



## Energy Performance Certificate (EPC) and its impact on UK Minimum Energy Efficiency Standard (MEES)

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### Abstract:

In the light of the growing concern over global warming and the EU's ambitious goal of 80% reductions in greenhouse gas emissions by 2050, the UK Government has recently introduced a new legislation targeting the energy performance of commercial buildings. This legislation which is called Minimum Energy Efficiency Standard (MEES), requires the commercial buildings to hold an energy performance certificate (EPC) rating of minimum E or above, before any deal can be made on the property. The EPCs were first introduced in the UK in 2008 and have been considered an energy signal tool for the market ever since. The process for generating non-domestic EPC in the UK is usually carried out in a software called SBEM, which is simplified energy model of the building. Considering the available evidences from the literature that the EPCs generated through different software for the same building tend to be different from one another, it is of high importance to investigate the accuracy and reliability of EPCs, especially with new requirements, where failing to secure the minimum levels required by the MEES can result in hefty penalties. The current study generates the EPCs for three UK hotel buildings by using a combination of detailed site survey and thermal analysis simulations and compares them against the existing commercial energy assessment for the concerning buildings generated through SBEM. Furthermore, this study will also investigate the potential discrepancies and the reasons behind this.

### Biography:

Shiva Amirkhani is a registered architect from Iran with a master's degree from Bartlett, UCL, focusing on the



impact of built environment on human health, comfort and wellbeing. Her research interests include energy analysis of the buildings and building simulation, the impact of built environment on human health and comfort and sustainable design. She started her PhD in January 2019 at UWL and her project is about the UK Government's MEES legislation and its impact on hotel buildings. In her PhD she is focusing on energy efficiency, cost-effectiveness and occupant thermal comfort in hotel building.

### Publication of speakers:

1. Committee on Climate Change Meeting Carbon Budgets – ensuring a low-carbon recovery: 2nd Progress Report to Parliament Committee on Climate Change; London, 2010;
2. Communities and Local Government A User Guide to iSBEM: EPC Generation - UK; 2018; pp. 1-100;.
3. Department for Communities & Local Government National Calculation Methodology (NCM) modelling guide (for buildings other than dwellings in England and Wales); 2013; pp. 1-34;.

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