elmhurst energy

EXCELLENCE IN ENERGY ASSESSMENT

THE ELMHURST ALMANAC 2024

Driving progress during political change

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2024 will not be a year of quiet. A general election and momentous consultations for energy efficiency are opportunities for the UK to re-evaluate progress towards net zero.
Now is the time to make our industry's expert voices heard.

Introduction

Stuart Fairlie, Managing Director, Elmhurst Energy

Energy efficiency was never far from the spotlight in 2023, but 2024 is likely to be even bigger for our sector.

As a prequel to this year of political change, in December, two of the most pivotal consultations for home energy performance in more than a decade were launched by Government.

The Future Homes and Buildings Standards will help to define how we build net zero carbon-ready new homes and buildings in England, while the Home Energy Model (HEM) will set how we measure home energy performance, replacing the current Standard Assessment Procedure (SAP).

So much is yet to happen between now and when these are implemented in 2025, including a General Election, which may result in a change of political direction.

This means energy efficiency and net zero are likely to be two of this year's political footballs and policy battlegrounds.

Let's not forget Energy Performance Certificates (EPCs), for which 2024 is also likely to be an important year with, we hope, progress on the Government's EPC Action Plan. Government has also confirmed that the EPC 'wrapper' consultation will happen in summer.

Elmhurst has long called for EPCs to change so they do more than simply estimate the cost of heating a home. We were pleased to see our recommendations (to include calculations for energy cost, consumption and carbon emissions) within the HEM consultation. Earlier, in summer 2023, Scottish Government's EPC Reform consultation also got its proposals broadly right - and now it's time for the rest of the UK to do the same.

From now until 2030 we must start reducing the impact of our homes and buildings on the environment. To support this, within these pages, we have provided a list of top 10 policy and regulatory asks for government. Each is aimed at driving continual progress in energy efficiency improvements and measurement across UK homes and buildings.

I firmly believe that the role of energy efficiency, retrofit, and building professionals, has never been more important than in 2024. Through these consultations, we have an open platform to spark discussion and deliver expert views that will shape the future. At Elmhurst, we will continue to make our voice heard and influence decision makers to keep what is right front and centre, rather than just what will get the most votes.

Take part in the debate - contact us or post your views on LinkedIn using the hashtag #ElmhurstAlmanac

Key facts and figures

£10.6 BILLION

is the aggregate saving if all homes currently rated D, E or F were improved to EPC C.

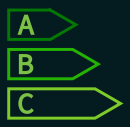
(source: End Fuel Poverty Coalition)

29%

increase in number of homes reaching the highest energy efficiency bands A to C in the last ten years.

(source: DLUHC)

51%



of Scottish homes are EPC C or above.

(source: Scottish Government)

66

is the median energy efficiency score of a dwelling in Wales (EPC D).

(source: Office for National Statistics)

1

is the median increase to energy efficiency scores for houses in England and Wales since 2022. (2022: England 67 Wales 65, 2023: England 68 Wales 66).

(source: Office for National Statistics)

1,663,877

domestic EPCs were lodged in England and Wales in 2023.

(source: DLUHC & MHCLG)

1,459,281

EPCs lodged by Elmhurst members in 2023.

(Source: Elmhurst)

15,000+

registered Elmhurst members in 2023, including competency scheme members.

(source: Elmhurst)

6.5 MILLION

UK households will be in fuel poverty from January 2024.

(source: National Energy Action)

£7 BILLION

a year and 140,000 new jobs could benefit the economy by insulating homes and installing heat pumps by 2030.

(source: Cambridge Econometrics, presented by The Guardian)

14%

of the UK's carbon emissions are caused by housing.

(source: Great Homes Upgrade)

25%

of households in Scotland are in fuel poverty, followed by 18% in Northern Ireland, 12% in Wales, and 10% in England.

(source: DESNZ & BEIS, presented by Heatable)

3.8 MILLION

energy efficiency measures were installed in about 2.5 million properties through ECO and other Government-funded schemes between 2013-2023.

(source: Household Energy Efficiency Stat Release)

7.39 MILLION

(30.3%) households in England spent more than 10% of their income on energy bills in 2022.

(source: End Fuel Poverty Coalition)

28%

of commercial buildings are currently at risk of non-compliance ahead of changes to Minimum Energy Efficiency Standards (MEES) Regulations in England and Wales.

(source: Jones & Woolman, presented by Property Reporter)

23%

of carbon emissions across the UK built environment come from commercial buildings.

(source: UKGBC)

2023 in policy and regulations

January

- Chris Skidmore MP published the **Mission Zero: Independent Review of Net Zero,** assessing the UK's net zero policies.

February

- **Section 6 of the Scottish Building Standards came into force,** meaning any new domestic or non-domestic buildings are required to demonstrate compliance with Section 6 2022.
- The Department for Business, Energy and Industrial Strategy (BEIS) was split into four new government departments, one of which is the **Department for Energy Security and Net Zero (DESNZ),** with its then Secretary of State Grant Shapps MP.
- UK government announced a **£32 million investment** to upgrade existing heat networks, with the aim of reducing energy costs and carbon emissions.
- British Standards Institute (BSI) issued two public consultations on changes to the **PAS 51215-1** assessment process and the **PAS 51215-2** competency of lead assessors for energy and net zero assessments.

March

- The government consulted on **'Improving boiler standards and efficiency'.**
- BSI announced its consultation for **proposed amendments to the current versions of PAS 2035.**
- DESNZ published its consultation response to the **Great British Insulation Scheme (GBIS)**, formerly known as ECO+, targeting the least energy efficient households.
- The Future Homes Hub released its **'Ready for Zero'** report delivering evidence from industry to help inform the government's development of the Future Homes Standard in England.
- DESNZ released **'Powering up Britain',** its plan for how government will deliver on net zero, enhance energy security and seize economic opportunities arising from the transition.

April

- The Royal Institution of Chartered Surveyors (RICS) consulted on the second edition of **Whole Life Carbon Assessments for the Built Environment,** which mandates a methodology to track all carbon emissions of built assets over their entire life cycle.
- Government launched the **'Heat Pump Investment Roadmap',** which includes the Boiler Upgrade Scheme delivering household grants for installation.

May

- **Elmhurst responded** to the BSI's PAS 2035 consultation.
- DESNZ announced a pilot scheme providing **£4.1 million in funding** to banks and loan providers to develop green finance projects that will allow UK homeowners to improve the energy efficiency of their homes.

June

- **The Building (Scotland) Amendment Regulations** were laid before Scottish Parliament, coming into force on 1 April 2024 and requiring that all new homes and buildings no longer use direct emissions heating systems.
- Transitional arrangements for Part L 2021 of the Building Regulations ended, meaning all new buildings, regardless of when the application was made, must now comply in England.

July

- Scottish Government released its new 'EPC Reform' consultation on proposed **changes to Energy Performance Certificates (EPCs).**

August

- Northern Ireland's Department of Finance issued its consultation on **Energy Efficiency Upgrades for Net Zero Future,** covering revisions to Technical Booklets F1 and F2 of the Northern Irish Building Regulations.
- The Government published its consultation on **Energy Company Obligation Schemes: Standard Assessment Procedure (SAP) and Reduced Data SAP (RdSAP) amendments,** proposing that both ECO4 and the GBIS use the latest version of the SAP and RdSAP methodology.
- Claire Coutinho MP became Secretary of State for DESNZ after a reshuffle sees Grant Shapps MP become Secretary of State for Defence.
- Welsh Government outlined its heat decarbonisation strategy in the **Heat Strategy for Wales document.**
- BRE confirmed **changes to RdSAP Methodology**, effective from 2024, which includes a requirement to measure all windows and options for rooms-in-the-roof.

September

- The Government published a consultation on proposed amendments to the **Boiler Upgrade Scheme Regulations.**
- The **Government launched the £1bn GBIS,** funding energy efficiency improvements for 300,000 low council tax and poor energy performance homes.
- **Prime Minister Rishi Sunak delayed and diluted a number of key green policies,** including Domestic Minimum Energy Efficiency Standards (MEES) Regulations.
- Updated guidelines on the **Energy Savings Opportunity Scheme (ESOS)** were released by government.
- Elmhurst was awarded **Home Decarbonisation Skills Training funding** in Wave 2 to deliver subsidised energy assessment and retrofit courses in England.

October

- The **updated version of PAS 2035 was published,** featuring updates for retrofit professionals across the UK.
- The government confirmed that EPC targets under Non-Domestic Private Rented Sector (PRS) MEES Regulations are not among those being revised by the Prime Minister.
- The **Energy Security Bill received Royal Assent** to become UK law – the Energy Act 2023 will help ensure bills are affordable in the long term.

November

- Scottish Government launched a consultation proposing **new laws that mandate the reduction of emissions in Scotland's homes and buildings**, helping support the country's drive to net zero by 2045.
- Welsh Government concluded its consultation on its **Heat Strategy for Wales**, designed to support their commitment to achieve net zero by 2050.

December

- DLUHC issued its **Future Homes and Buildings Standards consultations**, due to become regulation in England in 2025.
- DESNZ issued its **Home Energy Model consultation** to accompany the Future Homes Standard, signalling the first major revamp to SAP in 30 years.

The Future Homes & Buildings Standards and Home Energy Model consultations: what you need to know

Future Homes and Buildings Standards

The Future Homes and Buildings Standards consultation released by the Department for Levelling Up, Homes and Communities (DLUHC) in December 2023 proposes changes for the next revision of energy efficiency standards in Building Regulations.

Due to come into force in England in 2025, they will facilitate the transition to net zero in new domestic and non-domestic buildings. Scotland, Wales and Northern Ireland have devolved powers to implement similar standards and regulations as and when they wish.

The Future Homes Standard (FHS) delivers specifications for new homes to almost completely reduce emissions related to heating, cooling and energy use. These are some of the highlights:

Notional dwelling options
The FHS proposes an Option 1 and Option 2 notional dwelling. Both offer the same build or fabric specifications and adopt standards from Part L (Conservation of fuel and power) 2021 of the Building Regulations, but each delivers differing levels of energy efficiency.

Option 1 specifies use of a decentralised mechanical ventilation (dMEV) and high-efficiency solar PV panels, plus an airtightness test result of 4. Option 2 proposes natural ventilation with intermittent extractor fans, an airtightness test result of 5, and no solar PV panels.

Measured energy performance
Proposals include a brand or logo for housebuilders to demonstrate new homes comply with the FHS by testing real-world energy performance against modelled performance at design stage. This is to tackle the performance gap recognised in Part L 2021.

Energy efficiency metrics
The same metrics – Primary Energy, Carbon Emissions and Fabric Energy Efficiency – used to measure energy efficiency of a new build in Part L 2021 are set to be used in the FHS. Energy Use Intensity (kWh/m2/year) was being considered but has been set aside.

Material change of use
Any work on a building that involves a material change of use – usually a conversion such as an office block to residential – will now be measured for whole-dwelling performance using a notional dwelling as the benchmark. These will require a Building Regulations England Part L (BREL) report, photographic evidence and airtightness testing.

Transitional arrangements
There is usually a grace period when new Building Regulations are introduced for sites under construction to switch over to the new standard. The FHS is consulting over a six- and 12-month transitional period from when the regulations are introduced, to when they come into force. For any sites still being built to Part L 2010 and 2013, homes not yet started one year after the FHS is introduced will also have to comply with the FHS.

Home Energy Model highlights

The Home Energy Model (HEM) consultation from the Department for Energy Security and Net Zero (DESNZ) accompanied the release of the FHS consultation. It presents the first complete overhaul of the 30-year-old standard assessment procedure (SAP) energy efficiency calculation methodology.

The HEM deals with core building physics and is designed to deliver a more accurate assessment of the energy performance of homes.

'Wrappers'
The HEM will be developed alongside 'wrappers', which will be determined by policy and developed by Government to support improvements in housing and reaching climate targets. The FHS 'wrapper' will demonstrate compliance with the standard, with the EPC earmarked as the next. Each 'wrapper' is a different piece of code using different data inputs, such as home fabric, heating and cooling systems, plus standard inputs such as occupancy, weather and temperature.

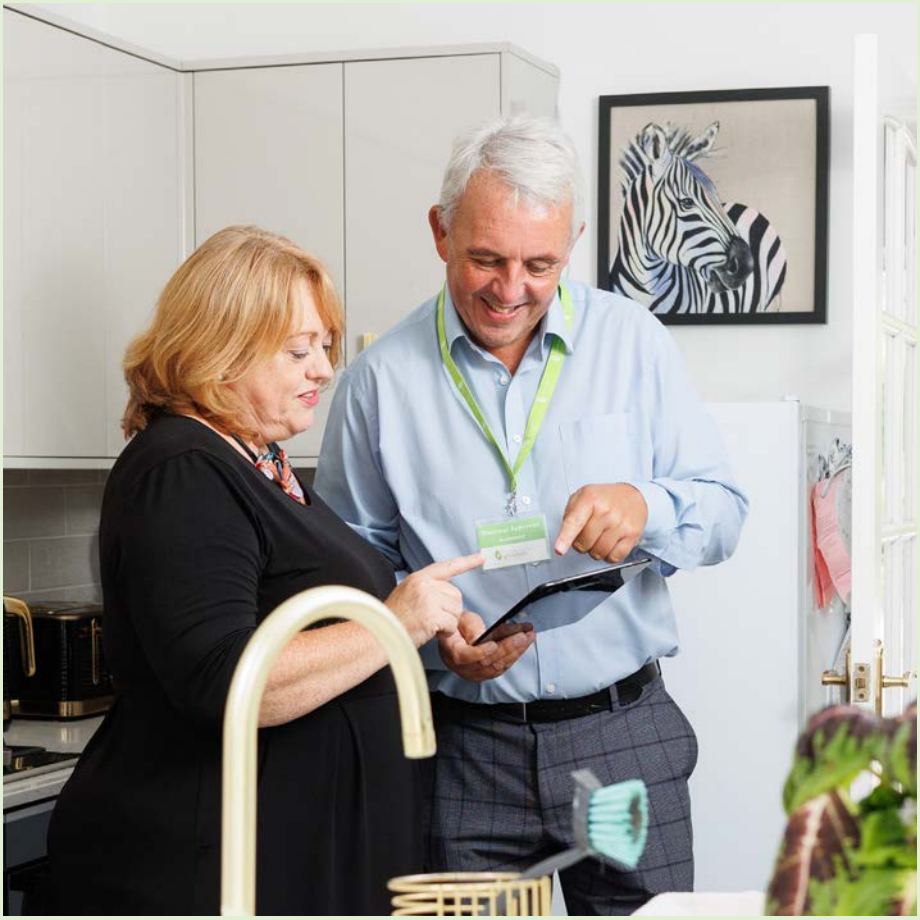
30-minute updates
Where SAP accounted for any changes monthly, the HEM will simulate energy performance half-hourly. It will update fuel prices, account for smart technologies and systems, and represent heat pumps in specific contexts for a home rather than relying on generic simulations.

Transparent methodology
The HEM codebase will be open source, with any changes being transparent and visible before changes appear in regulation. The code will replace the specification document used for the SAP. Software developers, such as Elmhurst, will all have the same version.

Home energy performance calculator
A home energy performance calculator is proposed as part of the HEM. This will be a cloud-based engine for software developers to build interfaces around.

Other changes in the consultation for comment include a new database to improve information on product characteristics, as well as a new process for replacing 'Appendix Q'. This is so more new technologies can be efficiently included in the HEM.

Both consultations are open for comment until 6 March 2024. We'd encourage all energy efficiency professionals to take the opportunity to have their voice heard.



Elmhurst's 10 big asks for 2024

These are Elmhurst's top 10 policy and regulatory asks for government. Each is aimed at driving continual progress in energy efficiency improvements and measurement across UK homes and buildings.

1. Reform the EPC

Government must launch its consultation on EPC reform by, at the latest, summer 2024.

The Home Energy Model (HEM) consultation on a 'New SAP' calculation methodology was released in December 2023. With this set to ring the changes, it's also time we revamped EPCs so they measure the right things.

Elmhurst has been calling for changes to the EPC since 2019. Reform has been on the cards since a call for evidence on EPCs in 2018, followed by the government's EPC Action Plan in 2020.

First introduced for homes in England and Wales in 2007 as a cost based metric, the EPC currently only estimates how cheap or expensive a home is to run. As they are typically valid for 10 years, this also means many are now out of date.

EPCs should now show the 'three Cs': energy **consumption**, energy **cost**, and **carbon** emissions. They should be displayed in an easy-to-understand format, similar to food nutrition labelling.

Each EPC should be renewed every three years, with re-assessment and re-issue required whenever there is a change to a building that impacts its energy performance.

Doing all of this would mean EPCs are able to support energy-efficient retrofit, reduce dependence on the grid, and inform net zero policies from government.

2. Use the Golden Triangle for EPCs

EPCs are not misleading but misunderstood. They are an energy cost metric being used as a policy tool to reduce carbon emissions from housing and to tackle climate change. This doesn't work.

They must now give equal focus to energy consumption, cost and carbon emissions. To tell the full energy efficiency story of a building, three crucial pieces of information are needed.

Elmhurst's 'Golden Triangle' of information is:

1. Asset rating: the predicted energy cost and consumption of the building, based upon nominal or average occupancy patterns.

2. Occupancy rating: the predicted energy consumption of the building, based on the people using it.

3. Energy consumption: what energy the building uses to run, ideally based on data from smart meters.

3. Launch the 'New EPC' with the Home Energy Model

Government must have the EPC 'Wrapper' ready to use in 2025. This would coincide with the Home Energy Model (HEM) going live in order to demonstrate compliance with the Future Homes Standard.

One of the HEM's main purposes will be to calculate the energy efficiency of a building. It is this calculation that will be used produce an EPC rating.

Making sure the 'New EPC' is ready at the same time as the HEM would avoid a clumsy situation where the old cost metric EPC is being calculated via a new methodology. The good news is that the government has indicated the EPC 'Wrapper' consultation will launch

this year. But time is tight, meaning the Department for Energy Security and Net Zero (DESNZ) must be fleet of foot in delivering the consultation and its conclusions, and work quickly with industry to finalise the EPC 'Wrapper' metrics and look and feel.

4. Change how ECO works

The Energy Company Obligation (ECO) is a requirement for energy suppliers to help low-income households reduce the costs of their home heating by fitting energy-saving measures. It's designed to help reduce carbon emissions from homes and to tackle fuel poverty.

ECO4 was set up to deliver £1bn funding per year over four years to upgrade an estimated 450,000 homes and will complete in March 2026. But its administration isn't quite right.

Set for 2026, ECO5 is already expected to reach a broader consumer audience including middle-income households who face significant energy costs. Government and energy companies can improve ECO5 by making the following changes:

- Both homeowners and landlords should be able to apply for funding, backed by government support. Currently, installers claim retrospectively for work, the result of which encourages installation of single energy efficiency measures. This increases the likelihood of unintended negative consequences such as mould and damp.
- Energy-saving measures must be led by a retrofit coordinator to ensure they are installed in the right order, in line with a whole-house retrofit approach detailed in PAS 2030, PAS 2035 and the upcoming PAS 2030/2035:2023, arriving in 2025.
- A campaign should accompany ECO5, giving homeowners and landlords information about energy efficiency measures and signposting to fully qualified retrofit professionals to increase uptake.
- It must put people back at the heart of the decisions for their home (or building) and their goals (warmer, cheaper to run, less emissions etc), it can't be lead by complex rules over the installation of certain measures.

5. Rebalance tax applied to fuel

Currently, any low-carbon heating solution running on electricity, such as a heat pump, is more expensive than running a traditional gas boiler. This means they won't be recommended on the current EPC.

To change this, we must switch the 'green levy' in energy bills so it applies to gas rather than electricity supply. Price ceilings and floors should be applied to ensure that what is right for the environment is also right for the consumer.

The government had previously revealed plans to rebalance green tax to gas, but its March 2023 'Green Day' climate policy announcements accompanying the **Powering up Britain** Plan delayed this until late 2023/early 2024.

We are now past that date, but the switch is the right thing to do for energy market reform and is a long-overdue catalyst for incentivising the transition away from fossil fuels.

6. Measure actual energy performance to validate retrofit strategies (use the data)

Energy performance measurement should be made mandatory before and after any retrofit work.

Deploying this would help to define the right energy efficiency measures for individual cases, test the efficacy of completed works, and build up insight for future retrofits.

There is a suite of technology available to support measuring actual energy performance – smart meters, Elmhurst's Measured Energy Performance technology, airtightness testing (Pulse or Blower Door), thermal imaging and U-value measurement tools, to name a few. When the data from these is combined with EPCs, it gives us a highly accurate picture of what is actually happening in a building.

An openly available, government-located central register of retrofit work should also be introduced to detail all projects along with their energy performance data.

7. Reinstate new MEES deadlines

The government must take a deep breath and reinstate energy efficiency targets for the private rented sector.

An EPC C requirement for all non-domestic tenancies should be confirmed for 1 April 2027 as initially expected in the Government's 2019 Minimum Energy Efficiency Standards (MEES) Regulations consultation. EPC B should apply to all privately rented non-domestic properties by 1 April 2030.

In 2020, the government released a public consultation which proposed a phased approach to improving the energy efficiency targets of domestic private rented properties. The consultation stated that these properties would need to meet a minimum of EPC C for new tenancies by 2025, and all tenancies by 2028.

The government should reassess the current timeline and consider reinstating the deadline for achieving an EPC by 1 April 2028, applicable to new and renewed tenancies. This requirement should then be gradually extended to cover all existing tenancies at a later date.

There are 3.2 million private rented properties rated EPC D or lower in England and Wales. EPC band D-G homes can cost almost three times as much in fuel bills for a tenant than those in band C. Legal targets are a 'must' to give the impetus for upgrading to EPC C.

8. Launch a GOV.UK retrofit advice hub

A GOV.UK retrofit guidance hub would deliver much-needed consumer information on retrofit and energy efficiency improvements – including the best order to complete them and how they might work alongside planned property refurbishments.

This was also mooted in the January 2024 cross-department Government document, **'Adapting historic homes for energy efficiency – a review of the barriers'.**

The retrofit advice hub must be independent and at the forefront of the customer journey for choosing green finance and appropriate renewable technologies, such as heat pumps and solar panels, plus options for insulation, ventilation and heat recovery.

Crucially, the hub should also signpost to registered professionals so homeowners can locate properly accredited and trained people, such as all of Elmhurst members.

9. Get the Future Homes/ Buildings Standard right

Getting the Future Homes/ Buildings Standard right is vital to facilitate the transition to net zero in new domestic and non-domestic buildings. It will also prevent the need for retrofitting any new buildings from 2025 and beyond.

The Future Homes and Buildings Standards consultation details two 'notional dwelling' options. Elmhurst is urging the government to implement Option 1 as this is the right choice for people and planet. It prepares us better for carbon net zero by cutting carbon emissions and running costs for occupants.

Option 1 would also support decarbonisation of the grid by delivering electricity micro-generation from solar panels. **A recent study** from the Karlsruhe Institute of Technology, Germany,

found more than half of Europe's 41 million freestanding homes could be self-sufficient using just solar PV panels and batteries.

Elmhurst would also urge Scotland, Wales and Northern Ireland to adopt the Future Homes/Buildings Standard without delay.

10. More energy efficiency funding, for more measures

There is currently a patchwork quilt of energy efficiency measures to support families on low incomes and in social housing, and those living in low EPC properties and lower council tax bands.

Government must close the gaps by doing more for households in fuel poverty, while dialling up support for middle-income families with high energy bills.
It should:

- Re-name the Boiler Upgrade Scheme the Boiler Replacement Scheme, as the term 'upgrade' perpetuates the norm for consumers to use the funding to purchase a new gas boiler.
- Expand the funding and scope of the Great British Insulation Scheme, or introduce a new scheme entirely, to include door, window and roof upgrades, as well as improved wall, loft and floor insulation.
- Introduce solar panel grants to help homeowners and landlords with the cost of installing solar panels at home.
- From 2030, government must build on its ECO schemes by covering the cost of heat pump installation for low-income homes. Low-income households that have already had the recommended insulation installed would be eligible for a free heat-pump installation by 2035.

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For further information about the services that Elmhurst Energy provides, please visit:

www.elmhurstenergy.co.uk or call **01455 883 250**