



Display Energy Certificates Consultation Response

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(i) **Are the views expressed on this consultation an official response from the organisation you represent or your own personal views?**

Organisational response



Personal views

Are the views expressed on this consultation in connection with your membership or support of any group? If yes please state name of group:

Yes



Name of group:

Chartered Institution of Building Services Engineers

The Chartered Institution of Building Services Engineers is the professional body that exists to:

'support the Science, Art and Practice of building services engineering, by providing our members and the public with first class information'

CIBSE members are the engineers who design, install, operate, maintain and refurbish the energy using systems installed in buildings, including homes, and are specifically trained in the assessment of heat loss from building fabric and the design of energy using systems for the provision of heating and hot water, lighting, ventilation and cooling and small power distribution in homes.

As an Institution CIBSE publishes Guidance and Codes which provide best practice advice and are internationally recognised as authoritative. The CIBSE Knowledge Portal, makes our Guidance available online to all CIBSE members and is the leading systematic engineering resource for the building services sector. Over the last twentyone months it has been accessed over 200,000 times, and is used regularly by our members to access the latest guidance material for the profession. Currently we have users in over 170 countries, demonstrating the world leading position of UK engineering expertise in this field.

This response has been prepared by CIBSE in collaboration with a large number of members, some of whom have also responded directly. This is a measure of the concern of many members with many aspects of the consultation. The consultation has been prepared under the oversight of the Technology Committee of the Institution, who have reviewed and approved the response.

Introductory Remarks

CIBSE's full response to the questions posed by the Department is set out below in section 3 of the response.

The Institution has also provided a thorough review of the policy analysis section of the consultation document, which we consider to have omitted key aspects of the original policy decisions to adopt DEC's in England and Wales, and other key aspects. This review is included as section 2 of the response.

We have also received contributions from a range of energy assessors and some estate operators, and these are included as a separate section and Appendices.

Review of Section 2: Policy Context

The Policy Context section of the Consultation Paper does not set out the full background to the policy of using Operational Ratings and Display Energy Certificates as it was originally developed and explained in the Explanatory Memorandum published alongside the original Energy Performance of Buildings Regulations in 2007. It is important that a number of these amplifications or corrections to the Policy Context are recorded in full. In this review the section is reproduced in its entirety below in normal text, retaining the original paragraph numbering, *with comments inserted in italic text after the relevant paragraph, and numbered C[paragraph.n]*.

Summary

There are two fundamental omissions from the Policy Analysis contained in the DCLG Consultation Document. The first is the fact that the impact assessment for the original Directive actually recommended the use of operational and not asset ratings for the implementation of the requirement for public buildings to display an energy certificate.

The second is that the Directive, both in original form and as recast, clearly expects the public sector to ‘lead the way in the field of energy performance of buildings’. The original impact assessment explicitly stated that the purpose of Article 7(3) is for those buildings to set an example, further stating that ‘good practice would be to renew energy certificates more often than 10 years to ‘sustain regular and effective energy management’.

The Directive

6. The EU Directive on the energy performance of buildings was adopted in 2002. It is designed to improve the energy efficiency of buildings and thus reduce carbon emissions and lessen the impact of climate change. Implementation in England and Wales was completed on 1 October 2008. Energy performance is a devolved matter in Scotland and Northern Ireland, and the UK encompasses Gibraltar for the purposes of this Directive.

Comments

C6.1. The original Directive was adopted on 16 December 2002, and published in January 2003. The original Directive was completely superseded by the Recast adopted in 2010.

C6.2. The original Directive was implemented using two legislative measures. Articles 3-6 covering whole building calculation methods and the provision of energy certificates on construction, sale or rent were implemented via the introduction of the requirements for energy performance certificates through the changes to the Building Regulations introduced in 2006. Articles 7-10 covering display of energy certificates in public buildings, boiler and air conditioning inspections and the provisions for suitably qualified and/or accredited assessors were introduced through the Energy Performance of Buildings Regulations 2007 (hereafter the term EPB Regulations is used) and a number of subsequent amendments.

C6.3. It is relevant to the discussion later in this analysis to note that the original Directive defined the term “energy certificate”, and not “energy performance

certificate". The subsequent development of two alternative regimes for Energy Performance Certificates (EPCs) based on "Asset Ratings" and Display Energy Certificates (DECs) based on "Operational Ratings" was entirely compliant with this original definition (and as shown below remains fully compliant with the updated definition of "energy performance certificate" given in the Recast.

7. A recast of the Energy Performance of Buildings Directive was adopted in 2010. The requirements of the recast of the Energy Performance of Buildings Directive have been transposed into legislation for England and Wales by the Energy Performance of Buildings (England and Wales) Regulations 2012. Some of the requirements of the regulations go beyond the requirements of the Directive.

Comments

C7.1. The Recast clearly states that it is intended not only to address greenhouse gas emissions, but also to address the EU's energy dependency and security of energy supply, in order to reduce EU energy consumption by 20% by 2020. The contribution of the Recast Directive to demand reduction and enhanced security of supply is an essential motive for the Display Energy Certificate regime, as it sets out to make the use and management of energy in public buildings transparent and accountable.

C7.2. The EPB Regulations implementing the Recast were made in December 2012, coming into force on 9th January 2013, six months after the transposition date set by the Recast Directive, which was 9th July 2012.

C7.3. In spite of a number of offers from relevant stakeholders to engage with DCLG to discuss the opportunities of the Recast to streamline and improve the EPB Regulations through the transposition of the requirements of the recast were either ignored or declined. When the 2012 Regulations finally emerged they were published without any prior discussion with any stakeholders.

C7.4 The current consultation, as noted elsewhere, shares this characteristic of a total lack of consultation with the interested experts and the affected stakeholders ahead of the consultation.

8. The focus of this consultation is on the requirements of the Energy Performance of Buildings Directive to obtain and display energy certificates for buildings occupied by public authorities and frequently visited by the public.

Comments

C8.1. It is unfortunate that the Policy Context does not acknowledge the objective of the Directive that "Public authorities should lead by example and should endeavour to implement the recommendations included in the energy performance certificate. Member States should include within their national plans measures to support public authorities to become early adopters of energy efficiency improvements and to implement the recommendations included in the energy performance certificate as soon as feasible." (Recital 23)

9. The Energy Performance of Buildings Directive requires Energy Performance Certificates to be obtained for all buildings when constructed, sold or let, and to be displayed in certain qualifying buildings.

Comments

C9.1 It is essential that the difference between the definition of an Energy Performance Certificate in the Directive and in the EPB Regulations is acknowledged and understood. See the commentary below on paragraphs 10, 11 and 15 onwards.

10. Article 11 of the Energy Performance of Buildings Directive sets out what is required of energy performance certificates, including that:

1. an “energy performance certificate shall include the energy performance of a building and reference values such as minimum energy performance requirements in order to make it possible for owners or tenants of the building or building unit to compare and assess its energy performance.”
2. an energy performance certificate “may include additional information such as the annual energy consumption for non-residential buildings and the percentage of energy from renewable sources in the total energy consumption.”
3. an energy performance certificate “shall include recommendations for the cost-optimal or cost-effective improvement of the energy performance of a building or building unit, unless there is no reasonable potential for such improvement compared to the energy performance requirements in force.”

Comments

C10.1. This explanation of “what is required of an Energy Performance Certificate” fails to fully describe the requirements and provisions of the Directive, for the following reasons:

- a) *Article 2, paragraph 12 of the Recast defines an “energy performance certificate” as ‘a certificate recognised by a Member State or by a legal person designated by it, which indicates the energy performance of a building or building unit, calculated according to a methodology adopted in accordance with Article 3;’*
- b) *Article 3 states that ‘Member States shall apply a methodology for calculating the energy performance of buildings in accordance with the common general framework set out in Annex I.’*
- c) *Annex I begins:*
 1. *The energy performance of a building shall be determined on the basis of the calculated or actual annual energy that is consumed in order to meet the different needs associated with its typical use and shall reflect the heating energy needs and cooling energy needs (energy needed to avoid overheating) to maintain the envisaged temperature conditions of the building, and domestic hot water needs.*
 2. *The energy performance of a building shall be expressed in a transparent manner and shall include an energy performance indicator and a numeric indicator of primary energy use, based on primary energy factors per energy carrier, which may be based on national or regional annual weighted averages or a specific value for on- site production.*

The methodology for calculating the energy performance of buildings should take into account European standards and shall be consistent with relevant Union legislation, including Directive 2009/28/EC.'

*d) it should be noted that the Annex clearly allows for the use of **actual annual energy that is consumed**. It also requires energy performance to be expressed in a manner that is transparent and includes an energy performance indicator and a numeric indicator of primary energy use.*

*e) It should also 'take into account European Standards'. In this context, it is noteworthy that the DCLG Consultation Document makes **NO** mention of standards. It is arguable, therefore, that the consultation on the DEC regime fails to take account of the European Standards (even though the Department is a member of the relevant British Standards committee) and therefore the proposed changes do not adequately address the requirements of Article 3 and Annex I of the Directive.*

11. In England and Wales those requirements have been implemented through two regimes – the Energy Performance Certificate regime for when buildings are constructed, sold, or let, and an additional regime – the Display Energy Certificate regime - for public authorities.

Comment

C11.1. This paragraph sets out to infer that DEC's are an additional "regime" that go beyond the requirements of the Directive. That is not the case. It is at best an inaccurate paragraph, and at worst it sets out to make a false case against Display Energy Certificates. This is of fundamental importance, and was dealt with at some length in the extended stakeholder engagement and consultation process during 2005-6 over the implementation of the original Directive. The relevant section of the Explanatory Memorandum is Annex C, which begins on page 81 of the document (page 94 of the pdf file). The original Directive, and the Recast, allow either calculated ratings or those based on actual metered consumption. To suggest that adopting DEC's is not a legal requirement is incorrect. DEC's are one legitimate way of implementing the original Directive and the Recast. As is set out in the comments below, they were justified on the basis of being the more cost beneficial solution and are therefore not "gold plating".

C11.2. The original Directive covered energy certificates for both construction sale or rent and for public display in Article 7, in separate paragraphs. The Impact Assessment noted that the purpose of Article 7(3) which covered public display was on regular assessment to inform and motivate improvement:

The focus of Article 7(3) is larger buildings (i.e. those with a total useful floor area >1,000m²) occupied by public bodies and public institutions which the Directive suggests (see Recitals 16) should set an example by taking environmental and energy considerations into account, and therefore should be subject to energy certification on a regular basis. Article 7(3), in the same way as Article 7(1), states that certificates should be no more than 10 years old. However, good practice would be to renew them more often to sustain regular and effective energy management.

C11.3. The Assessment went on to note that having Asset Ratings and Operational Ratings was consistent with the then emerging, and now published, European Standards:

“[BS] EN15217 *Energy performance of buildings – Methods for expressing energy performance and energy certification of buildings*” recognises that there are two alternatives for energy certificates which can be used for different purposes:

- The **Asset Rating**, which is a theoretical calculation of the expected energy performance of the building based on a standardised set of activities and subject to a standardised climate i.e. isolated from the way it is used.
- An **Operational Rating**, which is based on the measured performance of the building in use.

C11.4. The Impact Assessment goes on to explain the cost benefits of the Operational Rating approach for display purposes in public buildings:

“10. The EPC to be made available at sale or let (Article 7(1)) should be the Asset Rating (AR), since this best informs the purchaser or tenant about the likely performance of the asset being procured. The Operational Rating (OR) or Measured Rating²⁴ though is a measure of performance that reflects both the energy efficiency potential of the building and the way that it is being operated. Experience shows that a major cause of excessive energy consumption is poor building management, and that the most cost effective energy savings are those no and low cost measures that are the product of improved energy management. **Accordingly, given that the balance of benefits and costs is heavily in favour of the OR, this is the recommended route for implementation for Article 7(3).**

11. Further, public buildings are unlikely to be sold or rented out and an EPC which allows comparison with other properties in the market is less relevant. The intention of this Article is to raise awareness of energy use in the general public and provide additional motivation to the public sector to improve energy performance and energy management of their buildings. However, public authorities may also wish to procure an AR in addition as an aid to understanding energy use within the building and for estimating the benefit of any energy saving investments, but this will not be a statutory requirement. Similarly, the public authority may use the OR approach at a more detailed level if suitable sub-metering is installed but again this is not discussed here as it will not be a statutory requirement.

12. To encourage better energy management, a DEC could be required annually. The Directive allows DEC to be valid for up to 10 years and a requirement for an EPC every year could be seen as too onerous. However, the use of the OR approach together with appropriate software should reduce the costs of producing the DEC so that an annual certificate is still cost-effective.”

C11.5. The issue of the relative costs of EPCs and DECs is addressed elsewhere in the CIBSE response, and the evidence presented indicates that the original estimates of the relative costs and therefore of the potential benefits are realistic and borne out by subsequent experience.

C11.6. Display Energy Certificates (DECs) are fundamentally not an additional regime. They are a cost beneficial alternative form of energy certificate, as defined in the original Directive, and not the ‘additional’ (and burdensome) imposition which they are made out to be in certain quarters.

C11.7. The argument put forward for the development of the two alternative approaches, Asset Ratings based on an assessment of the building fabric and systems for EPCs for construction, sale or rent, and Operational Ratings based on actual metered energy usage by floor area and building type for Display Energy Certificates, was based on a thorough analysis of the relative costs and benefits of the two approaches, and of the potential benefits which annual rating of public buildings offered to the public purse.

C11.8. The original Impact Assessment noted the potential benefit of DECs for the delivery of public services as follows:

- *‘As noted in Recitals 16 of the Directive, the display of energy certificates in public buildings will result in a greater awareness of the importance of energy use and its environmental impact which may have a positive effect on the implementation of the other parts of the Directive as well as on members of the public.*
- *Money saved as a result of better energy management could be used directly for the public services concerned with corresponding social benefits.’*

The objective of the proposals for annual DECs was to enable improved energy efficiency in public buildings in order to reduce spending on energy and release money for the delivery of frontline services. Although the consultation document argues for the reverse: reducing the frequency of DECs to release money for frontline services, the experience of the DCLG Regional offices in Birmingham suggest otherwise. Here the DEC is estimated by those familiar with the building to have saved taxpayers £800,000 over six years, and shows that DECs are a cost effective means of identifying energy waste and eliminating it.

C11.9. This approach also engaged seriously with the requirement of the original Directive for the public sector to demonstrate leadership, as described in Recital 23. (The UK legal argument that the Recitals are not part of the text is understood, but as the experience with the Construction Products Directive, now a Regulation, shows, this approach tends to lead to a more direct legislative approach to the matter by the Commission and will in the longer term increase the prospect that the expectations of the Directive will be imposed by subsequent Regulation.)

C11.10. The omission of this full analysis of the original policy development and the justification for the status quo, or the “do nothing” option for this present Consultation, is deeply regrettable. The fact that this full analysis was not presented when collective agreement was obtained for the Consultation renders the exercise deeply flawed at best.

12. All energy certificates must be issued by qualified energy assessors, who themselves must belong to an approved accreditation scheme before they are able to lodge any certificate on to the central register of all energy certificates and related documents.

Comment

C12.1. The Consultation hardly acknowledges that many assessors are sole traders, or micro-businesses, and could be very significantly affected by the proposals. Nor does it acknowledge the impact of the proposals on the approved accreditation schemes.

13. Accreditation schemes are responsible for managing energy assessors and for monitoring the quality of the Display Energy Certificates by ensuring that their assessors are competent and possess the appropriate skills to conduct energy assessments. There are currently 10 government approved accreditation schemes that manage the energy assessors who produce Display Energy Certificates. In order to manage this process, most accreditation schemes will charge their assessors an administration fee each time a Display Energy Certificate is lodged on the Energy Performance of Buildings Register. The administration fee covers the cost of the quality assurance audit regime, insurance and technical support services.

Comment

C13.1. This is incorrect. There is a lodgement fee which is charged by the Register operator for each certificate lodged. The administration fee covers the cost of that lodgement, and will contribute towards the cost of the QA regime, governance infrastructure, insurance and technical support services. The 10 schemes have a variety of business models and cover their operating costs in a variety of ways. It is regrettable that the Department chose not to engage with stakeholders on this point to ensure that it is accurate prior to publishing this Consultation Document.

14. The Register Operator manages the Energy Performance of Buildings Register, through a concession contract, on behalf of the Department for Communities and Local Government. The operational cost for developing, maintaining and implementing register changes are funded through a lodgement fee which is subject to an annual service review.

Comment

C14.1. It is worth noting that the Department had to make a payment of £5.7m to Landmark Information Group in September 2013 to cover the shortfall in certificate lodgements over the previous several years. For the full Written Statement by then Housing Minister Mark Prisk on 13 September see <http://www.publications.parliament.uk/pa/cm201314/cmhansrd/cm130913/wmstext/130913m0001.htm>

As was explained at the time in an analysis of this announcement, the shortfall arose in part due to non-compliance with the requirements for lodgement of EPCs, DEC's and air conditioning inspection reports. For the full article see CIBSE Journal, November 2013, page 25 at <http://www.cibsejournal.com/archive/PDFs/CIBSE-Journal-2013-11.pdf>

Energy Performance Certificates

15. An Energy Performance Certificate indicates how energy efficient a building is. The certificate provides an asset energy rating of the building (it reflects the potential energy efficiency of a building), where A is the most efficient (or A+ in the case of a building that is not a dwelling). The higher the rating, the more energy efficient the building is and the lower the fuel bills are likely to be. An Energy Performance Certificate is required

whenever a building is newly constructed, sold or is let to a new tenant. The purpose of an Energy Performance Certificate is to show prospective tenants or buyers the energy efficiency of the building.

Comment

*C15.1. Actual energy efficiency depends on the operating regime of the occupied building. For the purposes of producing EPCs which are comparable from one building to the next, standardised assumptions about occupancy hours and patterns are made. In reality, occupiers will adopt different hours and patterns of occupation, which will affect the actual energy use. It is therefore more accurate to say that “The higher the rating, the greater **the potential for** the building to be operated in an energy efficient manner and for the fuel bills to be lower.” However, this is not absolutely guaranteed, as SBEM, the tool used to calculate the ratings, is a simplified model. The document would also be more accurate if it stated that that EPCs are intended “to show prospective tenants or buyers the **potential** energy efficiency of the building.” It is wrong and misleading to suggest that an EPC gives any firm indication of actual energy consumption and performance in use, and it was never intended that Asset Ratings would be used for this purpose.*

Display Energy Certificates

16. A Display Energy Certificate shows the energy performance of a building (the operational rating) based on the actual energy consumption as recorded over 12 months. It informs the current occupant how they are using the building.

Comment

C16.1. An Operational Rating shows occupants and the public, including taxpayers who fund the services provided in that building, how efficiently the occupier uses energy in the building compared to similar public buildings, and how well they are stewarding taxpayers’ money.

17. A Display Energy Certificate is accompanied by a recommendation report, which enables the occupier to identify what may be done to improve the building and the way they use it in order to make it more energy efficient. The report contains zero and low cost operational and management improvements, possible upgrades to the building fabric or services and opportunities for the installations of low and zero carbon technologies. This consultation seeks views on ways to modify the regime to improve compliance with and enforcement of the requirements regarding Display Energy Certificates in order both to ensure Display Energy Certificates are effective and that the UK is complying with the requirements of the Energy Performance of Buildings Directive.

Comment

C17.1. CIBSE and a number of others have expended many weeks of effort and tens of thousands of pounds of resources, both of our organisations and our staff, volunteers and members, analysing the implementation of the DEC regime and seeking to identify ways to improve the regime, and, critically, the outcomes of having DEC. We have offered our suggestions and sought engagement with the Department on a number of occasions since 2010, with very little success. Given the Cabinet Office guidance on Consultations, it is highly regrettable that the Department has issued this Consultation Document without

undertaking any prior stakeholder engagement with those who have been offering expert help to improve the DEC regime for years.

C17.2. A major area of concern amongst leading assessors and professional commentators has been the ineffectiveness of the Advisory Report regime. We have also noted the relative effectiveness of Operational Ratings in schools, and made a number of recommendations for improvements to the OR approach and the provision of site based DEC's for campuses. We would welcome a serious technical dialogue on these ideas to take them forward to ensure that the UK public sector and the taxpayers who fund it derive maximum benefit from the implementation of display energy certificates in England and Wales.

Compliance with Article 11 of the recast Energy Performance of Buildings Directive

18. Display Energy Certificates show actual energy consumption of a building in a manner that allows comparison and are accompanied by reports which provide recommendations on potential energy saving measures. Display Energy Certificates meet the basic requirements of Energy Performance Certificates, as set out in Article 11.

Comment

C18.1. And they meet the overall requirements for energy performance certificates as set out in Article 3 and in Annex I of the Recast, as noted above. Operational Ratings and Display Energy Certificates are currently fully compliant with the Recast.

19. However, our Display Energy Certificate regime may exceed the requirements of Article 11. Article 11 stipulates that the energy performance certificate shall be valid for no longer than 10 years.

Comment

C19.1. See the detailed justification of the original adoption of ORs and DEC's on cost benefit grounds. Adopting DEC's on a ten year cycle eliminates the benefits, as even a three year old DEC is useless for informing energy management or for transparency to taxpayers.

20. Currently, a Display Energy Certificate for a building to which this regulation applies is valid for 12 months where the total useful floor area of the building is over 1,000m², or 10 years for buildings with a total useful floor area of over 500m² but below 1,000m², and recommendation reports are valid for seven years where the total useful floor area of the building is over 1,000m² and 10 years for any other building, which could appear illogical as recommendation reports are unlikely to correspond to the most recent Display Energy Certificate.

Comment

C20.1. Once again, this was addressed in the original Impact Assessment, which said "the 7-year period for the validity of measures is considered a reasonable interval as in this time measures on the original list should have been implemented or that a review is needed in the light of new technology, changes to energy prices etc."

C20.2. The one year validity for buildings over 1,000m² and ten years for those of 500m² to 1,000m² arises only because of a decision by the coalition to implement the extension

of DEC's to smaller public buildings by allowing ten year DEC's. This decision does not appear to have been made with any reference to the reasons for annual DEC's, for ideological reasons about not going any further than the absolute minimum requirements of Directives. To argue that the confusion created by this decision is a justification to reduce the frequency of all DEC's to ten years in the light of all the explanation of the original policy position set out above is quite perverse. The confusion could better be resolved by adopting annual DEC's for all buildings that are within the scope of the Regulations requiring a DEC.

C20.3. There is a variance between annual DEC's and seven yearly reports, but that is because the report is likely to identify a programme of potential improvements that will need to be phased over several years, taking account of financial constraints and that some of the measures may most cost effectively be implemented at the same time as other works. It was felt that seven years was a reasonable period to allow for this purpose, as explained in the Impact Assessment.

C20.4. The Department itself was keen to refer to the progress made with its own DEC in its former premises at Eland House when answering a Commons Written Question in July 2014, noting the improvement from a G to a D.

Written Question from Tom Greatrex, Shadow Minister (Energy) 10th July 2014:

“To ask the Secretary of State for Communities and Local Government what estimate he has made of his Department's consumption in kWh of (a) gas and (b) electricity in each month since June 2010; and what the cost of such consumption has been in each such month.” (Hansard Citation: HC Deb, 10 July 2014, c403W)

Brandon Lewis, Parliamentary Under-Secretary for Communities and Local Government 10th July 2014, replied:

“Under this Government, the DCLG Group has made considerable financial savings in energy consumption, reducing its greenhouse emissions by 54 per cent from 2009-10 to 2013-14, saving £1 million comparing 2009-10 energy costs to 2013-14, through energy efficiency measures and better procurement practices.

“I would note that under the last Administration, the Department's main building (Eland House, Victoria) was one of the least energy-efficient buildings in Whitehall, despite it being the lead Department on energy efficiency standards in buildings. In June 2011, the building was awarded a ‘D’ grade display energy certificate, having improved from a notional ‘G’ grade in 2006-07.

“It is not possible to provide meaningful comparable monthly figures since June 2010, as (a) from 2011, the residual parts of the Government office for the regions estate became part of the core DCLG estate, (b) due to billing credits following consumption estimates by suppliers, (c) changes in consumption due to cold weather and (d) additional consumption due to empty office space being sub-let to third-party tenants, generating income to save taxpayers’ money.”

It is also worth noting that the Department of Energy and Climate Change has also been very successful in improving its DEC, motivated by its prominence in this area and the need to demonstrate leadership. A certificate in the reception area, visible to all those who come and go through DECC, appears to have had a significant motivating value. Without annual DEC's neither of these progressions would have been possible.

21. Article 11 also states that, “Subject to national rules, Member States shall encourage public authorities to take into account the leading role which they should play in the field of energy performance of buildings”. Requiring annual Display Energy Certificates is one way of meeting this obligation. It was believed that introducing a more frequent series of updates than the Directive required, the discipline of having to obtain data on annual energy use, calculating an operational rating and displaying the results to the public may have an impact on behaviour and encourage better energy management. The Department of Energy and Climate Change analysed the impact of 48,000 Display Energy Certificates and found that energy intensity (energy consumption per metre square of floor space) fell by 2% more between 2008 and 2009 for public buildings with Display Energy Certificates than comparable private sector buildings. See the ESOS Impact Assessment at <https://www.gov.uk/government/consultations/energy-savings-opportunity-scheme>

Comment

C21.1. We can only assume that the absence of more up to date evidence is because none is available. This is a very poor evidence base on which to propose such significant changes of policy. The 48,000 buildings represent 48m m² of public buildings, and a 2% energy improvement over and above that achieved by other buildings without DECs represents a significant saving of energy, money and carbon. This section underplays what the DECC analysis showed, by only quoting the 2008-09 result of a 2% improvement, rather than the 2009-10 reduction of 12%, which saved some £13m in year in Central Government offices, well in excess of the claimed costs of DECs for those buildings. There are many more local authority offices than Central Government with considerable further savings opportunity.

22. The Department of Energy and Climate Change research suggests that “for organisations that are not particularly engaged in energy management, collecting the information required for a Display Energy Certificate can lead to a better understanding of energy usage and can indicate buildings in a portfolio that are particularly energy efficient, or inefficient. The Display Energy Certificate can also promote a reduction in energy usage by providing building managers with evidence to help make a case to senior managers for making changes resulting in greater energy efficiency. For organisations that are engaged in energy reduction initiatives, the Display Energy Certificate helps to confirm which buildings are inefficient or those buildings that are not operating according to their design predictions.”

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/211054/D13_703672_130605_Display_Energy_Certificates_-_Report_V8_FINAL.pdf

Comment

C22.1. A DEC does not provide any direct evidence of whether a building is operating according to its design principles. It is a measure of how the building is operated. An energy efficient design that achieves an A rating, but is occupied by a very energy intensive occupier using the building 24/7, for example, will get a good Asset Rating but a poorer Operational Rating. That is due to the occupancy, not necessarily a failure to perform as designed.

23. However, as annual Display Energy Certificates are not required for all qualifying buildings, it may be that an alternate and simpler means of encouragement could be employed.

Article 12 and the Article 4 exemptions

24. Article 12 of the Energy Performance of Buildings Directive introduces the requirement for Member States to ensure that an Energy Performance Certificate is issued for every building, “where a total useful floor area over 500m² is occupied by a public authority and frequently visited by the public,” and allows Member States to exclude from these requirements the categories of buildings referred to in Article 4(2), namely:

- a) buildings officially protected as part of a designated environment or because of their special architectural or historical merit, in so far as compliance with certain minimum energy performance requirements would unacceptably alter their character or appearance;
- b) buildings used as places of worship and for religious activities;
- c) temporary buildings with a time of use of two years or less; industrial sites, workshops and non-residential agricultural buildings with low energy demand and non-residential agricultural buildings which are in use by a sector covered by a national sectoral agreement on energy performance;
- d) residential buildings which are used or intended to be used for either less than four months of the year or, alternatively, for a limited annual time of use and with an expected energy consumption of less than 25% of what would be the result of all-year use;
- e) stand-alone buildings with a total useful floor area of less than 50m².

25. Display Energy Certificates are currently required for buildings (or building units within) with a total useful floor area of over 500m² occupied by a public authority and frequently visited by the public. This threshold will be lowered to 250m² with effect from 9 July 2015. We do not currently apply any of the above (Article 4) exemptions to these requirements. These buildings would also need to obtain a non-domestic Energy Performance Certificate if the building was to be sold or rented out. However the above exemptions are used regarding Energy Performance Certificates.

Comment

C25.1. The implication of this is that public buildings which fall within the classes of exempt buildings are to be allowed to be profligate with energy and not to be accountable for it. Again, this misses the whole point of the Operational Rating. The argument for exemption from an Asset Rating is that the exempt buildings are a small proportion of the asset base, are mostly older and therefore energy inefficient, and would be enormously difficult and costly to improve to a significant extent without damaging their heritage characteristics, and in some cases without making technical interventions that are inappropriate for such period buildings. There is clearly no added value in confirming this through an EPC, and hence the exemption. But the Operational Rating is an assessment of how efficiently the building is being operated, and as shown above is a much lower cost instrument. The idea that less efficient public buildings should be excused from being accountable for how they spend larger sums of taxpayers money on operating the buildings seems perverse.

Article 13

26. Article 13 of the Directive requires Member States to “take measures to ensure that where a total useful floor area over 500m² of a building for which an energy performance certificate has been issued in accordance with Article 12(1) is occupied by public authorities and frequently visited by the public, the energy performance certificate is displayed in a prominent place clearly visible to the public.”

Comment

C26.1. There is no evidence that this is being implemented or enforced.

C26.2. There is no justification offered here for the approach proposed in the consultation which suggests defining a building that is “frequently visited by the public” as one having an area of at least 500 m², all of which the public “enter on a daily basis, or, for example, it is also used as a community centre in the evenings”. The Directive does not provide any legal basis for such redefinition of the buildings which require a DEC, and nowhere in the Recast is there any suggestion that the public has to have access to at least 500 m² of a building for a certificate to be required to be displayed. The claim that this redefinition would give “greater certainty” about which building was exempted and which not does not stand scrutiny. It would require a farcical and very expensive level of floor area measurement and visitor auditing of many public buildings, which would be more expensive than doing the DEC for that building annually for the next 10 years. This redefinition of “public buildings over 500m² and frequently visited by the public is totally unjustified by the Directive and appears to leave the UK wide open to infraction proceedings.”

C26.3. Given that many public buildings, eg schools and university buildings, are rarely sold or let, such a redefinition of “visiting a building”, effectively adds these buildings to the list of those exempted by Article 4.2 of the EPBD from the energy certificate regime altogether, without any justification and in clear contradiction of the public leadership role set out in the Recitals to the Directive.

27. Every occupier of a building which is required to have a Display Energy Certificate must display at all times a valid Display Energy Certificate in a prominent place clearly visible to members of the public who visit the building. In addition, all non-dwellings which have a total useful floor area of more than 500m² and are frequently visited by the public, including those occupied by public authorities, must display an Energy Performance Certificate (if they have one) in a prominent place, clearly visible to members of the public who visit the building.

Comment

C27.1. There is no evidence that this is being implemented or enforced. In addition, the specification of an EPC in the EPB Regulations is an over-implementation of the Directive. The Regulations should allow owners of buildings which fall into the scope of this requirement to display a DEC if they so wish, instead of an EPC, to demonstrate the quality of their energy management regime. The exclusion of that option is not supported by the Directive.

28. Display Energy Certificates are also currently one of the four ways large undertakings can comply with the Energy Savings Opportunity Scheme. Such commercial organisations must ensure that at least 90% of their total energy consumption is subject to an Energy Savings Opportunity Scheme compliant energy audit, a Display Energy Certificate, a Green Deal Assessment or a certified ISO 50001 Energy Management System. Display Energy Certificates are obtained voluntarily for this purpose and any changes to the statutory requirement for public authorities to have a Display Energy Certificate would not affect this scheme.

Comment

C28.1. This assumes that there will be sufficient DEC assessors to provide DECs for ESOS purposes. If statutory DECs for the public sector are abolished then there will be no DEC assessors, because none of the accreditation schemes will continue to operate a register of DEC assessors, and if DECs cease to be required in the public sector there will be no revenue to support the continued operation of the Register, without which DECs cannot be lodged, and without lodgement then DECs for ESOS purposes cannot be obtained. So if the option to scrap DECs is adopted, then this ESOS compliance route will no longer be available. This could have been explained quite simply had DCLG engaged with the accreditation schemes prior to issuing the Consultation Document.

29. Local Weights and Measures Authorities in England and Wales have a duty to enforce the energy certification requirements of the regulations. Local Weights and Measures Authorities can issue a penalty charge notice of £500 for failing to display a Display Energy Certificate at all times in a prominent place. For failing to possess or have in their control a valid recommendation report the building occupier can be issued with a penalty charge notice of £1,000. In addition to paying these penalties, a Display Energy Certificate and/or recommendation report will still need to be obtained.

Comment

*C29.1. Article 27 of the Recast addresses penalties, and requires Member States to “lay down the rules on penalties applicable to infringements of the national provisions adopted pursuant to this Directive and shall take all measures necessary to ensure that they are implemented. The penalties provided for **must be effective, proportionate and dissuasive**. Member States shall communicate those provisions to the Commission by 9 January 2013 at the latest and shall notify it without delay of any subsequent amendment affecting them.”*

C29.2. DCLG Ministers have been questioned in the House of Commons about enforcement of the EPBD regime on many occasions since the EPB Regulations were first introduced in 2007, as summarised in Appendix 1 of the overall CIBSE response to the consultation. It is clear from the answers given that DCLG has no idea whether the current penalty regime is being enforced, let alone whether the penalties are effective or dissuasive. It is arguable that the UK is not remotely able to demonstrate that it is “taking all measures necessary to ensure that [the provisions of the EPBD] are being implemented”.

C29.3. The current Consultation does nothing to address the lack of enforcement of the EPB Regulations. This is not only an issue in relation to the EPBD, but could also

fundamentally undermine the proposed Minimum Energy Efficiency Standards, due to come into effect in 2016.

NOTE: This review has been compiled by Dr Hywel Davies, Technical Director of the Chartered Institution of Building Services Engineers, with additional contributions from Robert Cohen. It may be reproduced in full subject to the original source being acknowledged clearly as CIBSE.

Responses to Questions on Section 3, Part 1

Question 1 - How could the existing enforcement regime be improved?

There are a number of ways in which the existing regime could be improved. One regime and enforcement body currently covers all of the Energy Performance of Building Regulations (EPBR), including Energy Performance Certificates (EPCs), Display Energy Certificates (DECs) and Air conditioning inspection reports. There is a considerable divergence in the requirements for the three types of document. This divergence means that it would be sensible to consider alternative enforcement regimes for each.

Our answer to Question 3 addresses compliance with the DEC regime in some detail.

For EPCs there may also be another approach. An EPC is triggered by a transaction, either a sale or a rental, or by construction. For EPCs on sale or rent an alternative to Trading Standards is for those transactions that require registering with the Land Registry to also include either the EPC itself, or to register the UPRN of the EPC related to the transaction as part of the Stamp Duty registration process. Whilst there would be some work involved in setting this up with the Land Registry, and some transactions are not within the scope of this process, it would remove the duty from Weights and Measures, who often have no way of knowing that a transaction has occurred, and so no reason to seek to enforce. This approach might also have potential in the domestic sector, although it is understood that is outside the scope of this consultation.

This approach has the advantage that if set up correctly, then the transaction would simply not be legally valid without the EPC, and that would be very dissuasive to avoiding EPCs. The cost of this approach would be very low indeed, other than the set up costs, and it would therefore satisfy the requirements to be effective, proportionate and dissuasive set out in Article 27. Another advantage of this approach is that other policies which depend upon EPCs would also benefit. CIBSE has set out at some length its concerns in relation to the lack of data from DCLG on compliance levels with the EPC regime, in its response to the consultation on Minimum Energy Efficiency Standards (MEES). CIBSE still considers that without an effective compliance regime for EPCs the MEES proposals will be seriously undermined.

Question 2 – How may the barriers to enforcement be overcome?

We suggest that if the route proposed for DECs in the answer to Q3 is adopted, then there will not be a barrier in the education sector, it will be seen as essential to produce DECs.

Question 3 - Who should be the enforcement body for the display of energy certificates in public buildings regime, and why?

Display Energy Certificates are intended to be produced by public sector building operators. Over half of the buildings in scope at present are in schools. The largest other groups are hospitals and healthcare buildings, government offices, and universities. There is something odd about the idea of one part of government having a duty to enforce a regime of sanctions on another part of government, which is the current position. There is also something defeatist about public sector bodies needing to be enforced.

DECs are intended to identify energy use, to benchmark it, to publicise it, and to motivate improvement. This is very similar to school league tables, where exams measure performance, proportions of grades in certain brackets benchmark the performance of schools, league tables publicise performance, and the existence of the system motivates improvement, with Ofsted in the background to encourage action. There is no regulated enforcement regime in a Statutory Instrument for state schools supplying league table data: they would not think of doing otherwise. So perhaps the simple answer for schools is that they supply their DEC with the league table entry.

If the government wanted to really set an example and demonstrate leadership, then they could include the details of a school's DEC or DEC's as a column in the league tables, to show how well energy use is managed. However, given the approach being proposed that does not currently seem a priority.

The idea that DEC's are managed by the current education administration, and perhaps that Ofsted include requirement for DEC's in their routine checks, would provide a robust, effective, proportionate and, certainly with Ofsted involvement, a dissuasive regime for this aspect of the Directive, fully compliant with Article 27, and would relieve Weights and Measures of this duty. The new Priority Schools Building Programme run by the Education Funding Agency already requires the new designs being submitted to comply with the iSERVcmb methodology.

There is also an argument that if the public sector is truly to lead by example, then state schools should be taking responsibility for using their resources wisely. If a school bought 100 text books, and promptly threw 10 of them in the bin, they would be rightly castigated for wasting taxpayers resources. DEC's identify schools that are wasting energy. A G rated DEC indicates a far more wasteful state of affairs than 10 books in a bin. In austere times it is very hard to understand why DCLG is so keen to let energy wasting schools off the hook.

Schools should also be teaching resource efficiency, and DEC's are part of practicing that within the school estate, and can also be a practical teaching tool, showing how the school is improving (or not) from year to year. It is a practical teaching resource relevant to several subjects on the curriculum. Giving DEC's greater profile will drive compliance without such a need for enforcement.

A similar approach, working with sectoral or service regulators such as NHS England, HEFCE for universities, and Departmental Annual Reports and auditing by the NAO would cover the other major areas which are in scope for DEC's. Again, these approaches, with the NAO having a backstop role across all Departments, would be more appropriate than the current use of Weights and Measures to enforce this policy. As with schools, it is arguably far more compliant with Article 27 than the present regime.

In any public body, then requiring accounting officers to sign off that the buildings for which they have responsibility have up to date compliant DEC's would also serve to focus the minds of responsible officials, and provide the potential for them to be marked down on appraisals for not being fully compliant, thereby giving them an incentive to ensure compliance and obviate enforcement.

Finally, there is a role for “big data” here, or perhaps more correctly, there is a role for the register of DECs to be used. DECs are public documents, intended for public display. There can be no rationale for not treating the register of DECs as an open database, fully accessible to all. Making the register open, so that interested parties can search for DECs online, and if they consider that they are lacking can challenge public building occupiers, would immediately increase the motivation for public bodies to have up to date DECs, to avoid such challenges. Where these are ignored, then those same parties would be able to register their concerns with the relevant management structures, thereby bringing voluntary consumer action into play to help with enforcement. But the first step is to get the register into the public domain.

Responses to Questions on Section 3, Part 2

Question 4 – Should the existing system of Display Energy Certificates and recommendation reports remain unaltered?

Yes. The consultation presents a case based on cost figures for EPCs which are seriously in error, as borne out in the evidence presented in response to Part 5 of the consultation. Based on the true relative costs of EPCs against DEC's, and on the value of DEC's in providing regular, open transparent information to consumers about the quality of energy management in public sector buildings, CIBSE firmly argues that there is no case to change the current regime.

Question 5 – Should the exemptions from the requirements of the Directive be applied to qualifying buildings for Display Energy Certificates?

CIBSE sees no reasonable argument to allow public services in potentially exempt buildings to be excused from reporting their energy performance and efficiency of use of taxpayers money.

Question 6 – Should those buildings that have and display their Energy Performance Certificate be exempt from the requirements to have a Display Energy Certificate?

No. EPCs and DEC's provide very different information. EPCs indicate the potential efficiency of the building fabric. DEC's indicate the energy management regime of the building. By requiring three years of operational rating to be reported, the building is not only benchmarked against other similar buildings, but also against previous performance in the same building, so that improvements can be seen and reported clearly to those viewing the DEC.

DEC's are a far more useful tool to encourage energy and cost-saving actions than EPC's. They encourage all occupiers to improve actual operational efficiency, so that the actual emissions are much closer to the theoretical emissions indicated by an EPC. This also helps the public sector to contribute to reducing UK energy demand, reduce the need for new generating capacity and contributes to the UK meeting its carbon dioxide emission targets.

Question 7 – Should an energy certificate be required when 500m² is occupied by public authorities and frequently visited by the public?

The Directive requires that a building over 500m² is occupied by a public body and frequently visited by the public. If the DEC assessors have to determine whether 500m² of the building is accessible to the public, they will need to spend much longer working out whether a DEC is needed (and may decline to offer such a service, since it is likely to be at risk). If the public occupiers have to determine it, then there will be no control over this assessment, and the net effect is that many buildings will evade certification without any justification.

This is a complicated proposal which is likely to create even more confusion than the proposed changes to “frequently visited by the public” are claimed to remove. It looks

certain to be a loophole to allow large numbers of buildings to claim that they do not need a DEC.

Question 8 – Should the validity period of all Display Energy Certificates and their accompanying recommendation reports be five years?

No. The whole point of a DEC is to provide regular monitoring of real energy use. You might as well have five yearly tax returns as five yearly DECs: perhaps this analogy will serve to expose the illogical idea that DECs every five years are of any value to the taxpayer.

There is no good reason to link the validity of a DEC with that of the Recommendation Report. They have fundamentally different purposes. The EPC Recommendation Report lists the energy-cost saving measures that can be taken over the medium term. The DEC and the Advisory Report allow the manager to:

1. regularly monitor the energy use and efficiency of the building
2. take appropriate and immediate energy saving actions
3. measure the effectiveness of any energy saving steps taken

Question 9 – Should the validity period of all Display Energy Certificates and their accompanying recommendation reports be 10 years?

Again, No, for the same reasons.

Question 10 – Should the Display Energy Certificate regime be altered in the way outlined above?

The consultation presents a case based on cost figures for EPCs which are seriously in error, as borne out in the evidence presented in response to Part 5 of the consultation. Based on the true relative costs of EPCs against DECs, and on the value of DECs in providing regular, open transparent information to consumers about the quality of energy management in public sector buildings, CIBSE firmly argues that there is no case to change the current regime.

Question 11 – Should the mandatory Display Energy Certificate regime be abolished?

Absolutely not. It would give a clear message that this government believes in austerity for the private sector and the taxpayer, but not for public, taxpayer funded, bodies. Abolishing DECs at the same time as introducing the Energy Savings Opportunity Scheme (ESOS) for the private sector, which specifically does not cover the public sector because they are supposed to be covered by the public display of energy certificates, would give a perverse message to business, that they must audit their energy use in buildings, transport and industrial processes, whilst at the same time the public sector is relieved of the duty to audit its use of energy in buildings.

The impact assessment for the 2012 EPB Regulations identified a risk of a fine of £10m for infraction of the Directive. Abolishing mandatory display of energy certificates in public buildings over 500m² would be an absolutely clear infraction, and would render the UK liable to a fine of similar proportion and the re-instatement of a similar regime.

This consultation does not include a full impact assessment, but abolition would close a number of small businesses that specialise in DEC's, would eliminate the energy assessor accreditation bodies who cover DEC's, and would undermine the recently adopted ESOS Regulations.

Question 12 – If DEC's were no longer a statutory requirement, would you still obtain one (for example in order to monitor the energy efficiency of any non-dwelling)?

CIBSE currently has a DEC because we believe it is appropriate for us as an organisation to have one voluntarily. If you abolish DEC's then nobody will be able to have one – the DEC assessor schemes will all fold, DEC assessors will no longer be available, there will be no register, and so DEC's will cease to exist as a DEC is only a DEC when lodged on the Landmark register. For the Department to even ask this question suggests a profound lack of understanding of the whole system.

This also raises a serious question about the contractual arrangements with Landmark. If DEC's are abolished, then they will lose any revenue from DEC lodgements. This government has already had to compensate Landmark with £5.7m of taxpayers' money in September 2013 due to the lack of EPC lodgements. What will Landmark be due for the termination of the DEC register? This is an impact and a cost which is not identified or disclosed.

Question 13: Which proposal (or combination) is your preferred outcome?

CIBSE firmly argues that there is no case to change the current regime.

Section 4: Suggestions for ways to streamline and improve DEC's and align them with other emerging policy areas.

The EPBD dates back to 2002, and was first drafted and conceived before 2000. In those days data processing and collection was less well advanced. Now we have a far greater understanding of the importance of metered data and actual energy use. Data is king, not theoretical or predicted performance. DEC's tell us what is really used, not what someone calculated. However, UK led research into energy monitoring in buildings, through a series of UK led international projects culminating in the iServCMB project which concluded last year, have shown how powerful modern data collection and analysis techniques can deliver real savings in the operation of buildings, both public sector and private.

In practice it is the operation of the building services that determines efficiency, not process uses such as computers, printers and scanners. What is needed is a cost effective mechanism for delivering reduced energy consumption, with DEC's evolving to accommodate new data collection and handling techniques as exemplified by the iServ project.

The UK is leading in the development of Level 3 BIM, and looking to develop new data analysis tools and markets for asset related data, which build on the basic DEC model, with far more detailed information about buildings to inform asset information management. DEC's will need to evolve significantly as we move into Level 2 and in due course Level 3 BIM, but BIM has the potential to revolutionise the way that asset information is collected, managed and used to drive better operational value from buildings. The removal of DEC's would to some extent undermine current government work to improve its own asset management.

Tools such as iServ can provide cost effective means to reduce energy use for a specific building. They are designed to be fundamentally compatible with BIM and will help move this area forward through value to business not just legislation – but it needs the legislation to allow its use as a compliance route. Such an approach, with greater levels of detail, would also help to enable buildings to be used for appropriate purposes. For example, older, less well insulated buildings may well be ideal if occupied by call centres as they'd require less cooling to be installed and be a better match to the occupancy characteristics. This would avoid making these buildings prematurely obsolete at great cost. But without data on actual energy performance as currently provided by DEC's, the UK will lose its potential to lead in this area, and yet another UK idea will be exported and exploited overseas.

Section 5: Call for Evidence

It should be noted that there are 3 types of EPC. This has not been acknowledged in the consultation document. Level 3 (domestic style construction modelled in SBEM), level 4 (larger buildings with more complex HVAC systems modelled in SBEM) and level 5 (buildings typically with complex features designed to be low energy buildings requiring dynamic simulation modelling). An EPC for £140 may be obtainable for a bottom end level 3 building e.g. a corner shop, but for the range of public sector buildings in question level 4 or level 5 assessments will be required. This is reflected in the evidence below.

CIBSE has obtained the following evidence relating to the costs of energy certificates, both DEC's and EPC's.

A number of energy assessors have provided CIBSE with cost data, which is summarised in the following Section. Please note that these responses are all reproduced from currently accredited practicing energy assessors.

The overwhelming weight of the evidence is that there is at least an order of magnitude difference between the costs of DEC's and the costs of EPC, which are being quoted at ten times and more the cost of a DEC. This bears out the original analysis, that ten annual DEC's cost no more than an EPC, and deliver greater value. Assessor 9 expands on this from the view of a University estate.

Assessor 1: EPC for a small public building

“The costs for the works requested would be as follows:

Main building £542.00 plus VAT.

Block 3 £247.00 plus VAT.

For a level 4 EPC for a building similar in size to the main building, the cost would increase to £625.00 plus VAT.

The above costs include for the site surveys and lodgement fees.”

Assessor 2:

Most of our work is on complex large public buildings and fees are quite generous. Nevertheless even on smaller non-residential extensions, e.g. care homes or schools, we would rarely offer an EPC for less than £5,000 as there is huge amount of QA, data collection work and also software licences, training, certification and CPD investment that goes into that service.

Assessor 3:

Public buildings serve many different purposes and house a wealth of different services. It would therefore be at best futile and at worst misleading to try and determine an average cost of an EPC for these buildings. For a two class standalone school building it is possible to get to site, carry out the survey, build the model and produce the EPC within a day. For a larger, more complex building such as a hospital the survey alone could take several days.

The cost assumptions on p.29 [of the consultation] stating the average cost of an EPC to be £129-£150 is absurd, particularly when you consider the lodgement fee itself costs

£35-£45 depending on the accreditation scheme. If you add travel costs to this for say, 40 miles (far less than I have travelled for an EPC before now) at 45p per mile, that is a further £18. The annual software licences for accredited software can run into the thousands, but one particular provider does sell pay as you go credits, so add one of these at £12 (Please note: whilst iSBEM is freely available the cost for the additional time it would take to produce the EPC using the free software would far exceed the £12 for the credit). Taking the lower of all the estimates this would leave £64 as summarised below:

£129 fee - (lodgement £35 + travel £18 + software £12) = £64

This would have to cover the time to travel to and from site, carry out the survey, organise evidence, build the computer model, edit the recommendations and lodge the EPC. Even for a relatively simple, single storey building comprising only a few rooms you could be left working for under minimum wage for this fee. For a multi-storey building with complex systems such as the Suffolk County Council headquarters, Endeavour House, you could end up working for less than £1 an hour.

In summary, there really is no sense in trying to work out an average cost to obtain an EPC for such a broad range of buildings. Any averages or benchmark figures should at least be split between building type and floor area if they are to be of any use. The estimate of £129-£150 is way too low and no doubt could be confirmed just by obtaining three quotes for DCLG's own building No.2 Marsham Street.

[Note, if DCLG believe that an EPC, including the lodgement fees, software licences, CPD, assessor registration and PI insurance can be obtained for £140, then they are expecting Energy Assessors to work for about £100 per day net. This is not a rate that will attract the levels of competence expected of energy assessors.]

Assessor 4:

Examples of EPC quotations on existing public sector buildings which have been accepted are listed below. These include travel and lodgement of the certificate

Borough Council Offices – 10, 488m² £1,500

Leisure Centre - 4157m² £450

Assessor 5:

Not sure where their figures are coming from. I cannot send you any quotes due to confidentiality. However as a very rough guide our EPC costs would be in the region of those shown below:

Large hospital (between 400 - 800 rooms) - £20,000 +

Complex large high rise office block - £5,000 - 10,000

Leisure centres £3,000 - £5,000

Primary schools £2,000 - £3,500

Assessor 6

In regards to the email below, particularly the last paragraph, I would just like to respond to the subject of the cost of EPCs, so you can pass this on. The cost of £129 pounds is ridiculous, this would not cover any EPC apart from a domestic scale EPC. If you factor in the time for pulling together all the notes etc that are required to satisfy QA, as well as

the survey and the actual process of modelling a building to generate an EPC, even a small shop unit would cost at least £400 plus lodgement fee, this would be a base fee in my opinion. After that, the basic fee for larger building would be 40-50p per square metre, so a 10,000m² hospital would cost about £5,000 ! If I was completing an EPC for a large industrial unit without any sub divisions i.e. one or two zones the 40-50p rate might drop to 20-25p but no lower. Seems like the costs they are quoting are, daft and would not pay the bills!

Assessor 7

Firstly let me say your Cost Assumptions are horrendously flawed. This consultation is so badly prepared someone should lose their job over it. Little to no research into cost has been done into the methodologies and costs of EPCS and DECS, and NO RESEARCH AT ALL has been done into the savings to the public purse resulting from the DEC regime.

The EPC methodology is far more involved than the DEC methodology for a large building, and the certificate costs far more, not far less.

We carry out both Non Domestic EPCs and DECS. For a 1,000m² building with floorplans we would charge £250 plus travel expenses plus VAT for a DEC and AR, and £75 plus VAT for a desk based DEC renewal.

For a 10,000m² building the DEC and AR might increase slightly to around £350 plus VAT, but the EPC would be in the region of £2,500 plus VAT and could involve up to 3 days on site.

For a Non Domestic EPC on the same size building, which requires far more information to be gathered, we would charge £450 plus travel expenses plus VAT.

Here are some recent (real) figures that we have been paid by Gwynedd County Council for providing Non Domestic EPCs on Public Buildings (from February 2013):

Canolfan Tennis Arfon, Caernarfon – 2,975m² - £752 plus VAT

Ysgol Brynrefail Llanrug, Caernarfon – 7,244m² - £915.50 plus VAT

County Offices Caernarfon – 1,861m² - £770 plus VAT

The consultation does not seem able to quantify the clear savings that have been made from DECs. Surely this could be gauged properly by looking at the reductions year on year on the certificates? All the information is there. The kWh/m² is listed for each fuel along with the size of the building for each year of DEC compliance.

Assessor 8

1. There may be confusion in the pricing of DECs at the initial or renewal stage. If there is a renewal I would expect the costs to be lower, as one would expect less work the 'second time' around.
2. Pricing is driven by time, and time costs money.
3. The costs of delivering NDEPCs is also driven by time.
4. Like whoever did the survey quoted in the consultation document, there will be headline prices quoted as the hook to get the potential client interested. I have seen very

low ND EPC prices quoted, but being slightly mischievous have found those prices suddenly escalate upwards when more details are known about what might be required.

5. The low price 'regime' is not helped by assessors who cut-corners and chase volume, and not helped by some assessment organisations who seem to adopt a different audit ethic to others.

6. By way of example, I was asked to quote to assess a portfolio of hotels their locations ranging from York to Gloucester to the South East. They were all large, and some were up to 6 storeys high, but all had quite complex systems and all were Level 4. I quoted on the basis of 3 days work on each (which was optimistic anyway), and quoted an inclusive rate of £500 per day (inclusive of travel, accommodation, etc) for each property. I did not get the job.

7. A second example was for a school complex. The school believed they could get away with a single DEC covering the whole site, but as it turned out they needed 12 due the way the site was arranged and the buildings separated. That would have been 12 x registration fees, potentially 12 x audit targets, 12 x reports to write (but there might have room for some economies), and an increased fee. I did not get that one either.

8. A third example, a school requiring a NDEPC as part of a FiT application costing tens of thousands. This was a two storey >3000m² building on 2 floors with a swimming pool, two recent extensions, but no plans, layouts, or records. Access would have been out of hours (i.e. weekend as it was school), with data collection potentially over 2 days, with a write up following over potentially another 3. I was offered £235 inclusive of travel and registration costs. I asked the introducer to think again. I heard nothing more.

Assessor 9

DECs for building under 1000m²

The fact that these are currently only renewed every ten years is, in our opinion, a little nonsensical for reasons outlined in our answers to Questions 8 and 9. In addition, within our organisation the vast majority of our consumption occurs in buildings of 1000m² +, so we gain little in monitoring consumption in these smaller buildings anyway. We do not believe removing the requirement for mandatory DECs in buildings of less than 1000m² entirely would have a detrimental effect on our energy performance.

Cost assumptions

We produce DECs in-house, but given the cost of lodgement and the number of hours work involved, we do not think the estimate of cost for DECs is too far wide of the mark.

However, we would strongly question the cost assumed for EPCs. Given that EPCs require a much more in-depth site visit than DECs, that far more information has to go into the model and that the reports are much more detailed than DEC Advisory Reports, we would question how DCLG arrived at a value of £129-150. We had a number of EPCs produced in the last two years, and each cost £1000 + VAT. These were for buildings ranging from 2000 to 4000 m². When we surveyed the market, these costs did not seem to be exceptional.

Evidence 1: How many qualifying buildings does your estate contain (including a clear articulation of why some buildings are not qualifying)?

We produce DEC's for 119 buildings. We are not 100% certain that all of these buildings qualify for mandatory DEC's as there has been some confusion in interpreting whether or not University halls of residence qualify as we do not believe that they would be 'frequently visited by the public'. However, we have gone ahead and produced DEC's for these buildings anyway, **as we see value in doing so.**

Evidence 2: How many have a Non-Domestic Energy Performance Certificate? Eleven.

Evidence 3: How much, on average, does obtaining a Non-Domestic Energy Performance Certificate cost? In our experience, £1000 + VAT.

Evidence 4: How many have a Display Energy Certificate and recommendation report?

112 of our qualifying buildings (we have 7 DEC's still to produce for building under 1000 m²).

Evidence 5: How much, on average, does obtaining a Display Energy Certificate (on its own) cost?

We produce our DEC's in-house, so it only costs the lodgement fee (£34 + VAT) plus our time. We estimate a DEC typically takes 2 hours (£50) to produce and lodge.

Evidence 6: How much, on average, does obtaining a Display Energy Certificate and recommendation report cost?

We produce our DEC's in-house, so it only costs the lodgement fee (£68 + VAT) plus our time. We estimate a DEC and advisory report typically takes 4 hours (£100) to produce and lodge.

Evidence 7: How many of your buildings have both an Energy Performance Certificate and a Display Energy Certificate? Eleven.

Evidence 8: To what extent have you implemented the recommendations provided in the report accompanying your DEC?

Not to a great extent. The advisory reports are too basic to be of much use to us. We have, however, uncovered energy wastage issues as a result of carrying out surveys for advisory reports which we have then been able to rectify, so we do see some value in producing them.

Evidence 9: To what extent have any changes in the energy efficiency of your buildings been influenced by the information provided by your DEC's and recommendation reports?

We would argue that the effect has been significant. We have been using DEC's for a number of years now to benchmark our buildings and monitor performance over time. They are widely understood by our staff and have in fact become central to our reporting mechanisms and our drive for behavioural change and improved energy efficiency.

Evidence 11: Would you be willing to be contacted by our officials to discuss in more detail any aspect of your responses to this consultation?

Yes.

Assessor 10

I include below some indicative costs for producing EPCs to assist with your response on the DEC consultation. These are of course dependent on the availability of information.

Area (m ²)	Simple (£)	Complex (£)
500 +	410	660
3000+	850	1600
5000	1200	2300

Assessor 11: EPC for Bournemouth University

Our fee to produce the SBEM BRUKL and EPC would be £2500 + VAT and we could have the certificates over to you by Friday 16th January.

Due to the complexities of the DSM software we would require the actual build ups for each element as this is very much a case where we have to build the model using actual constructions and materials therein.

In the first instance, if our quote were acceptable, then having the drawings in DWG or better still, DXF format would be great. This would allow us to start on the modelling which we could crack on with tomorrow.

Assessor 12

Assessor 12 has provided a very detailed evidence report attached as Annex 1.

Finally we would like to draw your attention to other published evidence that has not been acknowledged in this consultation document as follows:

You have asked what is the actual evidence that DEC's have indeed catalysed reductions in energy use? The original UK Statutory Instrument Explanatory Memorandum[1] (UKSIEM) justified the annual renewal of DEC's as cost effective against 10 year renewal by estimating the increased energy savings DEC's would generate. Table 14 of that document estimates annual DEC's to be more cost beneficial by £457m net present value and Annex C sets out all the reasons for why DEC's are preferred to EPC's and why annual renewal is the most cost effective option[2].

The consultation has not cited this, but there is compelling evidence that these huge predicted savings were, if anything, conservative. Although it may be difficult to say categorically how much the presence of a DEC per se influences reductions in energy use, there has been a definitive study of all DEC's lodged up to June 2012[3], which includes a longitudinal study that looked specifically at the subset of 8,535 buildings which lodged DEC's in each of the three consecutive years 2009, 2010 and 2011. By renewing their DEC every year, this set of buildings manifestly was taking compliance with the DEC regime seriously. It can be surmised that the energy performance of these buildings was being influenced by the requirement to display a DEC. An unpublished addendum to UCL's report has calculated that this set of buildings collectively achieved 4% energy savings in 2011 compared with their energy use in 2009. Only a 1% average saving was assumed by the 2008 UKSIEM. For these 8,535 buildings, this level of savings is worth £18m/year, well over double the £7.83m/year estimate in the condoc of the cost for 42,000 buildings over 1000 m² to continue to procure annual DEC's.

Furthermore, there is no reason not to believe that the 33,500 buildings which did not renew their DEC annually from 2009 to 2011 could achieve a similar level of energy savings. If they did, a further £72m/year of cost savings would accrue, taking the total savings benefit to £90m/year, over eleven times the estimated cost of compliance.

Further evidence of the UKSIEM estimates being conservative comes from individual buildings. The graphics below show the operational energy performance of three rather pertinent buildings over the period 2008 - 2014: DECC's HQ, Portcullis House (the UK Parliament's offices in London) and DCLG's own regional offices in Birmingham. All three verify a halving of energy use, dwarfing the 2008 UKSIEM savings estimates. In each case, this has been achieved by bringing the buildings under operational control and then applying simple cost effective measures (not deep retrofits or fancy low carbon technologies). These exemplars demonstrate that huge energy savings are possible if the will is there to make the effort. The discipline of DECs holds the building operators to account, provides independent verification of savings and rewards success by making it visible.

[1] http://www.legislation.gov.uk/uksi/2007/991/pdfs/uksiem_20070991_en.pdf . These calculations were produced by DCLG before DECs were implemented in 2008.

[2] The analysis assumes 20% of buildings adopt the recommendations for improved energy management and achieve a one-off reduction of 5% in energy then sustained in every year of the Regulatory Impact Assessment (RIA) period. This estimate is equivalent to achieving a 1% reduction in energy use for all public buildings and was considered conservative as, typically, introducing an energy management regime with regular monitoring and targeting will produce much greater savings than 1%. The savings from upgrading and/or replacing boilers and heating systems are excluded, because they are used to justify the regulations for boilers.

[3] Hong, S.-M. & Steadman, P (2013). An Analysis of Display Energy Certificates for Public Buildings, 2008 to 2012, report to CIBSE from University College London (UCL).

CIBSE Comments on the options outlined in the Annex

Option 0: YES

As EPC cost calculations are so seriously flawed, and as DEC's are the most useful of all the certificates under the EPBD (as they benchmark, monitor and report actual energy use and drive real reductions) then Option 0 is the clear choice. However the benchmarking system and benchmarks should be reviewed and maintained in line with good management practice.

Option 1: NO

Listed buildings would be amongst the least efficient and the DEC regime encourages users to target whatever savings are available to them given the restrictions of the building they occupy. They can see, year on year, if they are improving their usage even if material changes may not be feasible. It makes sense to exempt them from EPCs, but not from DEC's.

Option 2: NO

The EPC is an asset rating and cannot drive improvements in the usage of the building and therefore encourages no savings. The recommendations relate to the asset only.

Option 3: NO

The DEC would be much less expensive than the EPC and provides more useful information. In buildings over 1000m² the DEC would be cheaper than the EPC.

Option 4: NO

This half measure removes all encouragement to improve consumption year on year and retains part of the cost!

Option 5: NO

Your savings figures are flawed, and the loss of the DEC regime would mean no mandatory monitoring of energy use by public building users, resulting in probable loss not gain.

Option 6: NO

See above reasons

Option 7: NO

DCLG should re-run the analysis using the sort of figures based on actual market costs and not on a "Google" search, and using real savings from actual buildings. This will make it clear of the benefits of the DEC regime.

On page 33, the consultation states that the cost of DEC policy is '£8,352 million annually'. This reads as £8.352 billion! This is clearly a gross error. The document continues to state that the cost of non-domestic EPCs is £7.56 million, although this is based on the totally erroneous average cost of £140. This makes the document very confusing to read and could lead people to make incorrect conclusions. Although the

saving of £7,596 million is quite impressive. DCLG need to review and correct the figures before they are used to justify any decisions based upon them. They also need to include ALL impacts, including loss of employment for energy assessors, particularly small and micro businesses, costs of compensating Landmark for reduced DEC lodgements and costs to assessor accreditation schemes.

Annex 1: Call for Evidence

David Maun – Associate Director

Kinetic Engineers Ltd
Unit F7, The Croft Business Park,
Boroughbridge Road ,
Kirk Deighton, Wetherby, LS22 5HG
t: +44 (113)2361555
m: +44 7879 816257
e: dave.maun@kineticengineers.co.uk

Dear Pete,

Re: Hungate , IES VE model and Design Stage SBEM calculations to ADL2A 2013

With regards to your recent enquiry, our fees to produce the IES model and the SBEM calculation for the landlords basement area and communal corridors only, based on the layout drawings you issued on 26.01.2015. for the proposed building would be **£1100.00** in total. This includes a design stage watermarked EPC.

Please note that the “new” Part L 2013 regulations require a feasibility report for “Consideration of high efficiency alternative systems for new buildings” under Regulation 25a , prior to start on site. We can provide this additional Report for a fee of **£500.00**.

Our fee includes up to three iterations of the model to demonstrate Part L compliance and to inform the report output as well as feasible and economically viable advice on the criteria to comply with the regulations on appointment.


Exclusions

1. SBEM calculations for a BREEAM assessment and/or if a comparison calculation is required for BREEAM low or zero carbon technology credits or planning conditions or other low carbon targets not defined initially would cost a further **£60** per hour for additional time.
2. A rate of **£120** per calculation would be charged for SBEM re-calculations due to client variations and design alterations by others, changes to information provided or if re-calculations are requested due to alterations to reduce the building emission rate.
3. Site Visits or attendance at meetings, if required or requested, would be charged at a rate of **£60** per hour per person (including travelling time) plus expenses.

4. As Built SBEM Calculations and Energy Performance certificates are not included, this would normally fall under the remit of the Contractor.
5. Individual SAP calculations will be required for the self contained apartments under ADL1A which can be quoted separately on request.

All prices are shown excluding VAT. Calculation results would be issued by e mail upon payment of fees. If you have any queries, please do not hesitate to contact me.

We trust the above meets with your requirements however should you have any further queries please do not hesitate to contact us.



Janet T Beckett CEng MCIBSE

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m: +44 7879 816257

e: dave.maun@kineticengineers.co.uk

Dear Dave,

Re: University of Leeds Undergraduate Library. IES VE model As Built Stage SBEM and Level 5 EPC and registration.

With regards to your recent enquiry, our fees to produce the “As Built” SBEM calculation for Part L compliance certification and a final Energy Performance Certificate using the existing IES model based on the “CAB” file and all information contained therein which you issued on 16.02.2015. would be **£2200.00** plus **£66.00** for the EPC registration including lodgement fee.

Please note that we will not be responsible for ensuring that the results show emission rates within required targets because the results will depend on the final as built installation of the building layouts, room types and fabric elements, as well as the heating, hot water ventilation and lighting installations which have been carried out by others. Providing the As Built criteria and evidence fully matches the design stage building criteria and evidence then we do not expect this to be an issue. However we can provide advice on various methods to improve the results should this situation arise.

Exclusions

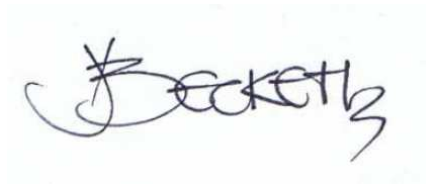
1. SBEM calculations for a BREEAM/LEED or similar assessment and/or if a comparison calculation is required for BREEAM low or zero carbon technology credits or planning conditions this would cost a further **£60** per hour for additional time.

2. A rate of **£120** per calculation would be charged for SBEM re-calculations due to client variations and design alterations by others, changes to information provided or if re-calculations are requested due to alterations to reduce the building emission rate.

3. Additional time spent extracting and compiling evidence due to non-provision of the relevant As Built information requested as shown on the “**Carbon Saver UK SBEM EPC Data Summary Document**” (attached) would be charged at **£60** per hour.

4. Site Visits or attendance at meetings, if required or requested, would be charged at a rate of **£60** per hour per person (including travelling time) plus expenses. Note a site visit /survey is not a requirement for the final SBEM EPC providing that all suitable evidence can be provided as item 3. above.

All prices are shown excluding VAT. Calculation results would be issued by e mail upon payment of fees. We trust the above meets with your requirements however should you have any further queries please do not hesitate to contact us.



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LOW

Real Life Fees in Yorkshire for Calculations to Produce Energy Performance Certificates

Job No	Project	floor area (m ²)	Location	Status	Enquiry received	Invoice No	Invoice Date	Date Paid	Invoice Amount	VAT	Total
J614	Hospital	13328	Bradford	Paid		954	29 January 2013	19 February 2013	£7,500.00	£1,500.00	£9,000.00
J735	Small conference building with bar	244	Wetherby	paid	1st November 2014	1205 1298 1300 1207 1304	28th January 2015	29th January 2015	£1,600.00	£320.00	£1,920.00
J354	Council office block		Hinckley	Paid		682	11 January 2011	21 January 2011	£1,490.00	£260.75	£1,750.75
J424	shop unit	245	London	Paid		873	02 July 2012	01 November 2012	£1,100.00	£220.00	£1,320.00
J395	industrial unit		Farsley	Paid		745	30 August 2011	07 October 2011	£800.00	£160.00	£960.00
J499	GP Surgery	252	Halifax	Awaiting Payment		816	29_May-12		£780.00	£156.00	£936.00
J909	2 storey offices- industrial unit	542	Ilkley	awaiting payment	24th September 2014	1311	19th February 2015		£750.00	£150.00	£900.00
J424	shop unit	196	London	Paid		945	15 December 2012	18 December 2012	£720.00	£144.00	£864.00
J735	Cottage conversion to offices	195	Wetherby	paid	07 August 2013	1206	22nd July 2014	4th August 2014	£620.00	£124.00	£744.00
J424	shop unit	74	London	Paid		930	08 November 2012	28 November 2012	£620.00	£124.00	£744.00
J784	Factory extension	2900	Huddersfield	Paid	10 December 2013	1117	28 January 2014	18 February 2014	£616.00	£123.00	£739.20
J887	Industrial unit offices	896	Brighouse	awaiting payment	12th August 2014	1312	25th February 2015		£600.00	£120.00	£720.00
J864	Primary school classroom & toilets	147	Todmorden	paid	16th June 2014	1208	28th July 2014	31st July 2014	£600.00	£120.00	£720.00
J489	offices		Todmorden	Paid		783	22 February 2012	29 February 2012	£600.00	£120.00	£720.00
J479	Garage offices	78	Shelley	Paid		789	22 February 2012	04 May 2012	£550.00	£110.00	£660.00
J350	Small Sports Centre	510	Droylsden	Paid		698 815	28 March 2011	15 April 2011	£540.00	£108.00	£648.00
J759	Gym	652	Sheffield	awaiting payment	30 October 2013	1223	19th August 2014		£450.00	£90.00	£540.00
J806	industrial unit		Brighouse	paid	17 February 2014	1175	13th May 2014	23rd May 2014	£440.00	£88.00	£528.00
J347	offices			Paid		699	04 April 2011	21 June 2011	£400.00	£80.00	£480.00
J453	shop	450	Leeds	Awaiting Payment		780	22FEB 2012		£390.00	£78.00	£468.00
J287	industrial unit		Brighouse	Paid		706	24 April 2011	28 April 2011	£370.00	£74.00	£444.00
J383	Industrial Unit			Paid		697 701	04 April 2011	04 April 2011	£360.00	£72.00	£432.00
J655	Small Icecream Factory	79	Huddersfield	awaiting payment	31 January 2013	1009	23 May 2013		£300.00	£60.00	£360.00
J400	Community centre		Headingley	Paid		717	14 June 2011	01 February 2012	£300.00	£60.00	£360.00
J727	Shop	107	Sheffield	Paid	15 July 2013	1067	03 October 2013	07 October 2013	£290.00	£58.00	£348.00
J514	Builder's yard office		Huddersfield	Paid		799	26 March 2012	02 May 2012	£250.00	£50.00	£300.00
total									£23,036.00		£27,605.95
average per EPC									£886.00		£1,062.00

Carbon Saver UK SBEM EPC Data Summary Document				
Date:		By:	Rev:	
SBEM/EPC Design stage information/evidence required for :				
Item	Description	Information recd. Y/N	Value used in model	Comments/Notes
1.00	Full site address including unit or building name or number, street, town and postcode OR UPRN where available.			
2.00	Is the SBEM required under Building Regulations ADL 2006 , 2010 or 2013 ? <i>Please note that it is not possible to Lodge an EPC on the Register under the 2006 version of SBEM so the EPC results will be different on the lodged version. The date for the SBEM depends on the date of deposition with the BCO.</i>			
3.00	Indicate Level of EPC required, Level 3, Level 4 or Level 5? (A decision flow chart is available on request)			
4.00	Please indicate if there are any specific energy targets, carbon rating or carbon reduction targets or specific EPC ratings required for the project. (ie planning conditions, BREEAM Credits targeted, client specific requirements, Consultant's specification etc etc)			
5.00	If BREEAM is a requirement then please indicate the year of the BREEAM scheme under which the project was lodged with BRE?			
6.00	Site plan/layout with North Point indicated			
7.00	Floor plan layouts			
8.00	Building elevations			
9.00	Building sections			
10.00	Sectional details showing building construction for U values. External walls, floors, roof, doors.			

11.00	Glazing specification sheet from supplier showing overall average area weighted U values.(OAAWUV's)			
12.00	Glazing specification sheet from supplier showing g values.			
13.00	Details and locations of any internal blinds to be installed including shading coefficient.			
14.00	Details and locations of any external shading devices to be installed.			
15.00	Heating plant specification details or manufacturers data sheet confirming SEER or SCOP			
16.00	DHW generator specification details or manufacturers data sheet confirming SEER or SCOP			
17.00	DHW layout drawings showing delivery method and secondary circulation system.			
18.00	Specification details or manufacturers data sheet for voltage optimisation unit or calculations for site power factor.			
19.00	Ventilation systems layouts with air volumes indicated. (No.off ?)			
20.00	Specific fan powers (SFP's) for each ventilation system.(No.off ?)			
21.00	Lighting layout drawings showing lighting control strategy to each room or zone, including parasitic power for lighting controls in w/m2 for each area.			
22.00	Lighting layout drawings with lighting power useage in both lighting efficacy at lumens per circuit watt and w/m2/100lux for each room and or zone.			
23.00	Ventilation heat recovery efficiency for each unit from manufacturers data sheet. (No.off ?)			
24.00	Ductwork leakage test certificates			

25.00	AHU leakage test certificates			
26.00	Circulating pumps specification from manufacturers data sheet. (No.off ?)			
27.00	Circulating pumps specification power consumption			
28.00	Manufacturers details of cooling terminal units SEER's and or COP's for each system (No.off ?)			
29.00	Manufacturers details of heating terminal units SEER's and or COP's. (No.off ?)			
30.00	Details of controls to HVAC room or zone.			
31.00	Manufacturers details of any LZC technologies (renewables)			
32.00	Schematic layout of metering and sub metering arrangements to HVAC systems			
33.00	Schematic layout of metering and sub metering arrangements to lighting and small power systems			
34.00	Specification details or manufacturers data sheet for meters and sub meters as above.			
35.00	Building air tightness testing certificate			
36.00	Evidence of accredited construction details where used.			
37.00	Written statement from the Architect or Engineer who is working for the client who is in a position to provide a professional judgement that the building has been constructed (services, fabric U value, glazing g value etc) in line with the design and if not what the differences are between the finished building and the design.			

Important Notes:

We are regularly externally audited by the DCLG via CIBSE (our accreditation provider) with regard to the data inputs and evidence used for the SBEM and EPC. The data we use and the evidence we provide must be specifically compliant with Document 1. "*NDEPC Conventions for England and Wales*". The evidence and data for the SBEM and EPC also refers to the requirements within Document 2. "*Part L Building Regulations*", which takes precedence over the aforementioned, as well as Document 3. "*NCM Modelling Guide*" these three documents are available free online but an e copy can be provided on request.

This summary spreadsheet "Carbon Saver UK SBEM EPC Data Summary Document" simplifies and summarises the various requirements from the three reference documents above to assist with client response. Should you have any queries regarding the summary evidence requirements or any of the reference documents then please do call us or contact us, as an SME we are always happy to help you at info@carbonsaveruk.com t: 07980 485 258 or 0113 282 1078

Finally please note that in order to commence the calculations for a final SBEM /EPC Assessment and lodgement **we must be in possession of all of the information and evidence in accordance with the requirements of the reference documents listed above**. Therefore if you could please provide this information at least two weeks in advance of the due date for either of the SBEM submission to Building Control or the EPC lodgement required date then we will do our utmost to assist you in achieving practical completion and or handover obligations. Should you have any queries regarding the any of the above then please do not hesitate to contact us info@carbonsaveruk.com t: 07980 485 258 or 0113 282 1078

Note	Red Amber Green (RAG) Indicators
	Red = no information received. Assumed value used in model as shown OR default.
	Amber = Further information is required on this item to complete.
	Green = All information received on this item and used in model as shown.