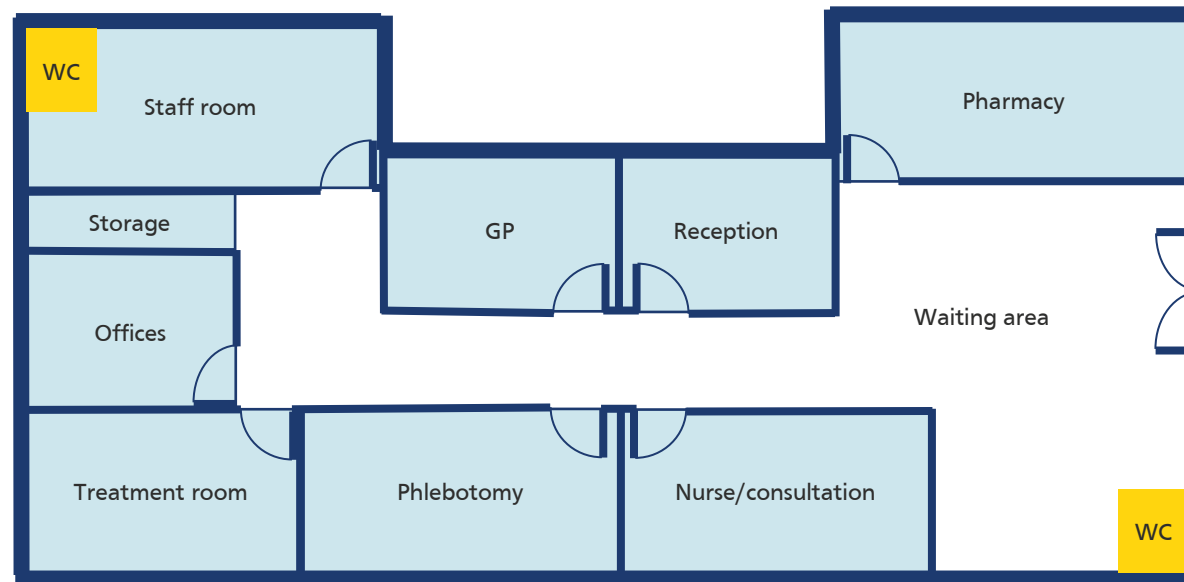
- Consider highest energy efficiency rated appliances within your budget when needing to replace
- Ask staff to only boil as much water is needed in a kettle.
- Use 'on-demand' water heaters instead of kettles

Step 1: Energy saving

Reduce energy use through behaviour change

General Practice Energy Management Floorplan

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Equipment left on stand by can use £10 per year per socket



Case study

One practice asked their clinicians to switch off at the wall as part of their '*Electricity Responsibility Plan*'. The depowering of the rooms decreased the practice electricity consumption by 30%

Outside/Roof space

- Check and upgrade insulation where needed
- Annual maintenance of boilers and electrical items
- Look to improve thermal efficiency of doors and windows
- Prevent heat loss in the winter - Close windows and doors, improve draft exclusion

Shared space/corridors

- Turn the thermostat down 1°C saves 8% in heating costs
- Lights on timers e.g., automatically off overnight
- When replacing equipment choose the highest energy efficiency ratings available

Longer term

Plan to replace a boiler with an air source heat pump in your action plan.

Step 2: Energy efficiency

Reduce energy use through by increasing energy efficiency.

E.g., improved fabric efficiency, upgrades to lighting and cooling equipment, controls and metering.

Short-term investments in technology:

- Examine the current insulation – is it sufficient? The [National Insulation Association](#) can help.
- Is the thermal efficiency of windows enough? Do they feel cold? Are they double glazed?
- Heating – are there thermostats to control individual room temperatures? There is evidence that multizone control can drive higher savings.
- Can you use an 'On demand' water heaters instead of kettles for hot water?
- Water softening: Build-up of limescale in a central heating system due to hard water can reduce the efficiency of heating systems. Practices can include measures for water softening.

Electricity use

Computers & printers

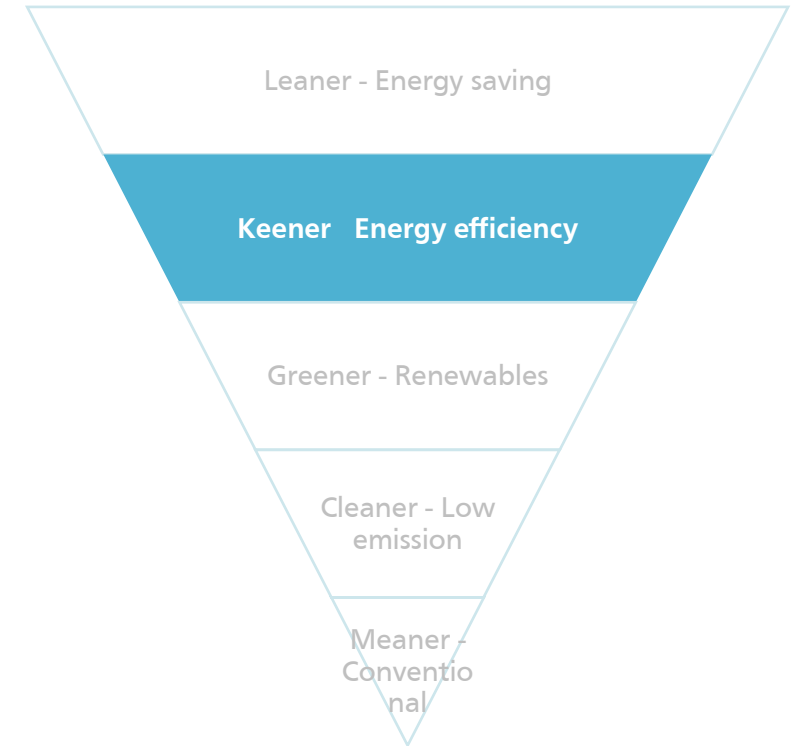
- Put computers, printers and chargers on powerbanks can be turned off remotely or on a timer every night. Best buy reviews are [here](#), [here](#) and [here](#)

Lighting

- Movement sensors, occupancy-controlled lighting, automatic light sensors
- Lights on timers e.g., automatically off overnight
- Change to LED bulbs

Equipment

- When replacing equipment choose the highest energy efficiency ratings available
- Low energy AAA rated electrical equipment e.g., refrigerators



A twin approach to technology change and behaviour change combine to have the greatest impact.

Step 3: Renewables and low emissions

Switch to a green tariff

Only those that are increasing the amount of green energy provision should be invested in. The others are not actually changing the energy-mix on the grid.

To help reduce the amount of carbon used in the UK, you need to look more closely at your choice of tariff. The only truly carbon reducing tariffs are those that buy renewable energy and the REGOs (renewable energy certificates called Renewable Energy Guarantees of Origin) directly from the companies that generate it. **Greener is not more expensive**, most suppliers now absorb the costs of REGOs.

According to information from Ofgem and research by Which? and the Energy Saving Trust, the greenest tariffs are available from Good Energy, Green Energy UK and Ecotricity.



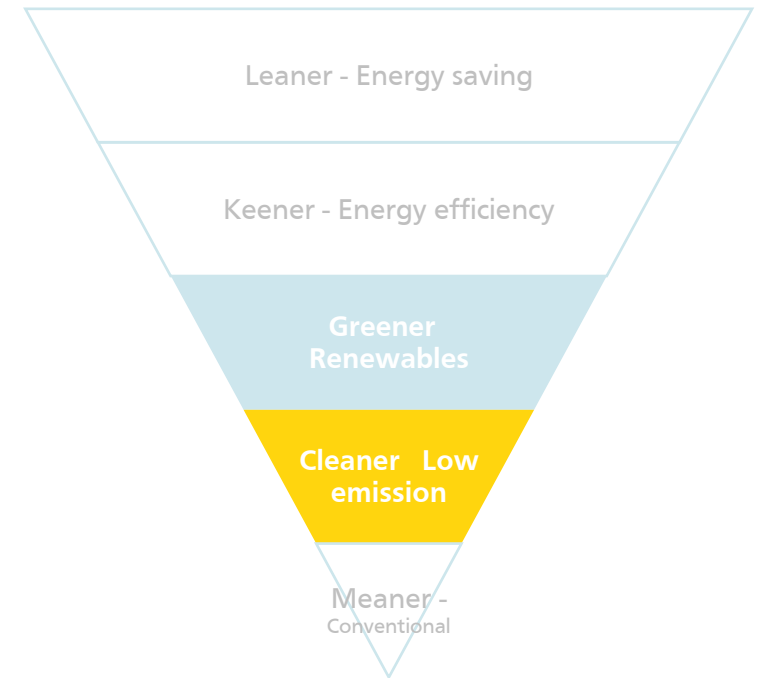
www.ecotricity.co.uk/for-your-business



www.goodenergy.co.uk/business/supply



www.greenenergyuk.com/Business



Switching to a green tariff is easy - look at Good Energy, Ecotricity or Green Energy UK.

Going further: Self generation and heat management

Self generation

Solar panels can be a cost-effective way of converting the natural power of sunshine into electricity or heat. Solar PV generates electricity on site which can be used by the practice, stored for later use or sold back to the grid. Solar Thermal uses sunlight to heat water and offset heating costs. Many UK solar energy manufacturers, suppliers and installers are members of the [Solar Trade Association \(STA\)](#).

Useful information on selling electricity to the grid is available at:

- www.goodenergy.co.uk/business/generation
- www.ecotricity.co.uk/your-green-energy/solar-power-export

Case study Urban practice

Panels installed on a practice generated 1.3 MWh in 2020. The practice pay the owner for what it uses and any excess is sold back to the grid.

The practice know where its electricity is generated, and the carbon emissions are zero.



Heat management

Pre-heating: Where the practice is sufficiently well insulated, it is possible to pre-heat ahead of peak times. This enables access to cheaper tariffs which reflect the reduced costs associated with producing power off-peak and reducing requirements for network reinforcement to manage peak loads.

Smarter heating management and use: A 3-6% reduction in heat demand can be achieved through more informed and smarter management of heating the practice.

Smart meters and real time displays have been found to result in energy savings of around 3%, driven by associated actions such as turning the thermostat down or reducing the amount of time the heating is on.

Case study Urban practice

Unit prices increased in the period studied by approximately 5% and 10%. Despite those increased unit prices, we have been able to reduce the energy bill in real terms by £2,500 ex Vat in the like for like period.

How?

Decrease energy consumption by reducing thermal loss using intelligent building management system. This refines the timings of the heating system to come on based on actual and predicted outside temperatures to reduce overheating the building when isn't being used.

Long-term actions

In 2021, the government consulted on reducing gas use for heating and replacing gas boilers with alternatives from 2025.

Options for future space and water heating includes heat pumps, electric (and infrared) heaters, district heating systems, biomass boilers and possibly hydrogen boilers. The upfront investment tends to be higher, but they can be cheaper to run – especially when combined with electricity storage battery options.

Air source heat pumps are several hundred percent more efficient than gas. There are grant schemes for investing in these. Plan to replace a boiler with a heat or ground source air-pump in your action plan when your gas boiler is in need of replacement. The Heat Pump Association is accessible [here](#).

Practices have different requirements due to size, location etc. It is worth understanding the options prior to the disaster of a boiler breaking down

Some practices may be able to access Salix funding via the [Public Sector Decarbonisation Scheme](#). This is likely to only apply to NHS Trust owned buildings and health centres.



Funding

A new government initiative – the Clean Heat Grant scheme – is scheduled to be available from April 2022.

Current information suggests it will provide some upfront funding, although an up-to-date Energy Performance Certificate (EPC) is likely needed.

Application details and website are not available at the time of going to press but further information available [here](#) and [here](#).

NHS Property services

NHS Property services are responsible for 3,000 properties including some GP premises and health centres.

They state “NHS Property Services will align with the ambitions of the wider NHS, aiming to become net zero carbon by 2050”.

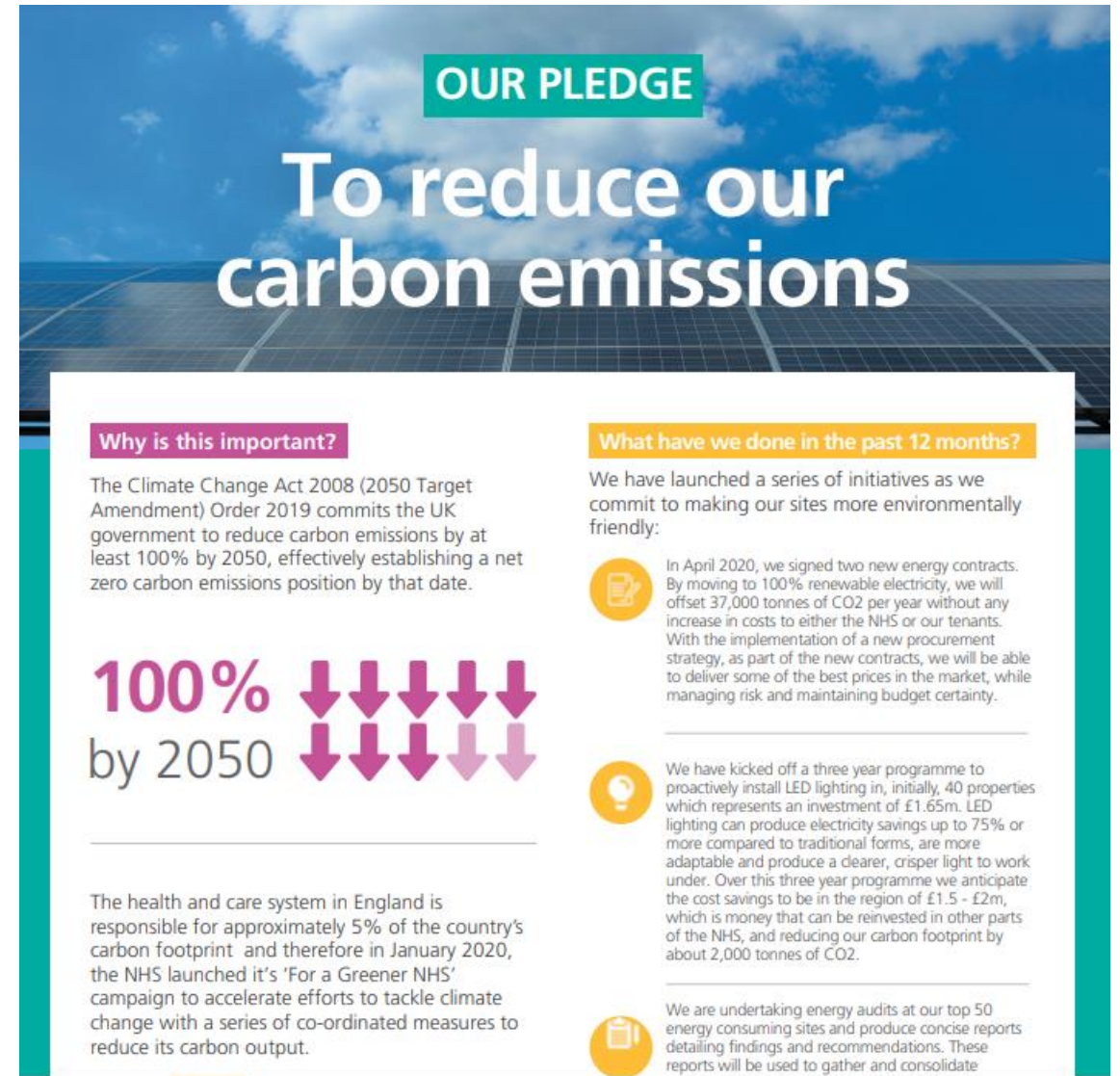
Their environmental sustainability strategy covers

- Carbon,
- Waste,
- Fuel,
- Water, and
- Environmental management.

Their pledges to reduce their carbon emissions are [here](#).

Their webinar on designing and implementing a strategy to achieve the Net Zero goal is [here](#).

Their contact is via www.property.nhs.uk.



OUR PLEDGE

To reduce our carbon emissions

Why is this important?

The Climate Change Act 2008 (2050 Target Amendment) Order 2019 commits the UK government to reduce carbon emissions by at least 100% by 2050, effectively establishing a net zero carbon emissions position by that date.

What have we done in the past 12 months?

We have launched a series of initiatives as we commit to making our sites more environmentally friendly:

- In April 2020, we signed two new energy contracts. By moving to 100% renewable electricity, we will offset 37,000 tonnes of CO2 per year without any increase in costs to either the NHS or our tenants. With the implementation of a new procurement strategy, as part of the new contracts, we will be able to deliver some of the best prices in the market, while managing risk and maintaining budget certainty.
- We have kicked off a three year programme to proactively install LED lighting in, initially, 40 properties which represents an investment of £1.65m. LED lighting can produce electricity savings up to 75% or more compared to traditional forms, are more adaptable and produce a clearer, crisper light to work under. Over this three year programme we anticipate the cost savings to be in the region of £1.5 - £2m, which is money that can be reinvested in other parts of the NHS, and reducing our carbon footprint by about 2,000 tonnes of CO2.
- We are undertaking energy audits at our top 50 energy consuming sites and produce concise reports detailing findings and recommendations. These reports will be used to gather and consolidate

100% by 2050

The health and care system in England is responsible for approximately 5% of the country's carbon footprint and therefore in January 2020, the NHS launched it's 'For a Greener NHS' campaign to accelerate efforts to tackle climate change with a series of co-ordinated measures to reduce its carbon output.

Four step approach to decarbonise the NHS estate

Step 1
Make every kWh count

- Carbon and energy management
- LED lighting
- Building Management Systems
- Space heating
- Ventilation
- Building service distribution systems
- Air conditioning and cooling
- Digitalisation
- Small appliances

Step 2
Prepare buildings for electricity-led heating

- Improve building fabric
- Check EPC rating
- Doors, windows, insulation

Step 3
Switch to non-fossil fuel heating

- Change your energy contract to renewables
- Heat pumps
- Hydrogen boilers
- Hot water

Step 4
Increase onsite renewables

- PV installation

Setting targets



Identify ways to reduce your emissions. Once you have calculated your greenhouse gas emissions, this information can help you reduce your emissions and help identify ways to save you money. Setting an emissions reduction target is one way in which this can be achieved.

Setting targets can help you deliver the strategic changes that are needed to reduce use and carbon emissions.

Regarding energy, a practice can set their own targets to achieve their goal such as:

- 50% energy reduction through energy efficiency savings within 3 years,
- Or, have a 100% carbon reduction in space and water heating by installing an air source heat pump by 2025,
- Or, changing to a 100% green energy tariff for electricity supplier by the end of this financial year.

How to set targets:

1. Carry out an energy audit in the practice
2. Identify energy-saving opportunities
3. Implement energy-saving settings where possible
4. Build a business case for energy-efficient replacements and include the payback period.

| Route to reduce | | Aim/target | | | | | |
|----------------------|-------------------------------------------|-------------------------------|---------------------------------------------------------------------------------|-------------------|------------------------------------------------------|-------------------|----------------------------------------------------|
| Area | Current footprint | 3 years time | | 6 years time | | 9 years time | |
| | | Total % reduction | How | Total % reduction | How | Total % reduction | How |
| Energy – electricity | 200,000 kWh = 46,000 kg CO ₂ e | 25% in use 100% to 'green' | Green team, behaviour change, energy audit Change supplier to 100% renewable | 50% | Install on site generation, more efficient equipment | 75% | Intelligent building management system for heating |
| Gas | 35,000 kWh = 6500 kg CO ₂ e | 20% in use | Improved insulation, reduced losses | 80% | Replace with ASHP/GSHP | 100% | Gas free premises |

RIBA targets for energy use

The RIBA has developed voluntary performance targets for operational energy use, water use and embodied carbon.


These performance targets form the basis of the 2030 Climate Challenge. The performance targets align with the future legislative horizon and set out a challenging but achievable trajectory to realise the significant reductions necessary by 2030 in order to have a realistic prospect of achieving net zero carbon for the whole UK building stock by 2050.

You can use your practice figures for total annual energy use (gas and electric) and surgery floor size to understand your current performance. This can help inform practice targets.



RIBA sets energy reduction targets for businesses including a reduction from over 225 kWh/m²/y to less than 55 kWh/m²/y by 2030.

RIBA 2030 Climate Challenge target metrics for non-domestic buildings

| RIBA Sustainable Outcome Metrics | Current Benchmarks | 2020 Targets | 2025 Targets | 2030 Targets |
|---------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------------|---------------------------------------------|-------------------------------------------------|
| Operational Energy kWh/m ² /y  | 225 kWh/m ² /y DEC D rated (CIBSE TM46 benchmark) | < 170 kWh/m ² /y DEC C rating | < 110 kWh/m ² /y DEC B rating | < 0 to 55 kWh/m ² /y DEC A rating |

Energy options

There are many options which can be considered when looking to reduce heat use or heat losses. This list covers the majority of topics which a practice can consider and research in more detail. The installations costs are a guide only and each practice will need to assess the impact and costs for themselves.

| Proposed measure | Description | Potential level of impact | Implementation cost | Running cost* | Ease of installation |
|---------------------------------------------|-----------------------------------------------------------------------|---------------------------|---------------------------|---------------|----------------------|
| Heating, cooling, ventilation (HVAC) | | | | | |
| Heating | Air Source Heat Pump (with 100% renewable electricity supplier) | High | > £1,000 | = | Difficult |
| | Ground Source Heat Pump | High | > £1,000 | = | Difficult |
| | Heating - electric heating (with 100% renewable electricity supplier) | Medium | £100 to £1,000 | - = + | Easy |
| | Connect to existing district heating | High | > £1,000 | - = | Difficult |
| | Heating – thermostatic radiator valves or zone control valves | High | > £100 | - | Easy |
| | Heating - discrete controls | High | > £100 | - | Easy |
| Cooling | Cooling - plant replacement/upgrade | Medium | £100 to £1,000 - > £1,000 | - = | Difficult |
| | Replacement of air conditioning with evaporative cooling | Low | £100 to £1,000 | - = | Difficult |
| Ventilation | Fans – air handling unit | Low | £100 to £1,000 | - | Easy |
| | Fans - high efficiency | Low | > £100 | - | Difficult |
| | Ultrasonic Humidifiers | Low | Less than £100 | - | Easy |
| | Ventilation - distribution | Low | £100 to £1,000 - > £1,000 | - | Easy |
| Buildings and building fabric | Cavity wall insulation | High | > £1,000 | - | Difficult |
| | Double glazing with metal or plastic frames | High | > £1,000 | - | Difficult |
| | Dry wall lining | Medium | > £1,000 | - | Difficult |
| | Loft insulation | High | £100 to £1,000 | - | Easy |
| | Floor Insulation | Medium | £100 to £1,000 - > £1,000 | - | Difficult |
| | Roof insulation | High | £100 to £1,000 | - | Easy |
| | Secondary glazing | Medium | < £100 - £100 to £1,000 | - | Easy |
| | Draught proofing | Medium | < £100 | - | Easy |
| | Automatic/revolving doors | Medium | £100 to £1,000 | - | Easy |
| | Radiator reflective foil (external walls) | Low | < £100 | - | Easy |
| | Pipework insulation both external and internal | Low | < £100 | - | Easy |
| | Building management systems | High | £100 to £1,000 - > £1,000 | - | Easy |
| Lighting and Lighting controls | LED - new fitting | Medium | < £100 - £100 to £1,000 | - | Easy |
| | Lighting - discrete controls or centralised control system | Medium | < £100 - £100 to £1,000 | - | Easy |
| Renewable energy | Solar PV | High | > £1,000 | - | Difficult |
| | Solar Thermal | High | > £1,000 | - | Difficult |
| Computers & IT solutions | CRT to LED monitors | Low | < £100 - £100 to £1,000 | - | Easy |
| | Energy Efficient Server Replacement | Low | < £100 - £100 to £1,000 | - | Difficult |
| | LED monitors instead of LCD (cost difference) | Low | < £100 - £100 to £1,000 | - | Easy |
| | Network PC power management | Low | < £100 - £100 to £1,000 | - | Easy |
| Hot water | Flow restrictors | Low | < £100 | - | Easy |
| | Hot Water - Efficient taps | Low | < £100 - £100 to £1,000 | - | Easy |
| | Hot Water - Point of use heaters | Medium | < £100 - £100 to £1,000 | - = | Easy |

*Running cost:

+ More than current options

= Cost neutral

- Less than current options

Resources



Useful websites

- [Energy Saving Trust](#)
- [The Carbon Trust](#)
- [Small Business User Guide – Measuring and reporting your greenhouse gas emissions](#)
- [Business Link](#)
- [Envirowise](#)
- [WRAP](#)
- [Energy Saving Trust Green Fleet programme](#)
- [The Quality Assurance Scheme for Carbon Offsetting](#)
- [Royal Institute of British Architects \(RIBA\) Climate Challenge](#)

Energy providers

- [Big Clean Switch](#)
- [Ecotricity](#)
- [Good Energy](#)
- [Green Energy](#)

Trade bodies

- [Solar Trade Association](#)
- [National Insulation Association](#)
- [Building Services Research and Information Association \(BSRIA\)](#)
- [Chartered Association of Building Service Engineers](#)
- [The Association for Renewable Energy and Clean Technology](#)
- [Building Engineering Services Association](#)

Other useful articles




- [Sustainable and environmentally friendly general practice](#)
- [Energy saving opportunities for GP practices](#)
- [Renewable energy good practice guidance](#)
- [Making energy work in healthcare – Government guidance](#)





Resources – examples of providers






Energy Insulation

 **Heat Insulation** **Hull** 
insulation@heat-insulation.co.uk
 01482588591
 heat-insulation.co.uk/

 **Minster** **Hull, Leeds** 
hull@minsteronline.co.uk
 01482221565
 www.minsteronline.co.uk/

 **Eclipse Energy** **HNY Region** 
savings@eclipseenergy.co.uk
 01422414850
 www.eclipseenergy.co.uk/



 **Enviro AC** **Hull** 
01482298550
 enviroac.co.uk/




 **Thrift Energy** **National** 
sales@thriftenergy.co.uk
 0191 284 2424
 thriftenergy.co.uk/

Energy Air conditioning and cooling





 **TDM Services** **HNY Region** 
tmonkman123@gmail.com
 07766066476
 www.tdm-services.co.uk/

 **Airkool** **Yorkshire** 
info@airkool.com
 01482371888
 www.airkool.co.uk/




 **Airco** **HNY Region** 
sales@airco.co.uk
 08007720558
 airco.co.uk/

 **Sub Zero** **National** 
08000051585
 www.subzeroclimatecontrol.co.uk/

Energy Building fabric





 **Ecomerchant** **National** 
info@ecomerchant.co.uk
 01793 847 444
 www.ecomerchant.co.uk/





Energy Building Energy Management Systems





 **Save Money Cut Carbon** **National** 
03331235464
 www.savemoneycutcarbon.com/sustainability-services/insight/

 **Efficient Power Solutions** **National** 
enquiries@efficientpowersolutions.uk
 01909569016
 efficientpowersolutions.uk/





 **The Home Improvement Advisory Service (THIAS)** **HNY Region** 
enquiries@thias.co.uk
 01937573367
 thias.co.uk/




 **Environmental Strategies Limited** **National** 
info@esltd.co.uk
 01757403113
 esltd.co.uk/

 **Green Building Store** **National** 
info@greenbuildingstore.co.uk
 01484 461705
 www.greenbuildingstore.co.uk/

 **Green Zone Surveys** **National** 
info@greenzonesurveys.com
 03444997574
 www.greenzonesurveys.com/




 **Fero Consulting** **National** 
bobcrawford@feroconsulting.uk
 07500962548
 www.feroconsulting.uk/




 **Bryce Energy Services** **National** 
info@BryceEnergyServices.com
 01915806543
 www.bryceenergyservices.com/




 **Trademark Property Services**
info@trademark-services.co.uk
 01472730539 **Grimsby/Scunthorpe** 

Resources – examples of providers




Energy Ventilation



  **Envirovent** HNY Region 
03452727807
www.envirovent.com/

  **Eclipse Energy** HNY Region 
savings@eclipseenergy.co.uk
01422414850
www.eclipseenergy.co.uk/



  **TDM Services** HNY Region 
tmonkman123@gmail.com
07766066476
www.tdmservices.co.uk/


Energy EPC Rating




  **Green Zone Surveys** National 
info@greenzonesurveys.com
03444997574
www.greenzonesurveys.com/

 **Enviro AC** Hull 
01482298550
enviroac.co.uk/




Energy Boiling Water Taps




  **Zip** National 
03456005005
specify.zipwater.co.uk/



  **Fohen** HNY Region 
hello@fohen.co.uk
08081962480
fohen.co.uk/



  **Water Boilers** National 
info@waterboilersdirect.com
08007311491
www.waterboilersdirect.com/

Energy Space Heating

  **Yorkshire Heatpumps** HNY Region 
enquiries@yorkshireheatpumps.co.uk
01423788699
www.yorkshireheatpumps.co.uk/

  **Head-On** East Yorkshire 
office@head-onelectrical.co.uk
01482213177
www.head-onelectrical.co.uk/




 **Elite East** Yorkshire/North Lincs 
01482770550
www.elitesg.co.uk/

  **UK Green Energy** National 
info@ukgreenenergy.co.uk
01302966169
ukgreenenergy.co.uk/




  **Pure Renewables** Hull 
info@purerenewables.co.uk
+441482846005
purerenewables.co.uk/




  **Green and Reliable Heating** National 
alanmarcon@me.com
08001182467
greenandreliable.co.uk/




  **Green Building Renewables** York 
info@greenbuildingrenewables.co.uk
01904946609
www.greenbuildingrenewables.co.uk/

  **Duncan Renewables** Wetherby 
info@duncanrenewables.co.uk
01423359600
duncanrenewables.co.uk/

  **Yorkshire Energy Systems** 
info@yorkshireenergysystems.co.uk
01423529144 **Region**
www.yorkshireenergysystems.co.uk/

  **East Riding Energy** HNY Region 
info@eastridingenergy.com
01482210089
eastridingenergy.com/

  **Minster Energy Solutions** 
info@minsterenergysolutions.co.uk
01904486048 **HNY Region**
www.minster-plumbing.co.uk/energy-solutions

Resources – examples of providers




Energy Boilers




Green and Reliable Heating National 
alanmarcon@me.com
08001182467
greenandreliable.co.uk/




UK Green Energy National 
info@ukgreenenergy.co.uk
01302966169
ukgreenenergy.co.uk/



Eclipse Energy HNY Region 
savings@eclipseenergy.co.uk
01422414850
www.eclipseenergy.co.uk/



York Plumbing and Heating York 
office@yorkplumbingandheating.co.uk
01904819624
yorkplumbingandheating.co.uk/#/



Energy Smart Meters

You can contact your energy provider to request a smart meter installation.

Energy Heat Recovery System




York Ventilation Service York 
info@yorkventilationservice.co.uk
01904701117
yorkventilationservice.co.uk/



HoweCool HNY Region 
cliff@howecool.com
01977677077
www.howecool.com/index.php




NTS Hull 
info@nt.services
01482838080
www.nevilletuckerservices.co.uk/



Envirovent HNY Region 
03452727807
www.envirovent.com/


Energy Smart Heating Controls




York Plumbing and Heating York 
office@yorkplumbingandheating.co.uk
01904819624
<https://yorkplumbingandheating.co.uk/#/>

Energy Solar Thermal




Minster Energy Solutions HNY Region 
info@minsterenergysolutions.co.uk
01904486048
www.minster-plumbing.co.uk/energy-solutions




Envirowarm HNY Region 
info@envirowarm.co.uk
01482841225
www.envirowarm.co.uk/



Robinsons of Harrogate Harrogate 
contact@robinsonsofharrogate.co.uk
01423503987
www.robinsonsofharrogate.co.uk/



LPS Renewables Harrogate/York 
01943871397
lpsrenewables.com/



Alan Leighton HNY Region 
01482659305
www.alanleightonhull.co.uk/











Green and Reliable Heating National 
alanmarcon@me.com
08001182467
greenandreliable.co.uk/

Resources – examples of providers







Energy Solar Panels

 **Yorkshire Energy Systems** HNY Region 
info@yorkshireenergysystems.co.uk
 01423529144
 <https://www.yorkshireenergysystems.co.uk/>

 **East Riding Energy** HNY Region 
info@eastridingenergy.com
 01482210089
 <https://eastridingenergy.com/>





 **Pure Renewables** Hull 
info@purerenewables.co.uk
 01482846005
 <https://purerenewables.co.uk/>





 **Green Building Renewables** York 
info@greenbuildingrenewables.co.uk
 01904946609
 <https://www.greenbuildingrenewables.co.uk/>

 **Energi North East** Northallerton 
chris@energinortheast.co.uk
 08000434606
 <http://energinortheast.co.uk/>





 **Minster Energy Solutions** HNY Region 
info@minsterenergysolutions.co.uk
 01904486048
 <http://www.minster-plumbing.co.uk/energy-solutions>

 **Duncan Renewables** Wetherby 
info@duncanrenewables.co.uk
 01423359600
 <http://duncanrenewables.co.uk/>

 **Airco** HNY Region 
sales@airco.co.uk
 08007720558
 <https://airco.co.uk/>

 **Head-On** East Yorkshire 
office@head-onelectrical.co.uk
 01482213177
 <https://www.head-onelectrical.co.uk/>





 **Elite** East Yorkshire 
01482770550
 <https://www.elitesg.co.uk/>

 **UK Green Energy** National 
info@ukgreenenergy.co.uk
 01302966169
 <https://ukgreenenergy.co.uk/>





 **For more information on solar panels**

Solar Energy UK
solarenergyuk.org/

Energy Lighting





 **LED Lights 4 You** National 
info@ledlights4you.co.uk
 03333446084
 <https://www.ledlights4you.co.uk/>

 **Goodlight** National 
sales@goodlight.co.uk
 01276691230
 <https://www.goodlight.co.uk/>

 **Thrift Energy** National 
sales@thriftenergy.co.uk
 01912842424
 <https://thriftenergy.co.uk/>

Energy Renewable Energy Providers

 **Ecotricity** National 
home@ecotricity.co.uk
 03455557100
 <https://www.ecotricity.co.uk/>

 **Good Energy** National 
hello@goodenergy.co.uk
 08002540004
 <https://www.goodenergy.co.uk/>

 **Green Energy** National 
hello@geuk.com
 01920486156
 <https://www.greenenergyuk.com/>