

RATINGS COULD JUMP FROM AN E TO C UNDER NEW REGULATIONS

THE LATEST VERSION OF SBEM

(Simplified Building Energy Model) for England, version 6.1, has been released by the Government to support the new building regulations for non-domestic buildings which take effect on 15th June 2022. This significant change will also affect the energy assessment of existing buildings for the purposes of an EPC.

THE LATEST VERSION OF SBEM

Over the past couple of years, the decarbonisation of the national electricity grid has been hot topic on the government's agenda. The UK is transitioning to low carbon electricity with coal power stations being decommissioned and replaced with new low carbon power stations.

In 2013, the electricity grid was fueled mostly by fossil fuels, this was reflected in the carbon factor used within SBEM to calculate the emissions produced by a building based on its calculated energy consumption. Today, we can see that 30-40% of the electricity is produced by renewable or low carbon fuels. In 2020, it was recorded that a record high 53% of the electricity within the grid, came from renewable or low carbon sources.

Within the new version of SBEM, the carbon factor of electricity has been updated to an improvement of around 73% on the previous 2013 values. This highlights the need to make regular updates to SBEM to ensure that our energy assessments are providing accurate and relevant information to our customers and government.

WHAT DOES THIS MEAN FOR NON-DOMESTIC EPCS?

Domestic EPCs are a cost metric, but as the EPC rating for non-domestic buildings is based on the CO2 emissions, any change to the carbon intensity values will impact the predicted carbon emission and hence the EPC banding and the EPC rating. As it has been over 8 years since the industry had a regulations change, that change is sizeable.



Natural Gas

As the carbon factor for electricity has improved, conversely the carbon factor for natural gas has increased (got worse) slightly. Meaning that a building heated by natural gas will likely receive a poorer rating.



SBEM Analysis

Our accrediting body have modelled a number of scenarios and provided some analysis of our findings to demonstrate this change.

14 test projects were calculated using the current version (SBEM v5.6) and converted to the new version, v6.1. No inputs were changed during this process. The changes in EPC ratings are entirely based on using the new version of SBEM v6.1 that will be available for use from 15th June 2022.

Improvements to EPC ratings and bands have been highlighted in in green where as for EPC ratings and bands which have worsened, these are highlighted in red.

SUMMARY OF ANALYSIS:

- ✔ 9 of the 14 projects were heated by electricity. 5 were heated by natural gas.
- ✔ All 5 natural gas heated projects got worse with 3 of the 5 changing by one EPC band.
- ✔ All 9 grid electrically heated buildings got a better rating.
- ✔ Some ratings went from an F rating to a D rating.
- ✔ It is clear that the worse the rating the bigger the jump in bands.

It maybe worthwhile re running EPCs in current version of Sbem before undertaking refurbishment works.

EPC RATING AND BAND



BER DIFFERENCE BETWEEN SBEM



For more information, contact us at info@carbonprofile.co.uk