

The Green Deal and Energy Company Obligation consultation.

Please use the table below as a template to respond to the consultation. It will help us to record and take account of your views.

Also, please provide evidence for your answers and comments where possible.

PERSONAL DETAILS
<p>Respondent Name: Dr Hywel Davies, CIBSE Technical Director Email Address: hdavies@cibse.org</p> <p>Are you responding as an individual or on behalf of an organisation: On behalf of The Chartered Institution of Building Services Engineers (CIBSE).</p> <p>Organisation Name: CIBSE is the learned and professional body for building services engineers, with a global membership of almost 20,000 people, over two thirds of whom work in the United Kingdom and will be affected by the introduction of the Green Deal. Our members work in the manufacture of products and systems that will be funded under the green deal, and in the design and installation and operation of these products and systems for the buildings that will be refurbished and improved under the Green Deal.</p> <p>The Institution exists to 'support the Science, Art and Practice of building services engineering, by providing our members and the public with first class information and education services and promoting the spirit of fellowship which guides our work.' CIBSE sets standards for building services engineering in the UK and overseas, publishing the CIBSE Guide, Commissioning Codes and other guidance material recognised internationally as authoritative and setting the criteria for best practice in the provision of energy using systems in buildings.</p> <p>How were members views assembled: A workshop of senior members convened, to demonstrate that this is a significant collective effort. Members and non-members also submitted comments via the Institution website.</p> <p>Our response is limited to those chapters of the consultation in which our members practice and were we have appropriate expertise</p> <p>Would you like this response to remain confidential? No If yes, please state your reasons:</p>

GENERAL COMMENTS.

CIBSE has the following General Comments which we believe need to be made prior to providing the more specific answers requested in the response form.

The 8 week consultation period was not a reasonable timescale for response to a package of documents of this magnitude. This also spanned the Christmas period, further hindering the assembly of responses from our membership. We question whether the consultation complies with the Cabinet Office guidelines in this respect. Whilst we understand the constraints of the Green Deal timescale, and welcome the urgency of the Coalition in driving this issue forward, we do not think that the consultation period was satisfactory and the unduly short timescale has reduced the ability of respondents to undertake a thorough review of the whole package of documents on which the government has consulted.

Chapter 1: Assessment

CIBSE is concerned about the ability of prediction tools to accurately predict savings in the context of meeting the “Golden Rule”. This may be more of an issue in commercial buildings where a significant number of measures could be viable in a particular building.

The commercial buildings sector contains a very wide spectrum of buildings and occupying businesses. One model may not fit all. The ability of occupiers / owners to assess and manage risk will vary greatly. Concern has been expressed by our members at the apparent lack of account taken of occupancy patterns, behaviour and activities in the assessment.

Members are not altogether happy that the proposed process for accrediting and auditing Green Deal Assessors might disadvantage independent assessors who are not tied to a Green Deal Provider. It is important that clients should have access to fully independent advice and are able to use consultants of their choosing if they so wish.

Landlord / tenant issues are particularly relevant to the commercial sector and seem to pose many potential problems:

- Length of leases vs. payback period of measures adopted.
- Limitations on measures that end up being adopted / funded – short-term payback only?
- Is the Green Deal landlord or tenant driven?
- Who can (or has to) agree to a Green Deal on a particular building?
- Who pays the bill when there is a void?
- Change of ownership, Change of use, change in payback, acceptable liability.

The energy model used to assess the savings against the Golden Rule, whether SBEM or DSM, must first accurately predict (+/-25%) the existing monthly fuel consumption for at

least 10 months of the previous twelve and (+/-15%) on the annual fuel consumption for each of the main fuels. If it cannot do that how can anyone have faith in any other outputs? ('Main fuels' to be defined as any fuel that incurs at least 5% of the total expenditure on fuel, or any fuel that provides at least 5% of the gross kWh of the total gross kWh for all fuels used.)

If this test is not satisfied, then we would argue that a full dynamic simulation using Level 5 EPC software is needed to produce meaningful results.

- This means that if the building, systems or occupancy are sufficiently complex to require proper engineering specification then the assessment will automatically step up from SBEM to DSM
- This approach will also pick up errors in assessors reading meters/bills in multi-occupancy premises etc.

Green Deal assessments will trigger construction work that will require a professional design team to optimise and specify. This will require multiple professional disciplines and far exceed the capabilities of a single Green Deal assessor in larger commercial buildings.

It is essential that the Green Deal process clearly identifies how the specification will be produced. Although the installer is supposed to obtain the specification from the Green Deal Provider, there is no obvious information on the skills, competence or accreditation of the person or team writing the specification. This is a fundamental flaw in the overall process, which was pointed out in relation to the development of PAS 2030, but seems to remain. The specification should conform to the same procurement requirements as the supplier (i.e. tendering etc.)

Assessor qualification:

- Can any assessor cover the complete gamut for all the measures?
- Shouldn't specialists, be allowed to badge as Green Deal for their discipline only?

To what extent are assessors qualified? The following need to be considered:

- SBEM covers levels 3 and 4, but we will have a need for assessors fully competent in the use of Dynamic Simulation Models at level 5 for complicated buildings;
- Specialist Green Deal Assessors may be needed for sound tests, AC, CHP
- It is not clear from the consultation how new tools can come forward, nor how disruptive technologies can break into the buildings sector under Green Deal
- For existing buildings with actual performance data why can we not use benchmarks instead of SBEM, allowing the cost reduction to be calculated more simply and with greater predictability using real data and not modelling.
- Thermal details, especially for heritage buildings

- The proposals do not appear to engage with behavioural or other measures that are not addressed in the SBEM list of measures. There is no incentive to look elsewhere. How will differences between SBEM versions be handled? Will new TERs supersede old ones? Do you freeze the version being used once the Golden Rule calculation has been successfully met?
- CIBSE is encouraging members to trial the beta SBEM for Green Deal package. This particularly needs reviewing to ensure that it will deliver ‘workable’ figures to calculate reliable savings that equate to savings in the bills e.g. for lighting controls.

Assessor Impartiality

Guidance is needed about legal and PI issues. A large company could have a “Chinese wall” between 2 parts of the firm, but Sole Traders will have more difficulty. Not only be independent, but be seen to be independent. If the assessor is tied to the GD provider, he may be over-specifying on behalf of the provider. If tied to a supplier (i.e. boilers), then the tendency is to specify a new boiler (or whatever) maybe when not necessary.

Issues missing from Assessments:

- What about abstract performance measures that can’t be designed in, but must be targets, such as:
 - Air pressure/leakage test values and specific fan powers
 - Zones in complicated existing building, legacy technology, unknown parameters.

Chapter 2: Measures, Products and Systems

Concern has been expressed that there may not be sufficient capacity for testing/approval of new products and that this might act as a brake on innovation.

The list of qualifying measures has a strong domestic focus:

- No mention of chillers / cooling
- Measures to control overheating risk
- High efficiency electrical equipment – pumps / drives / motors
- Vertical transportation

In addition to challenges with assessing potential savings in the first instance, what about an occupier who, due to the Green Deal implementation, can now use the system in a much more wasteful way, and does so. What happens to the money then? So if a building was previously heated to 18 and now 21 (under-heating changed to comfortable), or from 21 and now to 23 (comfortable changed to overheating) (i.e. to improve comfort in the building), then we’ve encouraged additional energy use, rather than a reduction in energy use. This might apply to lighting as well – rooms being over lit after Green Deal, this is

especially important with emerging LED lighting technology.

If the bills do go up, is there a QA process which will say, 'actually, you were sold something that didn't work very well'? This could cause liability and therefore insurance issues. What about refurbishments? Office and retail fit-out (re-fit) is quite common. What happens if there is a re-fit within the 10 year payback of the Green Deal measure? What if a high street retailer installs fancy retail lighting, and then they leave and, for example, a Sainsbury's Local moves in and rips out the lighting installed by the previous retailer (which is most likely to happen). Do they still have to pay, as the Green Deal stays with the direct-supply meter which the previous retailer was using, and now Sainsbury's takes over? The equipment has been ripped out... is there a disincentive for these types of occupiers (particularly landlords with office blocks that have ground floor retailers) to use the Green Deal to fund energy savings, as it will essentially just make the tenancy more expensive to the future tenants, without any benefits to the subsequent tenants after the Green Deal item has been removed? Electricity use in retail is typically 40% lighting alone; many retail outlets are over-lit for current use and should be encouraged to refurbish, this disincentive will do the opposite.

There needs to be some protection so that companies can give this sort of advice without too much liability, but equally, if companies consistently recommend inappropriate measures, there needs to be a mechanism to identify them and "strike them off the list". Some sort of QA is essential.

Some specific measures may just not work, no matter who recommends or installs them. There needs to be a mechanism to measure all of the Green Deal measures, identify the ones that don't work, and remove them from the list to provide a learning and feedback cycle

Will there be a QA/feedback system to identify flaws in the assessment software? There also needs to be a means to identify this as well.

Chapter 7: Installation

Should mandatory Post Occupancy Evaluation be part of Green Deal in the commercial sector? This would provide evidence of successful Green Deal projects, and also ensure that the learning from Green Deal projects is captured and can be passed on to the wider sector.

There should be a formal audited requirement that adequate commissioning is carried out.

There is an opportunity to require providers to monitor some element of their installations to demonstrate that expected performance was achieved and if not to identify reasons

Additional Comments:

- Who takes responsibility for saying the Golden Rule will be met and what are the criteria for this?
- How will different software providers produce similar outputs?
- How do you get potential customers interested in the Green Deal when they currently don't even take up free roof insulation?

Electricity meter as the repayment mechanism – there is a real presentational problem and risk to Green Deal uptake where the principle saving is Gas and the Green Deal is repaid from the electricity bill. Gas savings should definitely be paid for through the gas bill, if only to send the right message to the consumer. What if there are separate gas (British Gas) and electric (EDF) providers, new condensing boiler but the savings come back through EDF?? How do we expect customers to respond to that scenario?

- Is the Green Deal provider responsible for:
 - Failure to reduce energy?
 - Poor installation?
- What are the implications or unexpected consequences of the interconnections between FiTs/RHI/CRC and the Green Deal?

It is a concern that the consultation document is framed around SME's for non-domestic. Document should say "commercial buildings" rather than SME's as the latter implies smaller buildings, often tenanted offices. This is important for the framing and feel of the Green Deal, where it sits in the market, who gets involved etc. It also has a significant effect on the early points made above about the non-domestic world being a different place with different skills, skill levels, technologies, building types. It is vital that the consultation reflects the domestic and non domestic sectors in the right way and the use of SME's does not help to achieve this.

Independence of the assessor is also a concern, but also who pays the assessor is not clear. Sub-metering and Automatic Monitoring and Reporting should be considered as a Green Deal measure as it is on the ECA list! Good Quality CHP is also on the ECA list but not on Green Deal measures!

Annex A: List of Green Deal Qualifying Improvements

Additional items suggested:

- Lighting controls and luminaires
- BMS systems
- Has to meet Golden Rule, has to be on list
- Power factory correction

CIBSE’s response primarily focuses on building services issues in commercial buildings.

CHAPTER 1: Assessment

Q1: Do you feel the proposed requirements on Green Deal assessors set out in the main body and at Annex A of the Code of Practice are clear and robust enough to support the Green Deal assessment?

No

Please explain:

Full details of assessment criteria should be stated in the overarching documents to ensure that all green issues are covered, for example: Heat energy, light energy, ventilation energy, water usage, and what will need to be assessed to collect relevant data in order to avoid unsatisfactory conditions resulting from remedial measures within both domestic and commercial buildings.

Additionally we have the following detailed comments on Appendix A, Green Deal Code of Practice, URN 11D/921:

Section	Comment
1. Introduction	§1.1 Green Deal providers are referred to as “assessors”, please amend to or add “or advisors”. Make this change throughout the document.
2. General provisions	§2.7 This states, “Green Deal participants and their representative bodies will be responsible for the actions and omissions of their employees, subcontractors, agents and associates.” It is not clear how this could be policed or legally enforced, and is very probably not an insurable liability for Schemes.
5. Duties on Certification Bodies	<p>§5.1 The term “members” is not normal certification terminology. As this scheme is being accredited under EN 45011 for product certification, we suggest using the term “supplier” which is the term defined in that standard. Make this change throughout the document.</p> <p>It is also not acceptable for Certification Bodies to be held responsible for the actions of their members – there is no way that all possible actions can be foreseen and it is unlikely that insurance could be obtained for such an open remit of responsibility. Certification bodies cannot enforce some of the duties being placed upon them.</p> <p>§5.6 bullet 5, the term “registration” is introduced. Please use the term "certification" as this refers to the formal issue of the certificate following evaluation of the GDA. "Registration" means that the certification body then records the certification in its client register.</p>
8. Breaches of	§8.5 refers to Participants as companies, directors, partners or sole traders. This

<p>this Code - withdrawal of authorisation for green deal participants & disciplinary measures</p>	<p>is different to the statement in §1.1 and is confusing e.g. a director is a member of a company therefore why separate them? We suggest that the definition in the Glossary of Terms for “participants” needs amendment, we suggest “Registered companies, organisations or self-employed individuals” §8.7 the term “firm” is introduced. There is a need for consistency of terminology to help avoid confusion therefore we suggest use of “participant” as a general term or “advisor” as a specific term.</p>
<p>Glossary of Terms</p>	<p>The definition for “assessor” includes the term “company” as being certified and on the assessor register. We suggest that “company” is deleted because a company cannot be registered as a GDA.</p>
<p>Annex A</p>	<p>Section 3 – Requires that Assessors and their employers are “financially viable” – we do not understand how Certification Bodies are expected to make this judgement without being certified accountants at the very least. It would be possible to have checks made on companies and organisations but is the expectation that checks be made on the personal finance of sole traders? The requirements should be clearly scheduled so that UKAS can accredit against the schedule and all Certification Bodies know exactly what they are and are not required to do. The requirements should be reasonable and proportionate, especially in respect of sole traders.</p> <p>Section 13 – refers to “specialist skills” – what specialist skills does this refer to?</p> <p>Section 22 – states “Assessment of technical competence must include on-site assessment/observation.” What level and frequency is envisaged for this activity, which is a very expensive, and time consuming function. Again, absolute clarity is required for UKAS purposes and to avoid competition around keeping such expensive activity to a minimum.</p> <p>Section 24 – refers to use of “competent inspectors to undertake monitoring of the work of ... green deal assessors...” We suggest that the term “inspectors” is replaced by “auditors” to be consistent with terms used in the certification industry.</p> <p>Section 26 – requires complaints to “be forwarded as appropriate to their employer and certification body.” What is meant by “appropriate”?</p>

Q2: Can you think of any requirements that Green Deal assessors will need but that may not be covered by the suggested approach, combining National Occupational Standards (NOS) and Accreditation of Prior Experiential Learning (APEL)?

Your answer:

There are a wide range of non-domestic building types and these have very different technologies and equipment. Compared with the domestic sector, assessors need very

different skills across this range and different software to assess it. The consultation does not seem to recognise this and probably needs a separate approach for non-domestic. EPC training is completely different in the domestic world than the non-domestic world. We have multiple levels of training based on size and complexity of buildings. For example, a residential assessor wouldn't be familiar with CHP or megawatt chillers; they would be completely fazed walking into a small/medium sized plant room. That is why EPC training is separate for domestic and non-domestic, and it is essential that this differentiation is carried forward into the Green Deal.

It is not just about competence level and training. Fee rates are different for different buildings and clients. Day rates in the commercial sector will be significantly higher. The increase in fees is not linear because they take into account the different skill sets. The Green Deal will need to take account of these fee rates.

This also applies to specification. Non-domestic specifications will need to be much more detail. With 3 quotes required over £10,000, this will probably need a formal tendering process with sealed envelope etc., far more complicated than, "getting 3 quotes" for cavity wall insulation. It needs to be considered more than whether it's wool, bead, etc. for example, in specifying changes to an air conditioning system.

Members have expressed concerns about the arrangements for APEL – which EPC assessors will get to use "APEL" to quickly become Green Deal assessors in non-domestic? It really needs operational energy experience (DEC assessors), but it needs SBEM-type experience as well, which the DEC assessors won't necessarily have, but the EPC assessors probably will. What about the really large buildings? Can you even use SBEM to assess potential energy savings? A huge City/Canary Wharf building? This is hugely time consuming and costly, probably making green deal uneconomic. There is a big credibility gap between EPC and DEC (OR) – how will this be bridged? Are we also going to accredit the "black box" of Green SBEM for the dynamic simulation software (IES, TAS, etc.) as well? New SBEM includes occupants, what about banding for age of existing elements.

A Green Deal assessor will require more than just a comprehensive knowledge about energy performance in buildings as the assessment should address all aspects of energy efficiency to reduce the environmental impact of the building. This would include: water saving appliances and retrofit devices; smart metering and retrofit energy saving/energy management devices; an understanding of energy use in the building type being assessed; knowledge of renewable and low carbon technologies; understanding of thermal dynamics. This is not currently required by a domestic EPC assessor (SAP) or non-domestic (SBEM) assessors.

Will there be levels of domestic assessor to respond to the varying levels of dwelling type?

E.g. Edwardian/Victorian terraced dwelling, 17th century large private residence, flats with communal core and/or shared heat source etc. Or will the assessment be a 'one size fits all' approach?

How will the Green Deal ensure that those who work on heritage buildings are suitably competent to work on them? The knowledge of building physics required to successfully improve the energy efficiency of a 19th century building is not the same as to improve a '1960s Wimpey Home'.

Will the EPC level 4 & 5 building types still apply with the same requirements for additional expertise? It is agreed that the non-domestic EPC assessor skill base is more comprehensive, but additional skills and knowledge will be required to enable an assessor to cover all aspects that should be covered by the Green Deal. Modular courses could be used to fill any individual's knowledge gaps.

CIBSE consider that it is essential to provide an APEL route to Green Deal Assessor accreditation, since there are a number of experienced practitioners operating in this field already, albeit without the knowledge of the Green Deal which they would need to learn and demonstrate competence in.

Q3: In proposing to allow for the market to determine payment of assessors and cost of assessment, are there any further requirements we should be placing on assessors or providers in relation to (a) payment of assessors, (b) the cost of the assessment, or (c) declarations from the assessor?

Your answer:

The key issue is the potential conflict of interest arising from direct salaried employment by the Green Deal provider.

Are the measures in place fit for purpose?

We believe that there is considerable scope for confusion over when a GDA is required to act in an independent manner, and when they can put that aside and resume a role as a representative or agent of an employer or parent company.

Q4: Do you agree with our proposed approach to third party assurance and enforcing compliance for those providing Green Deal assessments?

Agree

Please explain:

Providing the checks are in place to ensure that the predicted energy savings can be achieved. Post installation checks should be carried out to determine that these savings have been achieved.

The independence of the assessor is a concern, but also who pays the assessor is not clear. He who pays the assessor may control the assessor!

Q5: Should the current EPC validity period for property transactions be used for Green Deal purposes or is a shorter validity period more likely to meet the needs of the Green Deal process?

Your answer:

We believe older EPCs pose a significant risk to the Golden Rule assessment.

If the EPC is over 5 years old, some alterations are very likely to have occurred. Even at 6 months, services equipment and building fabric may have been altered. The existing EPC will give a basis for standard data but would require checking/updating to ensure it reflects the building at the time of the Green Deal assessment.

The EPC should have contemporary relevance for clarity of responsibilities and Technical viability.

Q6: Do you think that this approach to identifying and assessing non-domestic buildings, based upon the requirements and tools for Energy Performance Certificates, will capture all non-domestic buildings and business sectors for which the Green Deal is relevant?

We don't know because in the time available and with the tools currently provided in beta test format we cannot form a professional view.

Please explain:

The approach appears to be over simplified as applicable to a commercial building. Clarification of the new SBEM tool is required.

Q7: Are there alternatives to the simple approach to providing running cost savings in the non-domestic assessment that we should consider?

Your answer:

Estimating energy savings in non-domestic buildings is a complex process. It requires detailed knowledge of usage, occupancy and equipment. We understand that SBEM can model some of these things, but these models are based on crude assumptions and standard usage patterns. We know there is a substantial gap between EPC predicted energy use and actual reality (DEC) energy use. We understand that SBEM is being adapted to take some account of this, but have yet to be able to establish the success of this in practical tests.

We would suggest the inclusion of LENI (Lighting Energy Numeric Indicator) as a measure for lighting energy since it places a greater emphasis on controls and occupancy patterns than

SBEM.

We need to assess the actual energy use of a building before we make any assumptions about potential savings. EPCs do not cover all of the “non-regulated” energy. An office with a trading floor will be mostly non-regulated (i.e. lots of electricity for small power). It is not yet clear that SBEM has been modified to take account of this.

For example, for consumers on multi rate usage related tariffs, calculation of payback is potentially difficult. It may be that they pay a higher rate for the first units used and then the rate falls. So the payback must be calculated based on a lower unit cost. This may jeopardise the meeting of the Golden Rule.

Can the Green Deal provider agree a low/average rate at which they will recoup the loan per kWh saved. This would ensure that the variable tariffs do not confuse the figures as payback would be charged at a single rate per customer.

E.g. If a customer has 3 rates; initial energy consumed @ 0.15p/kWh, 2000-10,000 kWh @ 0.11p/kWh, 10,000 – 100,000 kWh @ 0.08p/kWh and generally consumes 12,000kWh/pcm, then C would be charged at a rate of 0.08p/kWh.

Capital allowance could then be determined as follows;

A = monthly existing average consumption

B = monthly post-Green Deal predicted energy consumption

Cp = predicted monthly kWh saving (charged to customer at low/average rate)

D = monthly post-Green Deal actual energy consumption

Ca = predicted monthly kWh saving (charged to customer at low/average rate)

E = Green Deal Golden Rule capital cost limit

$$A - B = C_p$$

$$A - D = C_a$$

$$((C_p \times 12 = \text{predicted annual energy saving}) \times \text{kWh rate}) \times (25 \text{ years with } 5\% \text{ inflation rises each year}) = E$$

$$E / C_a = \text{actual payback period}$$

Under these tariffs the energy saved will accrue savings at the lowest rate, so a proposal that might meet the golden rule under a flat rate tariff might not meet it under a declining

kWh multi rate tariff. That would be bizarre in the extreme, and very confusing to consumers. Will GDAs be allowed to advise a tariff switch as part of a Green Deal package, if that switch enables a package to meet the Golden Rule?

CHAPTER 2: Measures, products and systems

Q8: Which measures should be added to the list of qualifying measures in Annex 1 for non-domestic properties, and what evidence is there that these measures improve the energy performance of buildings?

Your answer:

A large number of non-domestic energy saving items are not on the list e.g. Daylight control of dimming for electric lighting, Building Management Systems, high efficiency chillers, Variable Speed Drives of fans and pumps, power factor correction. Evidence that these measures improve energy performance of buildings is available from the Carbon Trust. Why have “micro” CHP and wind without having “regular” CHP! E.g. 100 kW CHP for a hotel might be a good Green Deal option.

The list of measures does not include ‘special’ loads, unregulated loads, process loads that might be common in non-domestic e.g. swimming pools, computer room HVAC, display lighting etc.

The Enhanced Capital Allowance (ECA) list is already established for “approved” energy efficiency measures which are measured to provide savings. Why not use some or all of that for non-domestic?

There isn’t any opportunity for multiple building owners to link savings across buildings e.g. local district heating, central CHP for school, sports hall, etc. Also, an organisation with 25 buildings – “green deal” sits with an energy meter, but might be cost-effective to bundle the work, then what if they sell a few of the buildings... complicated.

Landlord tenant issues - Tenants who are sold energy from the landlord are more straightforward, but tenants with direct supplies (retail units at street level of an office block) – are far more complicated.

With emphasis on product for the measures there is little regard to lighting controls (although they are mentioned) and it may drive energy efficient products being designed into installations and systems poorly. Controls are the key to energy efficient lighting. Good components only deliver good systems with good integration and control.

Q9: Will the existing Appendix Q process, which will allow new measures to be added to the Green Deal assessment tools, and to the list of qualifying improvements, support innovation in the market and how could the process be improved? In particular, what support could SMEs benefit from?

Your answer:

See answer to Q8.

Appendix Q process is only applicable through SAP and RdSAP, the domestic assessment tools. There needs to be a process applicable to the commercial sector.

Government could consider using the methodology for adding things to the ECA list to identify new Green Deal measures.

Q10: What innovative ways can the government use to encourage uptake of a package of measures and could our existing proposals support this.

Your answer:

Mandatory Post Occupancy Evaluation could be part of the Green Deal in the commercial sector, since it would provide feedback on the effectiveness of plans. At the very least there should be a formal (and audited?) requirement that adequate commissioning is carried out.

Although this is a requirement of Building Regulations, Regulations 47 of the Building Regs prevents Building Control from insisting on reporting of commissioning in accordance with the relevant regulation.

In the commercial sector CIBSE has already contributed to the Ministerial Forum on Maximising Energy Efficiency and we contributed to the advice submitted to the Minister. We would refer to that advice on this question.

Q11: Please provide views on the potential inclusion of hard-to-treat cavities (and potentially other measures of a similar type), and proposals for how properties might be accommodated in the ECO without excessive complication or perverse consequences.

Your answer: It is not clear why these should be excluded from the ECO.

Q12: We propose that the ECO Carbon Saving obligation should be achieved primarily by promoting and installing solid wall insulation. Should any other measures be supported, and how would these be defined?

Your answer: See answer above. It is not at all clear how this distinction is justified.

Q13: For the ECO carbon saving obligation, we propose that any other carbon saving measures should only be eligible when delivered as part of a package with solid wall insulation. Do you have any suggestions for the criteria by which eligibility within packages should be restricted, explaining why you think any such restrictions should be included?

Your answer: See again the previous answers. It is not clear why these distinctions are being drawn. Hard to treat is hard to treat – ECO should not discriminate against different types of hard to treat home or building.

Q14: We propose that *any measure* should be allowed under the Affordable Warmth obligation, provided it allows eligible households to heat homes more affordably. If you disagree, or feel there are risks to this approach, please explain and set out any restrictions you believe should be put in place.

Your answer: So why this approach to affordable warmth but not to the ECO.

Q15: Do you have any suggestions for whether and how we should score, boiler repairs under the Affordable Warmth obligation, such that where repairs are more cost-effective than replacement systems, without significant impact on efficiency, these can be promoted?

Your answer: For non domestic buildings DECC should consult the Heating and Ventilating Contractors Association.

Q16: We are proposing that any heating measures should be allowed under the Affordable Warmth obligation, including for households off the gas grid, and extra incentives should not be put in place for air or ground source heat pumps. Do you have any evidence to bring to bear on the performance of heat pumps to improve the ability of vulnerable households to heat their homes affordably?

Your answer: Heat pumps are disproportionately expensive (within a domestic setting) with generally under achieving COPs. There are more cost effective ways of assisting vulnerable households.

Q17: To what extent can existing product lists, such as the list of Microgeneration Certification Scheme compliant products be used as the starting point for the Green Deal Products list?

Your answer: What about the Enhanced Capital Allowance product list or Energy Technology List.

Q18: Do you agree that allowing enhanced product performance to be recognised in the Green Deal financing mechanism is useful? Do you have any specific views on how this approach could be implemented?

Your answer:

Chapter 7: Installation

Q40: Are there any government backed and accredited scheme standards which operate

at present (in addition to the Microgeneration Certification Scheme and Gas Safe), that could be considered as meeting the new Green Deal standard already?

Your answer:

For cavity wall insulation accreditation there are existing competent persons schemes that apply to a range of the measures. It is not at all clear how these are to be treated under the Green Deal. Potentially some installers now face the requirement to be accredited under different schemes for different regulations, with disproportionate burdens as a result. This will reduce uptake of a simple and cost effective measure.

Q41: It is not yet clear what the accreditation requirements for GD/ECO will be and how they will impact on incumbent firms in the market. Further work is being carried out to understand and quantify the nature of the impact of these, particularly for those firms that are micro-businesses. We welcome views from incumbent CERT installers on what the potential implications of changes to accreditation would be.

Your answer: It is important that the accreditation requirements treat installers who are accredited under the Competent Persons Scheme arrangements, the Microgeneration Certification Scheme, and the Gas Safe Register on a fair and equitable basis.