

Future Homes Standard: What You Need to Know

Elmhurst Energy



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IN ENERGY
ASSESSMENT

Housekeeping

- **Video and Audio**
- **Q + A**
- **Slides and CPD certificates will be provided after the course**



Agenda

Future Homes Standard

- Timeline & Transitional Arrangements
- Performance Standards
- Renewable Electricity Generation
- SAP & HEM
- Compliance Impacts
- Heat Networks

Q + A



Introducing Part L 2026

Aka The Future Homes Standard

- **Released 24th March 2026.**
- New Approved Documents;
 - AD F 2026 - Ventilation
 - AD L 2026 Volume 1 – Dwellings
 - AD L 2026 Volume 2 – Non dwellings
- FHS & HEM:FHS consultation responses published.
- No new AD O – Overheating yet.



Timelines & Transitional Arrangements



Timeline Options

Option 1

- Six-month period between publication and regulations coming into force.
- Followed by one year transition period.
- Applied to individual buildings.

Option 2

- One year period between publication and regulations coming into force.
- Followed by one year transition period.
- Applied to individual buildings.

- Option 2 selected – 1 year implementation followed by 1 year transition period.

Sunsetting Older Transitional Arrangements

- Many new homes still being built to older regulations.
- Plots benefitting from 2013 (Part L 2010) transitional arrangements targeted. Plots that have not commenced by end of transition period will need to be built to FHS.
- Commencement now based on Regulation 46A.





“ ...work is to be regarded as commenced when the sub-surface structure of the building including all foundations, and the structure of ground floor level is completed. ”

**REGULATION 46A,
BUILDING REGULATIONS
(2010)**

High Risk Buildings (HRBs)

- HRBs are at least 18 metres in height or 7 storeys, contain at least 2 residential units, or are a care home or hospital.
- Since October 2022, HRBs have been required to go through more stringent building control procedures to ensure safety in high-rise buildings.
- For HRBs FHS comes into force on 24th September 2027.



FHS released

SAP 10.3 available

**March
2026**

**March
2027**

FHS commences for HRBs

Transitional arrangements
commence for HRBs

**Sept
2027**

**March
2028**

Transitional arrangements end for HRBs

New
applications
subject to FHS

**Sept
2028**

FHS commences for non HRBs

Transitional arrangements
commence for non HRBs

Transitional arrangements end for non HRBs

New
applications
subject to FHS

Performance Standards

Performance Standards recap

- Part L 2021 was an interim step towards FHS.
- FHS goal is to reduce carbon emissions over Part L 2013 by 75-80%.
- FHS consultation proposed two uplift options for new homes.
- Focus on decarbonisation of heating but need to ensure fuel bills do not increase.



Heating Source



- These changes will result in heat pumps being the main heating technology in new homes.
- Heat networks will also have an important role due to the ability to integrate low carbon heating.
- *“We found no practical way to allow the installation of fossil fuel boilers while also delivering significant carbon savings and ‘zero-carbon ready’ homes.”*
- *“We do not expect fossil fuel heating, such as gas, hybrid heat pumps and hydrogen-ready boilers, will meet these standards.”*

Notional Dwelling - Fabric

	Part L 2021	Part L 2026 (FHS)
Floor (w/m ² k)		0.13
Wall (w/m ² k)		0.18
Roof (w/m ² k)		0.11
Door (w/m ² k)		1
Window (w/m ² k)	u-1.2, g-0.63	u-1.2, g-same as actual
Thermal Bridging	y-0.05/Table R2 SAP 10	
Airtightness	5 m ³ /m ² /hr @ 50 Pa	4 m ³ /m ² /hr @ 50 Pa

Notional Dwelling - Services

	Part L 2021	Part L 2026 (FHS)
Ventilation	Natural with intermittent fans	Continuous dMEV, 0.15 w/l/s
Cooling	None	If none in actual dwelling or cooling present but not due to Part O then none. If 'Active cooling needed for Part O?' indicated then; SEER 5.1 Cooled area same as actual dwelling
Lighting	Fixed lighting capacity (lm) = 185 x TFA, 80 l/w	Fixed lighting capacity (lm) = 1139 x (TFA x N) ^{0.39} , 120 l/w

Notional Dwelling - Services

	Part L 2021	Part L 2026 (FHS)
Space + Water Heating	Mains gas boiler 89.5% efficiency, radiators, 55°C flow temp., central heating pump 2013 or later, in heated space If existing heat network – same as actual dwelling	If single dwelling heating system or unsleeved heat network - individual Air Source Heat Pump with SCOP of 2.5. If sleeved heat network – same as actual dwelling If communal heating system – Communal heat pump, 300% efficient, distribution loss factor 1.15.
Hot Water Cylinder	Loss = $0.85 \times (0.2 + 0.051 V^{2/3})$ kWh/day	Loss = $0.85 \times (0.2 + 0.051 V^{2/3})$ kWh/day
HIU	If existing heat network – HIU data is obtained from PCDB entry 400001. Otherwise, not applicable.	Where the sleeved heat network approach or communal heating system for heating and/or water heating is used, HIU data is obtained from PCDB entry 400011. Otherwise, not applicable.
WWHRS	Y - 36% recovery efficiency	No for single storey dwellings Yes for >1 storey dwellings - 50% recovery efficiency

Notional Dwelling - Services

	Part L 2021	Part L 2026 (FHS)
PV	For houses kWp = 40% of ground floor area, including unheated spaces / 6.5 For flats and maisonettes kWp = 40% of dwelling floor area / (6.5 x number of storeys in block) Orientation - SE/SW, 45° pitch. Overshading is 'none' Connected to dwelling's meter for houses Not connected to the dwellings meter for flats Export-capable meter present	None if no PV on actual dwelling. If PV present on actual dwelling, same kWp as actual dwelling up to; For houses kWp = 40% of ground floor area, including unheated spaces / 4.5 For flats and maisonettes kWp = 40% of dwelling floor area / (4.5 x number of storeys in block) Orientation, pitch and overshading - same as actual building Connected to dwelling's meter for houses Not connected to the dwellings meter for flats Export-capable meter present

PV and the Notional Dwelling

- Notional dwelling includes PV to reduce carbon emissions and bills.
- Notional PV is calculated as;
 - If none on actual dwelling, none in notional
 - If present on actual dwelling, same as actual dwelling up to;
 - Houses – 40% ground floor area/4.5
 - Flats – 40% dwelling floor area/(4.5*number of stories in block)
 - Same orientation, pitch and overshadowing as actual array
- Efficiency improvements - Part L 2021 was 6.5 m²/kWp, FHS 4.5 m²/kWp.
- Related to new functional requirement for onsite renewable electricity generation...

Renewable Electricity Generation

Future Homes Standard - PV

- June 2025 statement from MHCLG confirmed PV to be used on new homes.
- In the form of a functional requirement set in Building Regulations.
- Sets a minimum amount of self generated electricity i.e. PV.
- Limited 'exemptions' available.

Press release

Rooftop solar for new builds to save people money

New homeowners stand to benefit from rooftop solar and cheaper bills, with the Future Homes Standard being published this Autumn.

From: [Department for Energy Security and Net Zero](#), [Ministry of Housing, Communities and Local Government](#), [Matthew Pennycook MP](#) and [The Rt Hon Ed Miliband MP](#)

Published 6 June 2025



New Functional Requirement

Requirements *continued*

Renewable electricity generation – dwellings and buildings containing dwellings

L3. (1) When a building is erected which is or contains one or more dwellings, a system for on-site renewable electricity generation must be installed on the building or within the boundaries of the curtilage of the building.

(2) The system installed for the purpose of this requirement must be—

- (a) designed to enable generated electricity to be available for the use of residents of the dwellings;
- (b) capable of generating a reasonable output taking account of the building's design and surroundings.

(3) For the purposes of paragraph L3—

“energy from renewable sources” has the meaning given in regulation 25A;

“microgeneration” means the use for the generation of electricity of any plant (which for this purpose includes any equipment, apparatus or appliance) which in generating electricity relies wholly or mainly on energy from renewable sources;

“system for on-site renewable electricity generation” means a system for on-site electricity generation which generates electricity by microgeneration.

Requirement L3 does not apply to a building—

- (a) which is a relevant building for the purpose of regulation 7(4);
- (b) on which it is not possible to install a system for on-site renewable electricity generation capable of generating a reasonable output on account of its design or surroundings;

or

(c) where—

- (i) equivalent renewable electricity generation output to that required by requirement L3 is available to the building from a system for on-site renewable electricity generation which is not on the building or within the boundaries of the curtilage of the building; and
- (ii) that system is designed to enable generated electricity to be available for the use of residents of the dwellings.

- For houses the minimum requirement (kWh/yr) is calculated on SAP/HEM as follows;
 - Array kWp = $40\% \text{ ground floor area} \times 0.22 \text{ kWp/m}^2$
 - Orientated South east
 - 45° pitch
 - No overshadowing
- SAP uses this array size to calculate the kWh/yr output required.

Reporting compliance

- BREL reports will indicate if minimum requirement has been met;

9 Local generation	
Technology type: Photovoltaic system (1)	
Peak power	5.682 kWp
Orientation	South East
Pitch	45°
Overshading	None or very little
Manufacturer	PV
MCS certificate	
PV output 4563.76 kWh/annum meets the recommended kWh/annum (4562.16) according to section 5.7 of ADL1.	

9 Local generation	
Technology type: Photovoltaic system (1)	
Peak power	2.64 kWp
Orientation	North
Pitch	30°
Overshading	None or very little
Manufacturer	
MCS certificate	
PV output of 1519.68 kWh/annum does not meet the recommended kWh/annum (2851.35) according to section 5.7 of ADL1. Evidence to support lower provision must be presented.	

Exemptions?

- For HRBs or dwellings that cannot generate 720 kWh/yr no PV is required.
- In other cases the amount of PV required may be unachievable.
- Evidence needed for the BCB;
 - Roof diagrams with and without proposed PV clearly demonstrating design restrictions on panels.
 - A statement outlined why lower provision is being installed and modifications to designs cannot be made.
 - Calculations in support of 5.73, 5.74(a) and 5.74(b) signed by a suitably qualified person which includes OCDEAs. This would typically be the BREL.
- b. An annual output (in kWh) for the dwelling as calculated using the approved methodology at least equal to that of a photovoltaic array covering the reasonably practicable roof area with a panel efficiency of 0.22 kWp/m².

SAP and HEM

- On 10th February 2026 MHCLG confirmed Future Homes Standard would be released in Q1 with only SAP 10.3 to be used to demonstrate compliance.
- SAP 10.3 is a modified version of the current SAP methodology.
- Will provide a smoother transition to the Future Homes Standard whilst the industry adjusts to the Home Energy Model.
- Initially applies in England. Wales will also adopt SAP 10.3 in future.
- The intent is still for Home Energy Model to replace SAP when it is fully ready.

What is new in SAP 10.3?

- No changes to core calculation engine.
- New notional dwelling to set the compliance metrics for Future Homes Standard.
- New Carbon and Primary Energy factors for fuels (SAP Table 12).
- New Cooling & Heat Network fields.

SAP to HEM Transition

- The FHS consultation responses confirmed the following transition;
 - At least 3 months after the FHS is released (24th March 2026) that HEM will be ready and become an approved methodology for the FHS.
 - Then at least a two year dual running period will begin where SAP and HEM can be used for the FHS.
 - Towards the end of the dual running period MHCLG will give a six month notice that HEM will be taking over from SAP.
 - At the end of the six month period any uncommenced plots must be assessed on HEM

Estimated Timeline

HEM Approved

> 3 months later HEM
Methodology approved,
dual running commences

Notice of end of dual running

Government signals HEM
to take over with at least
six months notice

HEM only transition ends

HEM must be
used for new
work

**March
2026**

**Mid
2026**

**March
2027**

**Late
2027**

**March
2028**

**Early
2029**

FHS released

SAP 10.3 available

FHS commences

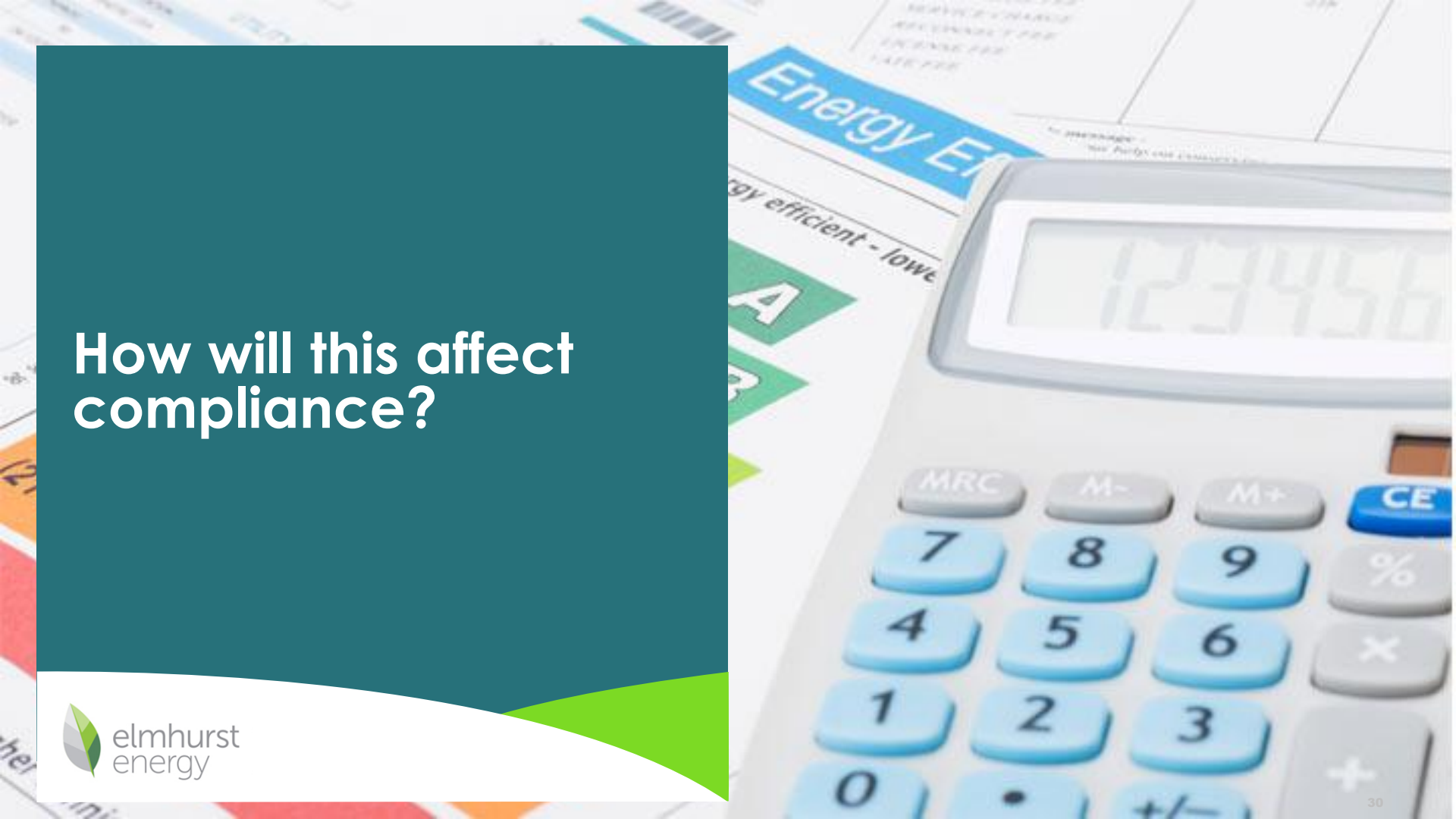
FHS commences within
Building Regulations

Transitional arrangements
commence

Transitional arrangements end

HEM only transition begins

Work that commences can use
SAP 10.3

The background of the slide features a close-up, slightly blurred image of a white and blue calculator. The calculator's LCD screen displays the numbers '123456'. Below the screen, the numeric keypad is visible with blue buttons for digits 0-9, a decimal point, and a sign change button. To the left of the calculator, there is a document with a blue header that reads 'Energy Efficiency'. Below this header, the text 'Energy efficient - lowe' is partially visible. There are also green and yellow rectangular labels with the letters 'A' and 'B' on them. The overall scene suggests a focus on energy costs and efficiency.

How will this affect compliance?

Modelling the impact

- Using SAP 10.3 we undertook modelling to reflect the new Primary Energy, Carbon and Fabric Energy targets.
- Took a typical developer house in Part L 2021 to see how it performs...

Semi Detached Dwelling – Mains Gas

 47 m² GFA with Part L 2021 spec

 Wall – 0.25 w/m²k Roof – 0.11 w/m²k Floor – 0.15 w/m²k

 Doors – 1.2 w/m²k Windows – 1.2 w/m²k, g-0.45

 Air Test – 4.5 m³/m²/hr @ 50 Pa

 dMEV

 89.5% mains gas combi boiler

 Time and Temp zone controls, smart thermostat

 WWHRS Connect to showers

 0.81 kWp PV array

	Actual	Target
Primary Energy	53.46 kWh/m ² /yr	53.72 kWh/m ² /yr
Carbon	9.94 kgCO ₂ /m ² /yr	10.31 kgCO ₂ /m ² /yr
Fabric Energy	33.48 kWh/m ² /yr	33.62 kWh/m ² /yr

Semi Detached Dwelling – Mains Gas



Assessed on FHS/SAP 10.3



With PV requirement (4.19 kWp)

	Actual	Target
Primary Energy	15.92 kWh/m ² /yr	-1.42 kWh/m ² /yr
Carbon	7.78 kgCO ₂ /m ² /yr	-1.02 kgCO ₂ /m ² /yr
Fabric Energy	30.86 kWh/m ² /yr	30.76 kWh/m ² /yr

Semi Detached Dwelling – SAP Heat Pump



Reduced wall u-value to 0.22 w/m²k



Switched to a default heat pump



Lighting improved to 105 l/w

	Actual	Target
Primary Energy	1.59 kWh/m ² /yr	-1.02 kWh/m ² /yr
Carbon	-0.88 kgCO ₂ /m ² /yr	-0.99 kgCO ₂ /m ² /yr
Fabric Energy	29.61 kWh/m ² /yr	30.76 kWh/m ² /yr

Semi Detached Dwelling – PCDB Heat Pump

Switching to PCDB heat pump, final spec:

 Wall – 0.22 w/m²k Roof – 0.11 w/m²k Floor – 0.15 w/m²k

 Doors – 1.2 w/m²k Windows – 1.2 w/m²k, g-0.45

 Air Test – 4.5 m³/m²/hr @ 50 Pa

 Y-value 0.024 w/m²k

 dMEV

 PCDB ASHP

 Time and Temp zone controls

 WWHRS Connect to showers

 4.19 kWp PV array

	Actual	Target
Primary Energy	-5.72 kWh/m ² /yr	-1.15 kWh/m ² /yr
Carbon	-1.22 kgCO ₂ /m ² /yr	-1 kgCO ₂ /m ² /yr
Fabric Energy	29.61 kWh/m ² /yr	30.76 kWh/m ² /yr

Heat Networks



Heat Network Types

- Part L 2021 all types/scales of heat network were assessed in the same way.
- In FHS this will be differentiated as follows;

Type	Description
Communal heating	A heat network by means of which heating, cooling or hot water is supplied only to a <u>single building</u> divided into separate premises, for example to both dwellings and non-dwellings in a mixed-use building or a building divided into separate premises.
District heat networks	Systems that supply heat from a central source(s) to consumers in <u>two or more buildings</u> , via a network of pipes carrying hot/warm liquids (generally water). Heat networks can cover a large area or even an entire city, or can be relatively local, supplying a small cluster of buildings.

- The notional dwelling is altered depending on which type is present.

Heat Networks & Sleaving

- ❖ It must be demonstrated that over the course of a year, at least 90% of the thermal energy calculated as delivered to the new building or dwelling by a heat network (in kWh) is provided by low-carbon heat sources.
- ❖ Low carbon heat sources;
 - ❖ Electric heat pumps
 - ❖ Waste heat from power stations
 - ❖ Geothermal heat
 - ❖ Electric boilers
 - ❖ Solar thermal
 - ❖ Biofuels
- ❖ Sleaving cannot be applied to Communal Heating systems.
- ❖ Temporary heating systems must be from one of the above sources.

Notional Dwelling - Services

	Part L 2026 (FHS)
Space + Water Heating	If single dwelling heating system or unsleeved heat network - individual Air Source Heat Pump with SCOP of 2.5. If sleeved heat network – same as actual dwelling If communal heating system – Communal heat pump, 300% efficient, distribution loss factor 1.15.
HIU	Where the sleeved heat network approach or communal heating system for heating and/or water heating is used, HIU data is obtained from PCDB entry 400011. Otherwise, not applicable.

Final Thoughts



- FHS is broadly as expected.
Low carbon heating, mandatory PV, tighter transitional arrangements.
- Functional requirement for PV significant
High capacity of panels, exemptions etc.
- SAP 10.3 available, HEM coming later this year.
- Further FHS CPD will be ready soon.