elmhurst energy

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Elmhurst Energy's response to:

PAS 2038: Retrofitting non-domestic buildings for improved energy efficiency

Prepared for: BSI

Introduction

Elmhurst Energy are an Accreditation Scheme specialising in the training, monitoring, and support of energy assessors across the UK. The energy assessment industry is well established and with over 10,000 qualified and accredited assessors, over 1,000 of which are specialists in the commercial sector, they need to be the first point of call for designing, promoting and delivering the energy efficiency scheme. Once engaged these individuals, whose passion is to save energy, will be excellent ambassadors for any scheme.

We are very excited to have received the draft PAS 2038 specification centred on non-domestic buildings and the retrofitting process to help achieve Government energy targets. Presenting the way in which the energy assessment industry can be a driving force in helping the UK become carbon neutral by 2050 and improving the energy efficiency of buildings. Our response brings together the opinions of Elmhurst and our members in a concise and valid view point, focusing on sections 4.1, 5.1, 6, 8 & 12.5. In formulating our views we shared a draft with our non-domestic energy assessor members and we were pleased that 54 were sufficiently engaged to share their views with us in writing. As requested those views have been reflected in this document.

Executive Summary

It's great to see an advancement and focus on non-domestic buildings within PAS 2038 and Elmhurst totally support the aims of this new specification. However, an opportunity has been lost to implement the measurement of crucial energy efficiency of buildings through the national approved and regulated methodologies of Simplified Building Energy Models (SBEM) and Display Energy Certificates (DEC). Elmhurst feel that Non-Domestic Energy Assessors (NDEAs) should have the opportunity to be part of the retrofit project team and use their well-established accreditation, quality assurance, insurance, knowledge, expertise and competency in the energy assessment industry. There is a common goal to be achieved and we feel the strong capabilities and nationally approved methodologies already present in the industry have been omitted in the draft PAS 2038: Retrofitting non-domestic buildings for improved energy efficiency specification. The draft PAS 2038 seems to be "re-inventing the wheel" when there is already a major energy assessment industry ready to deliver the requirements of the PAS 2038 specification.

We have unified the opinions of our non-domestic energy assessor members and Elmhurst to consolidate our views into 3 main points:

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1. To acknowledge and include the role of existing accredited Non-Domestic Energy Assessors and DEC assessors, suitably upskilled to meet the extended requirements of PAS 2038
2. To encourage the use of SBEM, the Government's approved National Calculation Methodology (NCM), which is currently used for assessing the energy efficiency of non-domestic buildings.
3. To encourage the use of DECs – the Government's approved methodology for undertaking occupancy assessments and should be used instead of CIBSE TM54.

In our view, PAS 2038 needs to ensure that we understand firstly: the 'asset' (the building), secondly the 'occupancy' (the people), to predict what the people will do within the building and finally measure the 'metered' (in-use) data. We currently use the Government's approved and preferred NCMs for the asset (SBEM) and the occupancy (DECs), working in hand with metered data to provide us with the right solution. All 3 together will solve the energy efficiency measurement dilemma. With this we will have a collective approach to start to use the outputs to drive the behaviours we require to meet the Government mission, which is underpinned by the National Calculation Method. The phrase "if you can't measure it, you can't manage it" provides insight in to the advantage of collecting nationally approved data – using the asset and the occupant's behaviour, to understand the metered use.

Response

4.1 Qualification of project team members

In this section a list of suitable qualifications are provided for competent candidates that wish to become a 'project team member'. Elmhurst are disappointed at the exclusion of Non-Domestic Energy Assessors and DEC Assessors.

When reviewing the specification you can easily identify the scope and requirements needed to carry out the retrofit scheme and we believe that NDEA's and DEC assessors are more than competent in being part of the retrofit assessment process. However, if necessary training is required to upskill assessors in the industry, a course for required knowledge can be provided, similar to the requirements needed for the PAS 2035 retrofit of domestic buildings. We conducted a survey to gather the opinions of our members and their responses to PAS 2038, and 66% of Elmhurst members believe that energy assessors will require upskilling and PAS 2038 specific knowledge to be part of the retrofitting team.

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The inclusion of accredited non-domestic energy assessors will ensure that work is delivered by individuals who are trained, supported, monitored and insured by an already established and Government approved industry. This industry already has the resources to fulfil the demand required, to encourage the energy efficiency market to grow, scale, and innovate through the PAS 2038. Elmhurst recommends the use of trained, qualified and competent non-domestic energy assessors and DEC assessors. All of which are currently involved in completing energy assessments for Government regulations such as Minimum Energy Efficiency Standards (MEES) and Part L2 new build regulations. These are current Government regulations that require accurate, consistent and regulated calculations of the energy performance, and efficiency of non-domestic buildings. This provides expert and knowledgeable advice on how building owners could improve the energy efficiency of their buildings. The PAS 2038 draft requirement is already available and ready to utilise.

90% of all respondents agreed with Elmhurst that Non-Domestic Energy Assessors and DEC assessors should be included as competent and accredited qualifications within the PAS 2038 specification.

Elmhurst recommend that the following qualified candidates are included in the specification:

- **Non-Domestic Energy Assessor Level 3, 4 and 5**
- **Display Energy Certificate Assessor**

5.1 Requirement for assessment prior to retrofit

Section 5 outlines the need for prior assessments of non-domestic buildings in preparation of the retrofit process, to identify areas susceptible to large energy losses. There are four categories of which data must be collated: Context, Condition, Occupancy and Energy performance.

SBEM calculations can provide authentic data on the context and energy performance of a building, however there is no inclusion of SBEM calculations within the specification. The calculation provides crucial data on the energy efficiency of a non-domestic building, as well as being supported by a nationally known, tested and regulated system - the National Calculation Method. Elmhurst would expect the acknowledgment and validity of an SBEM calculation to be part of the retrofit assessment process specified in PAS 2038.

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An EPC and SBEM calculation is used as a basis for many Government regulations, such as MEES, and it seems arbitrary not to follow the same consistent method for which the energy performance and efficiency of non-domestic buildings is assessed. BEIS have expressed the need for building owners to improve their energy efficiency, applying the minimum EPC rating of an E as a valid determinate of a buildings energy performance, with the future trajectory of the non-domestic private rented sector minimum efficiency standards likely to tighten to C or B rating by 2030. Any future standards must be developed in line with current regulations and standards to ensure consistency and effectiveness when being implemented. This allows building owners to easily follow and adopt any new requirements with little impact on their businesses and productivity. If adopted, the current SBEM calculation that is already well known and established in the non-domestic property sector, will ensure a smooth and seamless transition into the retrofitting process for building owners.

Elmhurst recommend that an SBEM calculation and EPC are introduced in the retrofit process, as the Governments approved method of collecting energy performance data.

6 Evaluation of improvement options

Section 6 makes reference to a Display Energy Certificate (DEC) in a note, as an alternative assessment to that of the 'energy performance simulation model consistent with the guidance in CIBSE TM54'.

A DEC is a legal, approved, and regulated assessment method used to identify the energy consumption of a building and already written in to the schema of energy assessment. DEC assessors have an official qualification, are competent, and experienced in recording the energy usage of a building, as well as identifying its services. An Operational Ratings Calculation (ORCalc) is the Government's approved and regulated assessment method used to calculate energy ratings based on consumption - being a logical and clear indicator of a buildings energy efficiency and carbon emissions.

PAS 2038 reiterates the need to lower emissions and comes off the back of the Government's mission to become carbon neutral. Therefore, we do not understand why a tested and proven method of calculating energy usage has not been employed as a crucial step within the retrofit assessment process.

Elmhurst recommend that a DEC assessment is listed as an equally appropriate method to calculate the energy usage of a building.

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8 Preparation of a medium-term improvement plan

Point b states that the assessor should "report the energy performance of the existing (i.e. unimproved) building as calculated during the improvement option evaluation (see Clause 6) and compare it with the relevant benchmarks for buildings of the same type in CIBSE TM46 [N3] or the CIBSE Energy Benchmarking Tool [N4]"

An SBEM calculation and EPC is a detailed report of energy performance and compares the asset rating to appropriate benchmarks associated with the typical building of existing stock and of newly built. The PAS 2038 specification suggests that there should be a new way of retrieving such data with the use of CIBSE TM54, instead of using the original and nationally approved methods already present in the industry.

Accordingly, Elmhurst recommend in this stage of the process that an SBEM calculation and EPC are introduced, as a standard and approved method of collecting energy performance data based on the NCM.

12.5 Fine tuning

This section relates to the assessments needed to show whether an improvement to the energy efficiency of the building has been made. In most cases a nationally approved method such as an SBEM calculation and an EPC would be able to show the true improvements made to the buildings fabric and services. However, this method has not been adopted within the fine tuning process. Aforementioned, DEC's also use the NCM, supported and regulated to assess the occupation of a building compared to its relevant benchmarks. The draft specification has failed to utilise the nationally approved methods of calculating energy efficiency, it is imperative to assess buildings using the NCM as a standard already set out by Government.

Elmhurst and our members recommend that this section is revised to include an EPC and DEC for the basis of identifying energy performance changes post-installation, as nationally approved methodologies using the NCM.

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Other

The draft specification of PAS 2038 does not consider a buildings alignment with the latest building regulations when making energy efficiency improvements. All non-domestic buildings must abide to the regulations specified in Building Regulations Approved Documents Part L2 (Conservation of fuel and power). In this case an assessment should be implemented to evaluate whether the building meets the compliance criteria - an aspect to be considered if the specification is to succeed. SBEM is currently used to calculate and determine what meets the latest buildings regulations via a Building Regulations UK Part L (BRUKL) compliance output document driven by Part L2 and would therefore, benefit the specification in meeting non-domestic building criteria.

It's clear throughout this response that the National Calculation Method should be used within the PAS 2038 specification as the national approach to represent energy data. Elmhurst can confidently state, 100% of all respondents in our survey agreed that the National Calculation Methodologies and Display Energy Certificates should be included as the nationally approved and suitable methods of assessing the energy efficiency and consumption of buildings in the PAS 2038 specification.

We must to utilise what is already present in the industry and proven to help achieve the Government's mission in order to succeed in improving the energy performance of non-domestic buildings.

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