

DEC Conventions for England, Wales and Northern Ireland Issue 2.0

These conventions have been agreed, and approved, by the OR Conventions Group and approved by MHCLG. These Conventions are part of the on-going work to standardise the assessment process to ensure uniformity of approach in a way that will assist Accreditation Schemes and DEC energy assessors and at the same time provide assurance to consumers that a consistent approach is being taken to carrying out energy assessments. The Conventions Group was set up with the agreement of MHCLG.

A copy of these conventions, which apply to assessments in England & Wales and Northern Ireland, have been sent to DEC energy assessors by their Accreditation Scheme(s). The Conventions must be applied by all accredited DEC energy assessors and by those DEC energy assessors currently in training. The scope of these conventions is limited to clarifying how the assessment methodology is to be applied when a DEC is produced. They do not by doing so in any way affect whether or not the Energy Performance of Buildings (England and Wales) Regulations 2012 and equivalent legislation in Northern Ireland require one to be produced.

To enable Accreditation Schemes, Energy Assessors and training providers to manage the implementation process please note that new conventions must be applied on the date shown in the document. These conventions will be included as part of future quality assurance checks of the assessments undertaken, and the DEC's produced, by DEC energy assessors thereafter. New and amended conventions for v2.0 are highlighted by a **light blue background**. The conventions are designed to improve the quality and accuracy of DEC's. The conventions will, therefore, supersede any previous assessment process and any previously issued guidance. With this in mind, further conventions are being discussed and developed by the OR Conventions Group and these will be released to you in stages.

If DEC energy assessors have any questions about the conventions, they must feed them back to their accreditation scheme so the issue they have raised, where appropriate, can be discussed at a future meeting of the OR Conventions Group. The conventions must be applied as issued, even if DEC energy assessors believe there may be a convention that requires further clarification, until such time as the OR Conventions Group has the opportunity to discuss the issue in more detail. Any subsequent changes to the conventions will then be circulated to all DEC energy assessors.

Note that these conventions also apply, under separate direction to Approved Organisations by the Scottish Government, to assessments in Scotland. In this respect, any reference to Accreditation Schemes or relevant regulations may be taken as the equivalent term applicable in Scotland.

Ref.	Issue	Convention	Implementation date
1. Fundamentals			
		Not currently used.	
2. General Information			
2.01	Acceptability of Non-Utility Meters	<p>Issue Summary:</p> <p>Clarification on the use of non-utility meters</p> <p>Convention:</p> <p>This convention applies to both primary meters and sub meters. Only permanent meters (as referred to within DCLG guidance) may be used to collect energy consumption data for the production of a DEC. Data gathered from temporary meters is not suitable for the production of a DEC.</p> <p>The use of data from meters not provided by a utility company is acceptable provided that suitable evidence is submitted to the Energy Assessor (EA) to confirm the validity of the data. Suitable evidence consists of:</p> <ul style="list-style-type: none"> (a) A consistent and dated schedule of the meter readings, AND (b) A signed declaration from the building occupier confirming that the data provided is a true and accurate reflection of the energy used in the building 	<p>Issue 1</p> <p>2 April 2012</p>
2.02	Resolution of Disputed Previous Year DEC	<p>Issue Summary:</p> <p>Where the current year EA believes the previous year DEC was inaccurate. Speed up the resolution of such situations, or what an EA/Accreditation Scheme (Scheme) does during the resolution period.</p> <p>Convention:</p> <p>If the current year EA believes the previous year DEC was inaccurate, then the EA should notify their Scheme (for escalation to the previous year EAs Scheme), and wait for a period of 25 working days (see Note 1) for the previous year DEC to be verified. Unless the previous year DEC is confirmed to be defective within the verification period, the current year EA will simply lodge with the available data.</p>	<p>Issue 1</p> <p>2 April 2012</p>

		<p>If the previous year DEC is confirmed as defective within the period, the previous year EAs Scheme must take the appropriate steps outlined by the Scheme Operating Requirements (SOR) for defective certificates before the renewal certificate is lodged (see Note 2). If it is confirmed that the previous year DEC was defective, subsequent to the verification period, then the previous year DEC needs to be replaced. There will be no requirement for the current year EA to update and re-lodge the current year's DEC with the revised data from the previous year's DEC; however they are encouraged to do so. This way, the error would in most cases be corrected in the following year's assessments.</p> <p>Note 1: Period selected in accordance with SOR guidelines, which allows 15 working days for an EA to respond to an audit request. The additional 10 days allows a reasonable period for the various contact that is required between parties and the actual Quality Assurance (QA) process.</p> <p>Note 2: Section included to prevent a contravention with current SOR guidelines in reference to defective certificates. This is the only situation where an EA is not able to lodge with the previous year data, as it has already been confirmed as incorrect.</p>	
2.03	Validation of Floor Areas	<p>Issue Summary:</p> <p>Accuracy of floor area is critical to the accuracy of a DEC. There are a variety of possible sources of floor area information available to EAs; however, the EA has a duty to ensure that the floor area used is reliable. This will involve verifying both reliability of the information and the relevance to the 'Total Area for DEC Assessment' (TADA).</p> <p>Sources such as asset register schedules can be appropriate. These however, may exclude areas such as circulation spaces or include external areas. They may not be based on 'Gross Internal Area' (GIA) and there may have been changes to the building since they were drawn up.</p> <p>The EA must prove that the floor area used is correct and this will generally require validation against more than one source.</p> <p>Convention:</p> <p>EAs are permitted to use floor areas obtained following the alternative procedures listed below together with the associated validation. They should also ensure there is sufficient evidence for audit. The requirement for validation of floor areas applies equally to a first DEC and a renewal</p>	<p>Issue 1 2 April 2012</p>

		<p>DEC produced by an EA who did not produce the previous DEC. It is also necessary for an EA renewing a DEC on a building where they have previously validated the floor area to ensure that there have been no alterations that affect the floor area, or that any changes are correctly adjusted for.</p> <p>Procedure A</p> <ul style="list-style-type: none"> • Method - Physical survey of the building • Validation - Not applicable • Evidence - Site notes and drawings showing how the area has been obtained <p>Procedure B</p> <ul style="list-style-type: none"> • Method - Scaled from plans (which are themselves to scale) • Validation - Site check sample measurements to confirm scale of plans as printed. Site visit used to check plans are accurate and match current building configuration • Evidence - Plans and record of sample measurements plus calculation details <p>Procedure C</p> <ul style="list-style-type: none"> • Method - From asset register schedule or similar • Validation - Confirmation that areas are gross internal (or appropriate conversion if use type is one that permits net internal to be used). Site check sample measurements to confirm accuracy of areas recorded in the asset register. Site visit used to check register is accurate and matches current building configuration • Evidence - Asset Register and record of sample measurements. Record of checks to ensure the area used includes all internal areas and excludes any external areas and site buildings that may also be shown on the asset register <p>Procedure D</p> <ul style="list-style-type: none"> • Method - From third party e.g. an architect or surveyor • Validation - Confirmation that the source has good reason to know the actual current floor area e.g. has undertaken a measured survey or drawn the plans for the building as it currently stands and there have been no alterations since. Site check sample measurements to confirm accuracy of floor area provided • Evidence - The source document(s) containing the floor area information and the method by which it was obtained, together with the reason for believing it is accurate. Record of sample measurements <p>The following are recognised potential sources of floor areas. They may be used provided they are validated against another suitable sources or they may be used to validate a floor area obtained by one of the above methods. None are sufficient to be relied on without validation.</p>	
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2.04	Treatment of Changes in Floor Area During Measurement Period	If there have been changes to the total useful floor area during the measurement period, the total useful floor area at the end of the measurement period must be used for the purposes of the DEC assessment.	Issue 2 1 November 2018
2.05	Energy content in biomass	<p>For biomass fuels, the calorific value (CV) should be obtained from the fuel provider. Only where CV values cannot be obtained from the fuel provider can the following convention be used to produce a DEC; and the assessor must be able to demonstrate that all reasonable efforts have been made to obtain the CV from the fuel provider.</p> <p>The CV for biomass fuels is dependent on the moisture content which is variable in wood chip fuels so the CV must be calculated as below. Moisture content is more consistent in wood pellet fuels so a fixed CV can be used.</p> <p>For further information, refer to section 2 (biomass fuels, combustion and emissions) of the CIBSE Application Manual 15-b (AM 15b) 2014.</p> <p>Wood Chips – option 1: weight-based calculation</p> <p>The CV (kWh/kg) is calculated as: $(\text{Moisture content percentage} \times -0.0568) + 5$ The moisture content must be obtained from the fuel provider.</p>	Issue 2 1 November 2018

		<p>Example - for a moisture content of 35% the CV to use (only when not obtainable from the supplier) would be $(35 \times -0.0568) + 5 = 3.012 \text{ kWh/kg}$</p> <p>Wood Chips – option 2: volume-based calculation</p> <p>The CV (kWh/m³) is the CV (kWh/kg) calculated as above multiplied by the density of the wood chips.</p> <p>The density (kg/m³) is calculated as: $150 \div (1 - \text{Moisture content decimal})$ The moisture content must be obtained from the fuel provider.</p> <p>Example - for a moisture content of 35% the density would be $150 / (1 - 0.35) = 230.8 \text{ kg/m}^3$</p> <p>Therefore, in this example the CV to use (only when not obtainable from the supplier) would be $230.8 \times 3.012 = 695.2 \text{ kWh/m}^3$</p> <p>Wood Pellets – option 1: weight-based calculation</p> <p>The CV to use (only when not obtainable from the supplier) is 4.65 kWh/kg</p> <p>Wood Pellets – option 2: volume-based calculation</p> <p>The CV to use (only when not obtainable from the supplier) is 2,938 kWh/m³</p>	
2.06	Use of Address Line 1 to Describe Site Buildings and Building Sub Parts	<p>Due to the complexity of sub dividing large buildings into functional areas requiring a DEC, it is difficult to be completely prescriptive about how to format the information that constitutes sub address information. However, in order to minimise the creation of duplicate sub addresses, Accreditation Schemes and Energy Assessors should adhere to the following guidelines.</p> <p>Site Building</p> <ul style="list-style-type: none"> ○ Site Building should only be used where the base address / UPRN refers to multiple buildings. Examples of this would be hospitals or campuses where there is a single postal address, but multiple buildings. ○ There are no further rules for formatting this field. The assessor should identify the 	<p>Issue 2</p> <p>1 November 2018</p>

building using the most appropriate description, perhaps agreed between the assessor and the person commissioning the DEC, e.g. "Operating Theatre" or "Great Hall".

NB: Please note that under this process a refinement to an existing address/UPRN is being requested (rather than a new address/UPRN).

Building Part

- Building Part should be used to identify a sub division within a building.
- The Energy Assessor should generate the Building Part using the following building part hierarchy:

Floor Details

↳ Room or suite details

Note that this is normally returned from the PAF (Post Office Address File) details.

For example, "Floor 16, Portland House"

Changes to Organisation/Company Name

If an assessor requires the organisation name of an existing address to be changed, the assessor must contact Landmark, using their scheme's normal procedure for requesting a new address, and ask for this to be done (a new address is not added in these instances).

There is one exception to this rule. If a case exists where there are two or more addresses sharing the same details and the organisation / company name is the ONLY unique element of each address, a new address / UPRN is needed.

e.g.:

The Bookshop, Unit 2, etc...

The Cookshop, Unit 2, etc...

If an assessor were to ask for one of the above entries to be changed to "The Workshop", a third entry will be added.

3. Benchmarking

3.01	Excludable Energy Uses	<p>The OR should reflect as accurately as possible the energy used by the building for all the activities directly related to the operation of the building compared to a building typical of its type. If energy is consumed for a purpose not directly related to the use of the building being assessed (i.e. not expected to be accounted for in the benchmark) and not attributable to a different building, it may be reasonable where accurately quantifiable to subtract this energy use in certain circumstances.</p> <p>a) If the energy use is an allowed “Separable energy use” for the benchmark category applicable to the building, then the rules for Separable energy uses must be followed.</p> <p>b) If the energy use is relevant to a different benchmark category and has an associated floor area, then a composite benchmark approach should be adopted.</p> <p>c) If neither of the above (a) or (b) applies, and the energy use is clearly not directly related to the use of the building (therefore not accounted for in the benchmark), and the energy used is supplied through the building energy meter, rather than a direct connection to the mains grid, then that energy use may be an “Excludable energy use”.</p> <p>Where such an energy use:</p> <ol style="list-style-type: none">1. Is supplied through the building energy meter2. Is essentially unrelated to the use of the building i.e. it is a use that is not expected to be accounted for within the benchmark3. Can be accurately quantified i.e. where it is separately metered or sub-metered and where the metering period matches that of the energy supply it is to be excluded from. <p>Then that energy use may potentially be excluded from the OR assessment.</p> <p>The assessor must obtain evidence to demonstrate that the energy consumption excluded from the OR calculation is accurately measured, is for an energy use which is not directly related to the uses included in the preferred building benchmark category and that it cannot be handled as a separable energy use or by using a composite benchmark. In addition, if the energy use is within the control of the occupier, the assessor must obtain evidence of a documented review of energy use and efficiency with improvement proposals completed no earlier than 5 years prior to the energy use being excluded from any OR assessment. The assessor must obtain evidence of such a review or evidence that the energy use is not within the control of the occupier.</p>	Issue 2 1 November 2018
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3.02	Hospital Benchmarking	<p>For hospitals, there are two possible benchmarks available to DEC assessors.</p> <p>The two benchmarks are:</p> <p>Benchmark 20 Hospital (Clinical & research) - According to TM46 this benchmark should be used for General acute/ Teaching / Specialist Hospitals.</p> <p>Benchmark 21 Long Term Residential - According to TM46 this benchmark should be used for Community and Mental Health Hospitals / other Hospitals, unless one or more of the characteristics listed under Benchmark 20 below apply.</p> <p>The selection of Benchmark 20, Hospital (Clinical & research) for a building which is a Community Hospital or Mental Health Hospital may not be the most appropriate benchmark for this type of hospital. This type of building (i.e. Community Hospital or Mental Health Hospital) normally has a much lower typical power (electricity consumption) usage, except where significant diagnostic equipment has been installed, and Benchmark 21 should be used.</p> <p>Where a Healthcare Building does not clearly fall into either category, in the first instance the</p>	<p>Issue 2</p> <p>1 November 2018</p>

		<p>assessor should consider whether a composite benchmark is appropriate (particularly if a composite benchmark has been used to create previous DEC's), and if so proceed following the approved composite benchmark methodology. In using a composite benchmark, the assessor needs to be aware of the many activities that are typically found in hospitals, (related administration offices, laboratories, catering etc.).</p> <p>If composite benchmarking is not appropriate or cannot be suitably evidenced, the following convention should be used:</p> <p>Benchmark 20, Hospital (Clinical & research) should be used if the CIBSE TM46 "allocation guides" (Table 1 columns D, E and F and Table 2) are satisfied or at least one of the following features is present within the building:</p> <ul style="list-style-type: none"> • 24-hour Accident and Emergency facilities (A & E facilities in a minor injuries unit and open for limited hours would not qualify). • Intensive care facilities. • One or more operating theatres (a minor injuries unit with a small operating theatre would not qualify). • Radiology facilities. These might include X-ray treatment (not X-ray for just diagnosis) or treatment using particle accelerators or CT/MRI scanners for diagnosis (a minor injuries unit with basic X-ray diagnostic facilities would not qualify). <p>CIBSE TM46 provides guidance (e.g. Table 1 "further category details" columns G, H, I, J) which should be considered when allocating a benchmark to a building.</p> <p>For Quality Assurance (QA) purposes, suitable evidence must be available to justify the selection of any benchmark(s) for a particular building.</p>	
3.03	<p>Benchmarking of Swimming Pools and Sports Facilities</p>	<p>For a dry sports and leisure facility that includes an indoor heated swimming pool and/or mechanical cooling (for dehumidification) in the pool hall, the swimming pool area, associated wet changing and plant areas should be benchmarked separately as a swimming pool centre (benchmark category 12). If the swimming pool is unheated and the pool hall has no mechanical cooling (for dehumidification), it can be included in a dry sports and leisure facility benchmark category 14.</p> <p>For a fitness and health centre that includes a swimming pool, the swimming pool area, associated wet changing and plant areas should be benchmarked separately as swimming pool centre (benchmark category 12).</p>	<p>Issue 2 1 November 2018</p>