

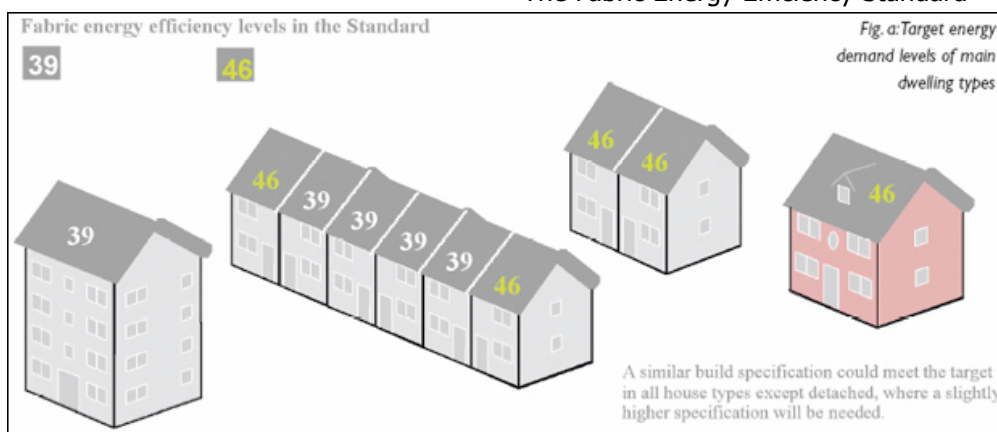
Fabric Energy Efficiency Standard



What is the Fabric Energy Efficiency Standard (FEES)?

Presented as a new Standard, the recommendations aim to deliver a high yet practical energy performance level for all new homes. The Standard focuses on the fabric of the home, to secure long lasting benefit for home owners and occupiers, and to make sure that energy efficiency plays a proportionate part in the ultimate delivery of zero carbon homes.

'Minimising energy demand will ensure that dwellings utilise Low and Zero Carbon (LZC) energy sources in the most efficient way. Focusing efforts on



the comparatively long-lived building fabric helps to 'future proof' homes meaning they will be less likely to require difficult and expensive refurbishment upgrades at a later date.

Energy Standard

The Energy Efficiency standard takes into account:

Building Fabric U Values

Thermal Bridging

Air Permeability

Thermal Mass

Solar, metabolic, lighting & appliance heat gains

Carbon Standard

The Carbon Compliance Standard takes into account:

Heating/Cooling appliances

Mechanical Ventilation

Hot Water

Active Controls

Fixed lighting

All LZC technologies

and includes the Energy Efficiency Standard.

The Fabric Energy Efficiency Standard

is measured in kWh/m²/year.

They are already used in the current Code for Sustainable Homes instead of the HLP in the allocation of credits.

Building Regulations from 2013?

They are due to come into the building Regulations from 2013 onwards.

2 figures have been set:

39 kWh/m²/year for mid terrace houses and flats

46 kWh/m²/year for semi's, detached and end terraced.

Fees Summary for clients

For all SAP2009 reports we produce we will automatically provide our client with the FEES summary printout. We thought it would be useful for architects and developers to know how their current designs are performing against this new standard, so that when it does become part of the Building Regulations in the next couple of years, they would have better knowledge in how to comply.

Calculations

The calculation sheet lists input from completing the SAP, under different headings:

Dwelling Dimensions for its volume
Ventilation Rate to establish infiltration and air change rates

Heat Losses from the building fabric by using the U Values, thermal mass parameter, thermal bridges, the heat loss parameter and ventilation losses
Water heating requirement

Internal Gains from metabolic, lighting, appliances, cooking, pumps & fans, water heating minus losses e.g. evaporation

Solar Gains taken from the glazing input

Mean Internal temperature

all of which go into calculating the two figures for the Space Heating & Cooling Requirements.

These two figures are then divided by the total floor area to produce a final FEES figure.

All of the calculations are completed automatically within the SAP software, to provide the printed report we give to our clients.

For each project we will monitor the effect of changes we make to the SAP input and notify the client of the affect on the FEES figure, keeping them up to date with how their design meets this new target on the road to zero carbon.

For further information on how **Energy Saving Experts** can help you, call 01225 862266

www.energy-saving-experts.com