

10 Things you should be asking your Energy Assessor

With the advent of obligatory EPC's the industry has been gearing up for a large demand for this type of service. LED welcomes the introduction of energy certification and encouragement this has given to industry professionals from various backgrounds and disciplines to re-train to become energy assessors and take an interest in energy/environmental issues.

However calculating a building energy performance is a highly skilled task and we are concerned about the government's attempts to "dumb down" the profession of energy assessing ignoring most of the relevant guidance produced by CIBSE and other professional organisations. We consider the "become an energy assessor in a week/no previous experience necessary" training programmes that have been introduced in order to meet these requirements to be entirely inadequate with the result that there are many accredited energy assessors practicing in this field who do not have the skills, knowledge or experience to give clients appropriate advice.

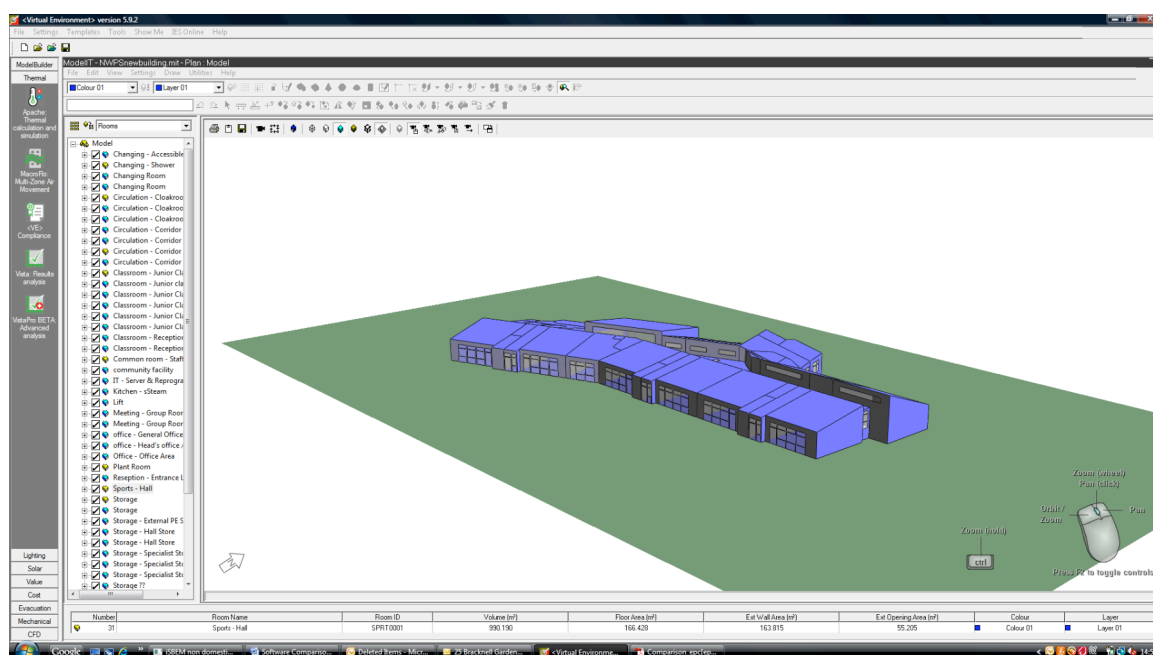
These questions are designed to test your energy assessor's ability to properly assess your building and give you appropriate advice in terms of energy efficiency.

1. What are the SI engineering units of Energy? I never cease to be amazed at how few energy assessors can answer this basic question and if your energy assessor cannot answer this question put the phone down and have nothing further to do with them.....they have no place in the professional energy assessment field if they do not know what energy is. The correct answer is "Joules" or more commonly "Kilojoules" as a Joule is a very small unit of energy required to raise 1 gram of water by 1 Degree Centigrade. Joule was a physicist who famously stood at the base of a waterfall trying to measure the rise in temperature as the kinetic energy of falling water is converted in to heat. He failed because the heat lost as water evaporates is almost exactly equal to the rise in temperature of the water.
2. What is the difference between Energy (Joules) and Power/Work (Kilowatts)? A lump of coal possesses energy that can easily be converted in to another form of energy heat following the laws of Thermodynamics which say that energy must be conserved and it can neither be created nor destroyed. That heat can then be used to produce useful power (say heating a house) or work (say driving a turbine). Kilowatts are the number of Joules (Energy) required per second to sustain this process and when you stop supplying energy the process stops. Your energy assessor should be familiar with this concept and if they aren't they are not able to advise you correctly.
3. Name 3 forms of energy. Energy can take many different forms and correct answers could include the following
 - Kinetic Energy
 - Potential Energy
 - Nuclear Energy (fission or fusion)
 - Light Energy
 - Acoustic Energy
 - Sensible Heat Energy
 - Latent Heat Energy
 - Electrical Energy
 - Electromagnetic Radiation
 - Atomic Energy (the same thing as heat really)
 - Wind Energy
 - Tidal Energy
 - Geothermal Energy
 - Solar Thermal Energy
 - Solar Electric (Photovoltaic) Energy

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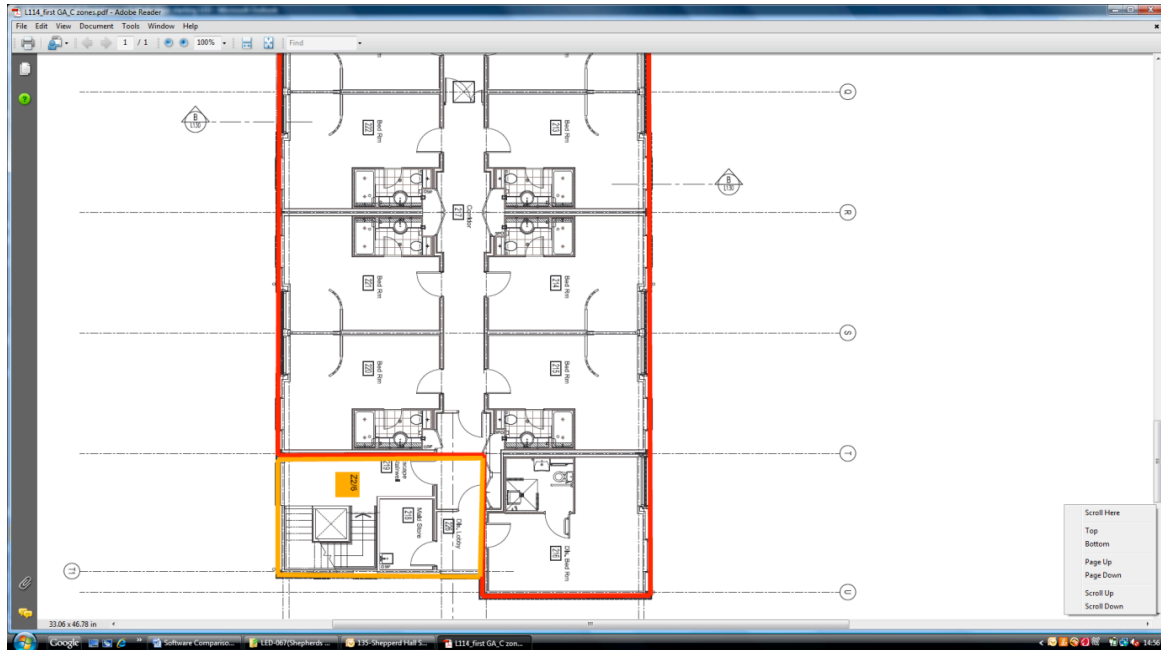
If your assessor tells you it is Mass multiplied by the speed of light squared as Einstein's famous equation $E=mc^2$ they are a genius and you should hire them straight away provided they can spare time from their day job as a rocket scientist and they can produce your EPC for a reasonable cost.

4. Can your energy assessor give you a 3D visualisation of your building? The process of producing an energy certificate requires the assessor to create a 3D model of the building within the software. If they cannot give you a visualisation of the building something like the below they are either not producing the certificate properly or they are using the wrong software or both. Below is an example of what the assessor should be able to produce.



5. Can your energy assessor give you a zoning plan of the building? The process of producing an energy certificate requires the assessor to accurately measure the building in 3 dimensions and zone this according to physical boundaries, the type of activity and the type of heating or HVAC system used so that the software can compare your buildings energy performance against an appropriate benchmark. Many assessors cut corners in this area as it reduces their inputting time but this will have an adverse effect on your certificate and make it harder (and more costly) to comply with the building regulations for a new building. Below is an example of a badly zoned building produced by one of our competitors who was not accredited with bedrooms, corridors, bathrooms, stores included in 1 zone which was defined as a bedroom. Clearly stores use less energy than bedrooms and this was causing the building to fail the building regulations. By zoning the building correctly we were able to demonstrate that it passed without any remedial work which was being demanded by building control.

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6. What insurance arrangements does the assessor have in place? All energy assessors must be accredited by an organisation that will check they have insurance in place in case you are given bad advice. However there is no minimum level of insurance required and we are aware of cases where energy assessors have only £1 of insurance. Most energy assessors operate via limited companies so if you were to sue them they would simply wind up their company and you would find you can only recover £1 in damages from their insurance company. LED carries £1 Million of PI cover as standard and can increase this to £10 Million on request.
7. Is your energy assessor able to give you a confirmation that your certificate has been lodged and can you check this on the “Landmark” on line database? Lodging the certificate costs the assessor between £30-50 and we are aware of assessors who do not lodge certificates because this saves them money but this will mean your certificate is invalid.
8. Is your energy assessor a Chartered Engineer affiliated with a professional engineering body that specialise in energy matters such as CIBSE, the Institution of Mechanical Engineers, the Institution of Electrical Engineers (now the IET)?
9. Is your energy assessor a Low Carbon Consultant via an organisation such as CIBSE? This is a sign of quality that is accepted by most building control officers as an indication that calculations have been undertaken diligently.
10. Has your energy assessor accepted “default” answers within the software? The energy assessor should go to all reasonable lengths to ensure that the questions asked by the software have been answered correctly. Accepting “default” answers within the software is a way in which your energy assessor can cut corners to reduce the time spent producing the assessment but, because the default answers are generally (but not always) the worst possible case, this will lead to your building being given a worse rating that would be the case and in the event of a new building will require you to spend more money on insulation and/or renewable energy than is required to meet your legal requirements.