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It is possible to improve EPC and DEC ratings for existing buildings if FMs seek advice and align improvements with tenant refurbishments or scheduled plant replacements

Grade expectations

It is now a requirement for a building (or part of a building) to have an EPC at construction or when it is sold or rented. EPCs are also required when major refurbishments are undertaken. This applies to buildings, or parts of buildings, of more than 50m2 where the internal environment is conditioned, ie where fans or heating or cooling are installed.

Most FMs will come across the need for EPCs when parts or all of buildings for which they are responsible become due for rental. With EPC grades ranging from A (the best) to G, the expectation may be that the EPC grade will fall within the A or B bands.

This expectation is not likely to be fulfilled. Of the 200 existing commercial buildings recently rated by Hoare Lea, the largest percentage fell into the D rating band – this is in line with the government's anticipated rating for existing building stock. The results suggest that for this type of building an A rating is not currently obtainable.

It is possible to improve ratings for existing buildings and improvements can often be aligned with tenant refurbishments or scheduled plant replacements. It is important for the FM to be guided on the implications of tenant and plant refurbishments in order to add the best possible value to the property.

New buildings normally yield an EPC rating of C or better depending on the likely energy use.

The process

The EPC process involves a site survey and the completion of a report and calculation. The data required relates to building fabric, air tightness and fixed building services (these include heating; cooling; hot water services; metering, monitoring and targeting; lighting and lighting controls; plus any renewables or low to zero carbon technologies). Each stream of data has a place in the calculation but it appears some items have a heavier weighting than others.

Building fabric and air tightness, for example, generally have a lower weighting, and it is safe to say that if all fixed building services are efficient a building is likely to achieve a good rating (C or above). Time spent collecting information on the fixed services is therefore well spent. However getting the correct mix of items required by the calculation is a delicate balancing act.

DECs

A survey recently carried out by Hoare Lea examined 50 public sector buildings whose owners had monitored energy use and implementing energy saving projects over many years. This enabled 50 per cent of the ratings to be better than the typical DEC rating which is generally on the D/E boundary. There is room for improvement in the DEC scheme. One anomaly is that it is possible to get a good rating in a building with inefficient fixed building services by reducing occupation levels. It is also possible to get a poor DEC rating in a building that has efficient fixed building services but is occupied densely, due to the increased demands on small power and services.

Due to a loophole in the legislation, guidelines from the Department for Communities and Local Government (CLG) allowed the production of DECs as a desktop exercise in the first year DECs were required. Not surprisingly DECs that include a site survey are likely to be more accurate. Desktop DECs are not recommended as they also remove the assessor's ability to identify ways to reduce energy use. The DEC system offers the opportunity to measure year-on-year energy and CO_2 reductions, but this measurement cannot be used purposefully until the calculations are correct.

The reports

It is widely accepted that the reports produced by the EPC and DEC calculation tools are lightweight. The mandatory recommendations reports are generated from a generic list embedded in the calculation tool. These only provide an approximate guide in most cases.

Although the assessor can add recommendations, clients generally feel that these documents do not provide sufficient information on which to base decisions. Value can be added if the engineer undertaking the calculations produces supplementary commentary on areas for investigation that may yield energy and CO_2 savings. With the potential of the rating to influence lettable rates and asset values supplementary reports are often requested. These can include information regarding capital investment, return on investment and the effect of EPC or DEC improvement. Because of the specialist nature of this work it is advisable to appoint an accredited energy assessor with expertise in building services or the built environment. FM

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Details of assessors can be obtained from the government's central register at www.ndepcregister.com/searchassessor.html

EPC/DEC – reasons and responsibilities

- **EPC is required when a property or part of a property is sold, rented or constructed**
- **EPC should be provided to the potential owner or occupier to advise the potential energy performance of a building**
- **DECs only currently apply to public buildings(buildings owned or occupied by public bodies that provide services funded from the public purse)**
- **The responsibility for producing DECs sits with the public body**
- **The responsibility for producing EPC sits with the owner of the property**
- **The EPBD also requires that all buildings containing air conditioning systems over 250 kW should be inspected and an EPBD compliant a/c inspection report should be undertaken**
- **A revised and extended EPBD is likely to come into force in the UK in 2012**
- **EPCs and DECs provide excellent opportunities to save energy and reduce gas and electricity costs**