

Analysis of stakeholder responses to the Energy Savings Opportunity Scheme consultation

Final Report



Report for the Department of Energy and Climate Change

Ricardo-AEA/R/ED58893

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Contact:

Lisa Groves

Ricardo-AEA Ltd

Gemini Building, Harwell, Didcot, OX11 0QR

t: 01235 75 3032

e: lisa.groves@ricardo-aea.com

Ricardo-AEA is certificated to ISO9001 and ISO14001

Authors:

Lisa Groves, Christine St John Cox, Richard Eaton, Nipunika Perera, Rebecca Turner, Tom Beckett, Kathryn Rushton, Nikhil Doshi, Mark Johnson

Approved By:

Mark Johnson

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Executive summary

Under Article 8 of the EU Energy Efficiency Directive, all EU Member States are obliged to require all 'large enterprises' (non-SMEs) to conduct organisational energy efficiency audits by 5th December 2015 and thereafter every four years.

The Department of Energy and Climate Change (DECC) conducted a public consultation between July 2013 and October 2013 seeking views on how to implement Article 8 into UK law. The consultation document set out implementation options for a new Energy Savings Opportunity Scheme (ESOS) and invited comments and suggestions for alternative options. Respondents were asked to complete DECC's Questionnaire Response Form with their responses to 37 questions.

DECC commissioned Ricardo-AEA to analyse the responses to the consultation. This report provides detailed analysis of consultation responses. It also includes Ricardo-AEA's own suggestions to Government to support development and implementation of this policy.

In total, 147 responses were received and have been analysed in the preparation of this report. For each consultation question a summary of the key findings is provided, including a statistical analysis and a selection of particularly pertinent quotes. A critical assessment of the issues and concerns raised within the responses, and potential ways to incorporate these into policy development, has also been provided for each question.

The responses were spread across a range of sectors, although trade bodies made up the largest proportion of respondents (28%) of any sector grouping.

Table 1: Split of respondents by sector

Sector	Number of responses
Charities, NGOs and agencies	8
Energy intensive industries	15
Green Economy	18
Hotel chains / hospitality	1
Light industry and manufacturing	13
Other primarily office based companies	16
Property / land management	6
Retail	8
Trade bodies	41
Transport	2
Universities and other bodies	5
Utilities	14
Grand Total	147

From an overarching perspective, there are a number of key common themes that can be drawn from the consultation responses:

Respondents would prefer DECC to keep ESOS simple and understandable yet strive to make it meaningful

- Respondents want energy assessments conducted under the scheme to provide recommendations for energy saving outputs that are relevant to each business individually and are not just generic.
- Respondents want ESOS to add value and identify real measures that can be implemented. There were strong views that DECC will need to prove the added value of ESOS assessments if existing schemes are deemed not to be compliant.

Respondents are keen to avoid duplication in existing regulation and requirements

- Many respondents already engage with a number of other existing regulatory systems (CRC Energy Efficiency Scheme, Climate Change Agreements, EU Emissions Trading Scheme, Display Energy Certificates and Energy Performance Certificates, Carbon Trust Standard, Green Fleet Review and International Organisation for Standardisation accreditations).
- There was a strong emphasis in the responses on ensuring as much integration as possible with existing schemes, and recognising that existing schemes could provide accreditation for ESOS assessors.

Respondents were keen for DECC to ensure that the policy is designed to minimise compliance costs to enterprises

- In addition to reducing overlapping requirements with existing schemes, respondents want DECC to allow for actions that will reduce the cost impact to enterprises, including:
 - Discretion on the level of audits required
 - Using internal team members for their knowledge and skills

Many other detailed comments are provided in response to the consultation questions, as described within the main body of this report.

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1 Introduction and aims of the analysis

Background to the consultation

Under the EU Energy Efficiency Directive, all EU member states are obliged to require all 'large enterprises' (non-Small or Medium Enterprises (SMEs)) to conduct organisational energy efficiency audits by December 2015 and thereafter every four years. The Department of Energy and Climate Change (DECC) recently consulted on introducing a new Energy Savings Opportunity Scheme (ESOS) to implement this new requirement.

While the UK has various existing schemes requiring accurate energy measurement (e.g. CRC Energy Efficiency Scheme (CRCEES), Climate Change Agreements (CCAs), EU Emissions Trading System (EU ETS)), there are none requiring identification of cost-effective energy efficiency opportunities. The audit requirement within the EU Energy Efficiency Directive targets this policy gap. The Directive defines an 'energy audit' as "a systematic procedure with the purpose of obtaining adequate knowledge of the existing energy consumption profile of a building or group of buildings, an industrial or commercial operation or installation or a private or public service, identifying and quantifying cost-effective energy savings opportunities, and reporting the findings".

Energy efficiency audits align well with the Government's UK Energy Efficiency Strategy; where audits could help overcome 3 of the 4 key barriers to energy efficiency identified:

- By driving action, audits could help to accelerate the embryonic market for energy efficiency products and services.
- By investigating and highlighting key energy efficiency opportunities, targeting directly the information barrier, the audits could raise awareness of scope for cost saving.
- By raising the profile of targeted energy efficiency opportunities with the Board, audits could help to increase their importance within enterprises and thereby address the wider behavioural barriers to energy efficiency that cause energy efficiency improvements to be undervalued.

Significantly, energy efficiency audits will apply to a very large number of organisations, targeting all types of energy use across the organisation (including buildings, transport and industrial processes). As such, the policy has the potential to make a major contribution to UK energy efficiency.

The EU Energy Efficiency Directive states that the requirement to undertake an energy audit by 5 December 2015, and at least every 4 years subsequently, will apply to all large "enterprises". Statistics suggest that there are approximately 7,300 large organisations in the UK who are likely to fall within the scope of the audit requirements. This includes not only large companies; all types of large partnerships, community interest companies, charitable incorporated organisations, corporations sole and unincorporated associations will also be covered – unless they are classified as SMEs. Public sector bodies are exempt (as other parts of the Directive address public sector energy efficiency).

The Government conducted a public consultation between July 2013 and October 2013 seeking views on how to implement Article 8 in to UK law. The consultation document set out implementation options for a new Energy Savings Opportunity Scheme, and invited comments and suggestions for alternative options.

Aims and objectives of the analysis

The consultation process forms a key part of DECC's engagement with stakeholders. As such, comprehensive analysis of the responses is an integral aspect of the policy development. The consultation is vital in order to ensure that the policy can be developed in response to stakeholder concerns, and so that the correct provisions can then be fed into the Statutory Instrument which will provide the legal framework for the mandatory energy audits scheme.

The central objective of this report is to analyse stakeholder responses to the consultation on implementation proposals for the Energy Savings Opportunity Scheme. It provides detailed analysis of consultation responses and advice to Government to support development and implementation of this policy. This report is intended to support DECC's own consideration of the consultation responses.

2 Analysis methodology

2.1 Data collection

The consultation documents were released to the general public in July 2013. Respondents were asked to complete DECC's Questionnaire Response Form with their responses to 37 questions. We have split the questions into a number of categories for ease of analysis (the questions have also been shortened in the below list).

Box 1. ESOS Consultation Questions

Overarching evidence and comments

Q1 Evidence to assist with the impact assessment

Q2 Geographical coverage

Q37 Are there any additional issues to be raised?

Qualification and registration

Q3 Definition of 'enterprise'

Q4 Qualification date

Q5 Re-registration and new entrants

Minimum requirements and accounting rules

Q6 Are the minimum requirements for ESOS reasonable

Q7 Should good practice guidance be developed

Q8 Energy spend threshold

Q9 The approach to calculating energy usage

Q10 Inclusion of energy intensity ratio

Q11 Energy use responsibility

Q12 Site visit discretion for ESOS auditors

Q13 Exemptions for Display Energy Certificates (DECs) and Green Deal assessments

Transport

Q14 International aviation and/or shipping

Q15 Exemption of Green Fleet reviewed vehicle fleets

Q16 Employee travel on company business

Industrial processes

Q17 ESOS assessment coverage for industrial processes

Q18 Issues for implementing ESOS assessments for industrial processes

Standards and alternative compliance

Q19 Any additional exemption suggestions

Q20 Agreement with transitional arrangements

Who will conduct the audits, standards and accreditation

Q21 Capacity within the energy efficiency advice sector

Q22 Relevant existing qualifications / standards

Q23 Proposals for lead ESOS assessors

Q24 Independence of in-house experts

Q25 Approach to accreditation

Q26 Quality assurance arrangements

Compliance and disclosure

Q27 Storage of ESOS assessment records

Q28 Survey based approach to collecting data on participants in ESOS?

Q29 Notification of inclusion in ESOS

Q30 Preferred approach for disclosure of ESOS assessments

Q31 If public disclosure – what information should be disclosed?

Q32 Reporting on key ESOS assessment findings to scheme administrator?

Q33 Options for meeting UK's reporting obligations to the European Commission (EC)

Q34 Compliance routes between Environmental Management Systems (EMS) and ESOS

Enforcement and administration

Q35 Who should be appointed as scheme administrator?

Q36 Should there be some form of penalty applicable, and are civil sanctions sufficient?

Respondents were asked to submit their response via email to esos@decc.gsi.gov.uk. Responses were then transferred to Ricardo-AEA's secure network and logged as they were received. The final deadline for responses was 3rd October 2013. A small number of responses were submitted the following week, under prior approval from DECC. See Appendix 1 for the full list of respondents.

Ricardo-AEA designed macros that pulled the Word Document responses into an excel spreadsheet, split by question response. Quality Assurance (QA) reviews were performed to ensure that responses were translated correctly (see section 2.4 for further details).

2.1.1 Outliers and non-standard formats

Out of the 147 respondents, 112 used the consultation response form and 35 respondents used a non-standard format for their submission. Of the non-standard responses, 19 respondents answered specific consultation questions within their responses. The analysis team translated these responses into the correct format, adding all other responses that did not directly answer consultation questions to Question 37 (any other issues to be raised).

All other non-standard responses were treated as responses to Question 37. The responses were reviewed by a member of the analysis team and important points for specific questions were distributed to the wider analysis team.

2.2 Data analysis (quantitative and qualitative)

For each question that was analysed a summary of the key findings was written, including a statistical analysis and a selection of particularly pertinent quotes. An assessment of whether the issues and concerns raised in responses were likely to represent the balance of views

and potential ways to incorporate these into policy development was also provided for each question.

Where relevant, the analysis team suggested ideas for alternative practices, as well as offering any relevant counterpoints to the issues highlighted. These are clearly separated from the summary of key findings.

2.3 Synthesising the responses

We provided a statistical overview of the total number of respondents, including a breakdown of respondents into key sectors:

- Charities,
- Non-Governmental Organisations (NGOs) and agencies,
- Energy intensive industries,
- Green Economy,
- Hotel chains/hospitality,
- Light industry and manufacturing,
- Other primarily office based companies,
- Property/land management,
- Retail,
- Trade bodies,
- Transport,
- Universities/higher education,
- Utilities,

The individual question analyses then fed into a summary of key points raised in response to the consultation, and critical issues for DECC to consider.

2.4 Quality assurance approach

QA reviews were undertaken in a two-phase approach:

1. Check to confirm that all consultation responses were included in the analysis, including confidentiality of responses.
2. Review of the analysis for each question to ensure a consistent and evidence-based approach was taken.

3 Overview of responses

The 147 respondents to the consultation are listed in Appendix 1. Table 1 contains a breakdown of responses by sector, which shows the largest contributing sector to this consultation has been trade bodies (who themselves represent various sectors of the economy). As each trade body represents a large number of organisations, their input to the development of the ESOS policy is highly important in indicating the views of a greater number of stakeholders.

Table 1: Split of respondents by sector

Sector	Number of responses
Charities, NGOs and agencies	8
Energy intensive industries	15
Green Economy	18
Hotel chains / hospitality	1
Light industry and manufacturing	13
Other primarily office based companies	16
Property / land management	6
Retail	8
Trade bodies	41
Transport	2
Universities and other bodies	5
Utilities	14
Total	147

Table 2 shows an overview of the level of responses to each consultation question.

Table 2 Summary graphic of ESOS consultation responses

Question	Response	Yes	No	Propose Alt	Prefer A	Prefer B	Prefer C	Propose Alt
Q1 Evidence to assist with the impact assessment	Response							
Q2 Geographical coverage	Yes	No	Propose Alt					
Q3 Definition of 'enterprise'	Yes	No	Propose Alt					
Q4 Qualification date	Response							
Q5 Re-registration and new entrants	Prefer A	Prefer B	Propose Alt					
Q6 Are the minimum requirements for ESOS reasonable	Yes	No	Propose Alt					
Q7 Should good practice guidance be developed	Yes	No						
Q8 Energy spend threshold	Yes	No						
Q9 The approach to calculating energy usage	Yes	No						
Q10 Inclusion of energy intensity ratio	Yes	No						
Q11 Energy use responsibility	Yes	No						
Q12 Site visit discretion for ESOS auditors	Yes	No						
Q13 Exemptions for DEC's and Green Deal assessments	Yes	No						
Q14 International aviation and/or shipping	Prefer A	Prefer B	Prefer C	Propose Alt				
Q15 Exemption of Green Fleet reviewed vehicle fleets	Yes	No						
Q16 Employee travel on company business	Yes	No						
Q17 ESOS assessment coverage for industrial processes	Yes	No						

Q33 Options for meeting UK's reporting obligations to the EC	Response						
Q34 Compliance routes between EMS and ESOS	Yes	No					
Q35 Who should be appointed as scheme administrator?	Prefer A	Prefer B	Prefer C	Prefer D	Propose Alt		
Q36 Should there be some form of penalty applicable, and are civil sanctions sufficient?	Yes	No	Propose Alt				
Q37 Are there any additional issues to be raised?	Response						

Appendix 2 contains a full breakdown of the number of responses to each question and an analysis of the split of responses.

From an overarching perspective, there are a number of key common themes that can be drawn from the consultation responses:

Respondents would prefer DECC to keep ESOS simple and understandable yet strive to make it meaningful

- Respondents want the scheme to provide energy saving outputs that are relevant to each business individually and are not just generic.
- Respondents want ESOS to add value and identify real measures that can be implemented. There were strong views that DECC will need to prove the added value of ESOS assessments if existing schemes are deemed not to be compliant.

Respondents are keen to avoid duplication in existing regulation and requirements

- Many respondents already engage with a number of other existing regulatory systems (CRCEES, CCAs, EU ETS, DECs and Energy Performance Certificates (EPCs), Carbon Trust Standard (CTS), Green Fleet Review and International Organisation for Standardisation accreditations such as ISO 50001).
- There was a strong emphasis in the responses on ensuring as much integration as possible with existing schemes, and recognising that existing schemes could provide accreditation for ESOS assessors.

Respondents were keen for DECC to ensure that the policy is designed to minimise compliance costs to enterprises

- In addition to reducing overlapping requirements with existing schemes, respondents want DECC to allow for actions that will reduce the cost impact to enterprises, including:
 - Discretion on the level of audits required
 - Using internal team members for their knowledge and skills

For further detailed commentary on each question, including Ricardo-AEA's own analysis of the concerns/issues raised in the responses, please refer to the 'implications for DECC' commentary boxes at the end of each question analysis in Section 4.

4 Detailed response analysis

The following sections contain detailed analyses of each of the 37 consultation questions.

Each section also contains a separate commentary from Ricardo-AEA, detailing further information of relevance for DECC, and the potential implications of the consultation responses for the development of the ESOS policy.

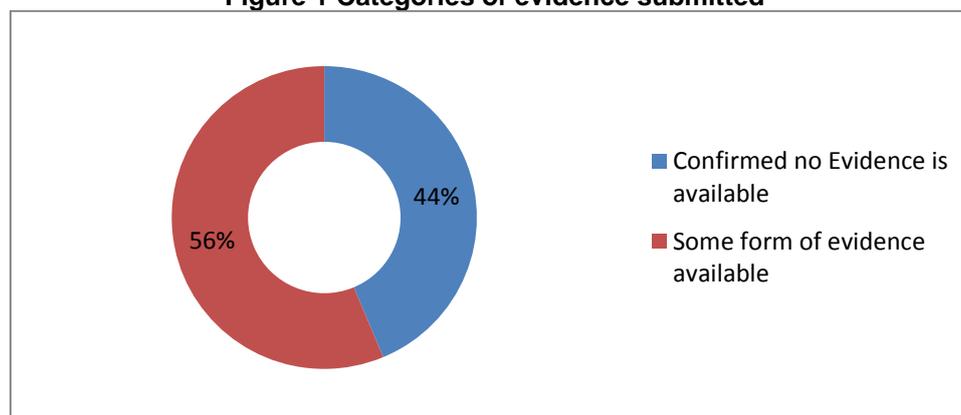
4.1 Overarching evidence and comments

Q1. Do you have any evidence which could assist us in calculating the impact of the options set out in this consultation document and the Impact Assessment?

Results summary

Total Respondents	Written Responses	Not answered
147	87	60

Figure 1 Categories of evidence submitted



The responses submitted in Question 1 can be categorised into three key areas:

1. *Evidence to support calculating the impact:* This includes providing or agreeing to provide qualitative and quantitative information and sources to calculate the impact.
2. *Evidence from previous experience on impacts:* This includes impacts highlighted by respondents with suggestions to take into consideration based on their concerns and experience.
3. *No Evidence Available*

Analysis of the responses of the three categories are given below.

1. Evidence to support calculating the impact of the options

Only around 10% (9 out of 87) of the respondents provided information that could support calculating the impact of the options from the consultation document and the Impact Assessment.

Some of these respondents, provided quantitative evidence that could be of use when calculating the impacts of assessments. . For example Utility Wise PLC provided average

cost and saving figures (average cost of installation, average energy spend saving, % energy saving etc.) derived from the last 481 energy audits that they carried out.

Some of the other key evidence submitted through the consultation included: a literature review of energy assessor surveys conducted under the Green Deal Advisor market by the Energy Efficiency Industrial Partnership (EEIP); a report titled ‘The scope for energy and CO2 savings in the EU through the use of building information technology’ suggested by the Chartered Institute of Building Services Engineers (CIBSE) and; a number of reports that quantify the scale of the energy efficiency (and carbon abatement) opportunity in the built environment suggested by John Lewis Partnership.

In addition the Mineral Products Association (MPA) and Hanson UK provided cumulative cost of energy and climate change policies for the two principal energy intensive mineral products (cement and lime).

Around 13% (11 out of 87) of the respondents who did not submit any evidence through the consultation indicated their expertise and potential to provide evidence or stated that they would be able to share information following further discussions.

2. Evidence from previous experience on impacts

More than 50% of the respondents either provided evidence based on their experience of impacts or factors that concern impacts. Most of these respondents raised concerns over the cost estimations provided in the consultation document.

For example, one respondent stated that *‘the cost of undertaking a basic audit across our sites would be in the region of £7-10k per asset area within each site (excluding tenanted properties and transport)....this would suggest that the audit cost every 4 years would be in the region of £140-200k...This is far beyond the estimate in the published impact assessment.’*¹

However a different opinion was expressed by E.ON UK, stating that *‘the cost estimates provided in the Impact Assessment is within the right proximity based on our experience.’*²

One respondent from the utilities sector, Scottish and Southern Electricity (SSE) expressed their view that costs would be higher than those presented on the consultation document. Based on their experience participating in the CRC scheme, SSE stated that costs of administering new reporting requirements can be considerable, requiring additional staff and training. SSE also stated that government’s own assessment of the costs of implementing CRC showed that the scheme cost companies more than predicted. Broadly, across all respondents, concerns were raised on increasing bureaucratic burden, reduced cost effectiveness, danger of double counting and whether ESOS would add value to business.

3. No Evidence Available

Out of the respondents who confirmed they did not have evidence available, around 10%, including Heathrow Airport and Utility Partnership Ltd., stated that this was due to restrictions in sharing commercially sensitive data.

While stating that they did not have evidence available to contribute, one respondent (RWE Npower) stated that energy audits would always determine energy reduction opportunities, irrespective of the methodology used, and should rank these in a pre-determined order (depending upon the key variable being measured).

Tata Steel, by contrast, stated that ‘energy mature’ companies are very unlikely to uncover new opportunities through high level audits and that detailed work programmes facilitated by expert teams working in close cooperation with the process plant are needed.

¹ Forth ports Limited

² EON UK

Implications for DECC

More than 1/3rd of the total respondents in the consultation did not provide any response to Question 1. A large number of respondents, including trade bodies and energy intensive industries, stated that there is no evidence available.

It is possible that the lack of responses and inability to provide information could also be due to the uncertainty of respondents on what type of evidence is being required and how the impacts are calculated.

Most responses concerned qualitative information based on respondent's experience and may not be directly relevant when calculating quantitatively the impacts of the options set out in the consultation document and the impact assessment.

To explore further the points raised by respondents regarding impacts, we suggest that DECC could follow up with respondents from organisations such as Utility Wise, Forth Ports, the Institute of Environmental Management and Assessment (IEMA), UK Green Building Council, Verco, British Glass Manufacturers' Confederation and Cardiff University.

Q2. Do you agree that there should be one energy audits scheme applied on a UK-wide basis, and are there any regionally specific needs that should be taken in to account for enterprises operating in England and Wales, Scotland and Northern Ireland?

Results summary

Total Respondents	Responses to Q2	Those who answered			Not answered
		Yes	No	Only written response	
147	120	103	3	13	27

The majority, 86%, of the respondents agreed that the ESOS scheme should be UK wide, as shown in the figure above. The respondents highlight what they considered several key advantages of having a UK wide scheme.

In particular, most respondents who operate UK-wide stated that having one scheme across all the UK would minimise duplication, overall cost and administration as well as maximise the benefits. Furthermore respondents also highlighted having one scheme gives the ability to make comparisons between sites within a single organisation.

One respondent (RWE Npower) expressed the view that a consistent approach would also help prevent distortion in the market (in terms of the required standards of assessment) and all participants, irrespective of their primary location, could benefit from cost-effective energy saving recommendations.

Even through there was a large overall response to this question, the majority of respondents did not answer the point about regional needs. Out of the 120 responses received for this question, less than 13% (16 out of 120) of the respondents specifically stated that there are no regionally specific needs.

Around 10% (12 out of 120) of the respondents agreed that the regional impact of ESOS could vary and that there is a need to understand regional variations. For example, The National Grid stated:

‘Effort should be made to develop the understanding of the impact on a regional as well as UK level. Energy consumption drives our infrastructure investment. Consumption varies by region, primarily due to the density of population, industrialisation and generation. Changing trends are becoming increasingly complex, ensuring a consistent approach would enable us to understand changing patterns and ensure we can continue to make appropriate investment decisions.’³

Some respondents highlighted that while there are clear advantages (cost and administrative savings, consistency and inclusiveness) to participants of a UK wide scheme, it is still important to consider approaches to align with regional differences, policies and legislation.

Similarly the Confederation of British Industry (CBI) expressed the view that, *‘While flexibility for businesses is crucial, it is equally important to ensure an element of consistency across geographies. The CBI understands that the government will seek to work together with other EU Member States to ensure a comparable transposition of the Energy Efficiency Directive*

³ National Grid

*requirements, which is vital to ensure that UK businesses operating across Europe are not subject to vastly different measuring and reporting requirements in each Member State.*⁴

A number of respondents who qualified their support for a UK-wide approach stated that consistency with other existing reporting mechanisms should be considered. One respondent, the Electrical Contractors' Association (ECA), stated that another reporting scheme with different formats and recording structures would add to costs and could cause confusion.

Implications for DECC

The suggested approach to having one energy audits scheme that is applicable UK wide is agreed to by majority of the respondents.

The perceived key advantages that the administrative burden, costs and duplication can be reduced by having a consistent scheme can be significant.

Furthermore other relates schemes have UK-wide coverage:

- CRC is UK wide
- CCAs and EU ETS are UK wide
- ISO50001 is UK wide
- Green Deal and energy company obligation are only in Great Britain (GB), and not Northern Ireland (NI). There are NI equivalent policies though (Northern Ireland Sustainable Energy Programme (NISEP) and Warm Homes for example).

Considering the large acceptance of having one energy audit scheme by the respondents we agree that one energy audit scheme would be more successful.

⁴ CBI

Q37. Are there any other issues you wish to raise in relation to the Energy Savings Opportunity Scheme that have not been covered in other consultation questions?

Results summary

Total Respondents	Written Responses	Not answered
147	111	36

111 respondents provided answers to Q37, some of which contained a large amount of information. Some respondents responded in a non-standard way and where this was the case, the information in these responses was included in the analysis for Q37 and fed into the response to other questions where appropriate. We have listed in the main report areas for further consideration by DECC. The detailed comments in Appendix 4 provide further ideas around each of the issues raised.

Many respondents were pleased to have had the opportunity to comment on ESOS and were supportive of energy efficiency. However, the following issues were raised for further consideration by DECC:

Organisations and Sectors included

- Flexibility is needed for different businesses and operating environments.
- Education will be needed for organisations not previously involved with this type of monitoring requirement.
- The scheme should be extended to SMEs.
- It would be good if the public sector were included in ESOS as they could then demonstrate leadership in this area.
- How will the construction sector fit into ESOS? It would be useful to consult further on proposals for this.

Transport

- Should energy usage from international aviation or shipping be included in the scope of the energy audits?
- Further detail on how a transport operation could be audited satisfactorily was requested.
- Marketing of ESOS.

Timescales

- Whether to delay the in scope and start dates.
- Whether auditing on a four year timescale is worthwhile.
- What is the timetable from 3 October onwards?

Scheme details

- The ESOS must be compatible with existing policies and is an opportunity to streamline the current policy landscape.
- How will opportunities identified through ESOS be implemented?
- How will the audit process be reviewed during the scheme?
- There is no reference in the consultation to transfer of findings, as required by the Directive. The Directive prohibits clauses preventing the findings from the audit from being transferred to any qualified/accredited energy service provider and there is a lack of clarity as to how this will be enacted.
- How will the actual scheme performance be measured?

- There is also a question of how the Air Conditioning Inspections, which are also mandatory under the Energy Performance in Buildings Directive (EPBD) regulations, will be integrated with the implementation of ESOS.
- Clarification was sought as to what the term 'energy' includes in this consultation, i.e. fuel oil, biomass boilers, other forms of self-generation fuels?
- The consultation was not clear on how self-generation would be dealt with, for example:
 - Will monitoring be on input fuel or output power (i.e. for diesel)? If input fuel, are DECC interested in this at the time of purchase or the time of use (standby generation use can be very intermittent)
 - How will DECC deal with the export proportion of power used in the case of distributed generation?
 - How will DECC deal with power use on site, and does it matter if it comes from a green source (renewables) or a brown source (diesel generation) or another source (energy reclamation from other source i.e. turbine from pre-pumped water)?
 - Will it matter how green the green energy is? Some returns don't regard generation as fully renewable unless it is eligible to be awarded Renewables Obligation Certificates (ROCs) or Feed in Tariffs (FITs) and they are retired without being used. For others this energy is effectively green as it has zero emissions associated with it.
 - How will third party generators attached to a site be dealt with, i.e. if a roofspace was sold to a third solar party, and a site got free electricity in exchange for rental?
- What is the precise scope of the audits and could further consultation be done once this has been clarified?
- Meter failure and the implications for participants or the licensed energy provider needs to be considered.
- Once the scheme is up and running, it is important that there is consistency and any reviews are clearly planned so that people have confidence in the longevity of the scheme.
- Should energy generation be excluded?
- Should decentralised generation, connection to a local heat network, demand side response and energy storage be included in ESOS?
- Should the assessment of energy use and emissions be across separate indicators for buildings, transport and industrial processes?
- Landlord/tenant issues need to be resolved for ESOS. Will the issues and mistakes that have arisen in relation to the CRC scheme on the landlord/tenant relationship be avoided?

Other EU Member States

- It is vital to work together with other EU Member States to ensure that UK businesses operating across Europe are not subject to vastly different measuring and reporting requirements in each Member State.

4.2 Qualification and registration

Q3. Do you agree with the overall approach to defining ‘enterprises’ in scope, and could you currently identify if you (or organisations you are familiar with) are in scope?

Results Summary

Total Respondents	Responses to Q3	Those who answered:			Not answered
		Yes	No	Qualified support	
147	103	75	7	21	44

Table 3 Sub-question responses

Q3 Sub-question	Those who answered:		
	Yes	No	No view expressed
a. Group enterprises	68	6	29
b. Voluntary disaggregation of group enterprises	69	3	31
c. Non-UK firms	57	9	37
d. Franchisors	52	6	45
e. Subcontractors	58	2	43
f. Universities	52	5	46

The supporting comments provided by respondents to Q3, as well as the tick-box answers to Q3a – 3f, show broad agreement with the Government’s proposals in defining an ‘enterprise’ within the scope of ESOS.

With regards to the approach to group enterprises (Q3a), the majority of respondents agree that these should be included. However, a large number of respondents qualified their support on the basis that the voluntary disaggregation of group enterprises (Q3b) is permitted. The respondents that expressed such a view also stated that disaggregation should not be used as a means to avoid an obligation to comply. For example, with regards to disaggregation, Ineos made the point:

‘We support the Government’s proposals to allow groups to conduct audits as a whole or as separate businesses, and we understand that, in line with the Directive, subsidiaries cannot be excluded from assessment as a consequence of disaggregation.’

There was broad agreement that the UK activities of corporate groups (including non-UK firms – Q3c) with at least one large UK legal entity should be included within the scope of an ESOS assessment. Respondents used the opportunity to emphasise that energy usage outside of the UK (Q3c) should not fall within the scope of an ESOS audit, as this could lead to possible double counting with schemes in place in other EU Member States. One respondent (National Energy Foundation (NEF)) highlighted what it sees as weaknesses in the proposals relating to non-UK firms. Specifically, its comments related to branches of financial services institutions registered outside of the UK (e.g. in the UK’s Crown Dependencies) but with significant activities in the UK.

There was general agreement with the Government's proposals regarding franchise businesses (Q3d) and ESOS. Only a small number of respondents (<10) made comments regarding franchise businesses and these were all largely in support of the proposals, highlighting that the proposals would 'minimise burden'.

There were a small number (<10) of comments regarding subcontractors (Q3e). Of the responses submitted by respondents, most agreed that the activities of subcontractors should be excluded from the scope of the contracting organisation's ESOS assessment. However, some respondents stated that the Government should further clarify definitions, as the treatment of subcontractors leads to various scoping questions, for example:

1. Does 'energy use' mean 'direct energy use' (i.e. fuel combustion by the ESOS qualifying organisation), 'indirect energy use' (i.e. heat or electricity supplied by a subcontractor) or both?
2. Does the definition of a 'subcontractor' include third party logistics operators as subcontractors?

The scoping of energy usage within an ESOS assessment was covered by Q11 of the consultation and is not considered further here.

Linked to the expressed requirement to define a subcontractor, some respondents said that Government should set a threshold regarding the exclusion of subcontractor activities, above which subcontracting activities cannot be excluded from the scope of an organisation's ESOS assessment. It was highlighted that subcontracting is the dominant business model within some sectors and that subcontracted activities may:

1. Represent a significant proportion of the contracting organisation's activities and/or energy.
2. Include the subcontracting of the contracting organisation's energy centre(s).
3. Involve subcontracting to SMEs.

As outlined in section 4.26 of the Consultation, the Government's proposal is to attribute the energy to be included in an ESOS assessment to the organisation directly paying for or producing the energy and subcontracting arrangements would be subject to the same rules.

Few (<5) additional comments were made regarding the proposals concerning universities (Q3f). However, those that did provide additional comments highlighted their preference for a single consistent position regarding the inclusion/exclusion of all universities. Respondents highlighted that the definition of a 'public body' within the Directive would lead to disparity, with some universities being classed as a 'contracting authority' and others not solely based on the university's funding structure. Regarding the Government's proposals not to group collegiate universities where the college has a separate legal identity to that of the university's governing body - a very small number (2) of respondents highlighted a preference for universities to be considered 'in their entirety' with respect to the requirement to participate in ESOS, to avoid inequality across UK universities.

Although outside of the scope of Q3, a small number of respondents (3) highlighted that, proportionally, SMEs have more to gain from undertaking an ESOS assessment.

In their response to Q3, a significant proportion of respondents (30%) included within their response a preference for the definition of an 'enterprise' under the ESOS to mirror that of the CRCEES for ease of compliance.

Implications for DECC

The Government's proposal to include group enterprises in the ESOS under the highest UK

legal entity is perhaps the most enforceable approach to monitoring and auditing the compliance of complex business structures from a regulatory compliance perspective. However, this approach is only effective in ensuring that an ESOS assessment adequately covers all group entities and activities if the compliance and reporting method adopted under the ESOS includes a requirement for group enterprises to either (1) identify the group structure (at the highest UK legal undertaking level) and/or (2) include details of an enterprise’s parent (UK legal undertaking). This is currently the process adopted under the CRCEES using central reporting to a scheme administrator, the Environment Agency.

The option to disaggregate for participation in the ESOS should be provided to qualifying group enterprises as it provides the flexibility for them to arrange their compliance with the ESOS as they do for other regulatory / reporting requirements (not just in the energy/carbon arena).

The disaggregation of group enterprises could be restricted, based on certain conditions (as currently utilised under Phase 1 of the CRCEES), or disaggregation could be offered on an unrestricted basis.

In order to prevent SMEs disaggregating to avoid participation (if they were not considered part of a group and were to fall below the ESOS qualification requirements then they might not participate) a possible condition would be for disaggregation to only be permitted provided the legal entity is not an SME”. Since this could be restrictive in preventing larger groups from disaggregating SMEs, An alternative and possibly preferable approach would be to permit SME disaggregation but require such disaggregated SMEs to carry out an ESOS assessment.

Any disaggregation should not wholly de-link an enterprise from the wider group enterprise, as this would impede the regulator’s ability to assess that the full UK extent of a group enterprise is complying with the requirements of the ESOS. Provided this de-linking is not permitted, then unrestricted disaggregation (including disaggregation of SME group members) could be permitted without any risk of large group enterprise SMEs “falling under the radar”.

Ricardo-AEA recognises that the Government needs to strike a balance between the overall scope of the energy/activities covered by the ESOS and the development of a clear and unequivocal definition of the enterprises in scope. Defining the coverage of the ESOS based firstly on UK legal undertakings and secondly on their UK activities is preferable to the reverse definition, since a system that covers overseas companies because of their UK presence would be difficult to administer. The Government’s proposals to exclude UK energy use where there is no UK legal entity follows the preferred approach and appears to achieve this balance.

Table 4 UK registered activities vs. overseas

	UK registered	Overseas registered
UK activities	Include, because this is the core of ESOS	Include them if there is a UK enterprise in the group that can be regulated. If no UK group then there is no clear way to regulate the enterprise.
Overseas activities	Exclude because it is likely covered by policies of other EU Member States, or not at all for extra-EU	Not within UK jurisdiction.

Ricardo-AEA’s experience supporting the CRCEES has shown that clear definitions on the

treatment of complex organisational structures, such as; trusts, franchises, outsourced activities, managed assets/activities, PPP/PFI and JV arrangements are important and that these should be, where possible, outlined within the regulations to:

1. Minimise errors made by organisations in defining the ESOS participant organisation or group, and;
2. Reduce the possibilities for organisations to avoid being covered.

Joint ventures (JVs) under the CRCEES are grouped with the party defined as the 'parent undertaking' in line with section 1162 of the Companies Act 2006. Where no party can be defined as the parent undertaking of a JV then the JV must assess qualification and undertake any necessary compliance requirements as a stand-alone entity, with the management/board of the JV being ultimately responsible.

Trusts and limited partnerships hold assets on behalf of a beneficiary or a number of beneficiaries. These assets may be either (1) shareholdings in an undertaking, or, (2) real property (managed assets). The Environment Agency, as the administrator of the CRCEES scheme, has developed guidance on trusts and limited partnerships for Phase 2 of the scheme.

Public Private Partnerships (PPPs) and Private Finance Initiatives (PFIs), as the names suggest, are partnerships between public sector bodies (e.g. local authorities) and private sector businesses. The PPP or PFI is often set-up to run and manage a real property asset (e.g. a school), sometimes via a Special Purchase Vehicle (SPV – a company set-up to run/manage the asset) and usually involving a chain of leases. Under ESOS, the energy to a PPP/PFI asset would only be within the scope of an ESOS assessment if the supply was deemed to be the responsibility of the private sector business.

The leasing and contractual arrangements under PPP and PFI agreements are often complex. The approach taken under the CRCEES, which takes account of the final lease is a sensible approach as this lease often indicates the day-to-day management of the asset and so identifies the energy using organisation. However, under the CRC, special rules have been developed for landlord / tenant situations that DECC may or may not wish to replicate under ESOS.

Replication of the CRC rules regarding landlord / tenant situations would be more administratively straightforward for organisations already participating in CRCEES, as the responsibility for including the energy under an ESOS assessment would fall to the same party.

However, Ricardo-AEA is aware that some landlords have not supported the landlord / tenant rule under the CRCEES, stating that they have no control over the usage of energy by their tenants in day-to-day operational activities (i.e. heating, energy efficiency of equipment etc.). DECC may wish to consider adopting a more specific 'control' approach rather than adopt the CRCEES's landlord / tenant rule. Under such an approach, the responsibility to include the energy as part of an ESOS assessment would fall to the party that controls the energy that is used. The scoping of energy to be included in an ESOS assessment is considered in more detail in questions under Chapter 4.

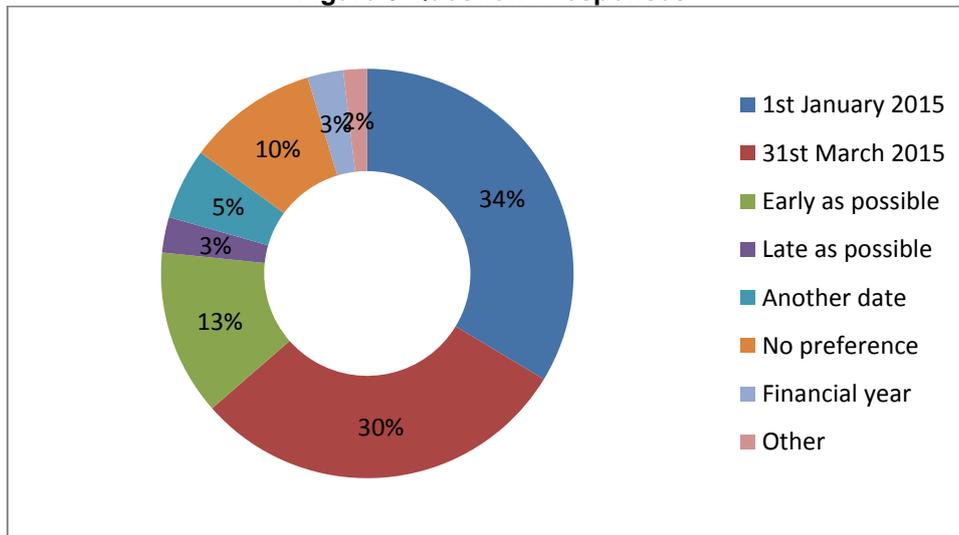
Q4. What do you think should be the initial ‘qualification date’ for organisations to determine if they are in scope of the scheme?

Results Summary

Total Respondents	Written Responses	Not answered
147	108	39

108 responses were received to Q4. The comments from respondents on the preferred ‘qualification date’ varied, with no clear preference for the example dates suggested in the question (1st January or 31st March 2015). Of those respondents that did specifically outline a preferred date (74 total), 36 (49%) chose the 1st January 2015, 32 (43%) chose the 31st March 2015 and 6 (8%) put forward other dates including “summer 2014” and “2014”. Three of the six respondents providing an alternative date suggested that the qualification date should occur a defined period of time after the formalisation of the ESOS regulations – e.g. 8 months – to allow suitable time for organisations to confirm their qualification position.

Figure 3 Question 4 responses



The majority of respondents in favour of the **1st January 2015** as the qualification date stated that this date is preferred as it would give ESOS participants a suitable amount of time to confirm that they qualify for the ESOS but, more importantly, the maximum amount of time to plan, prepare and undertake the ESOS assessments in 2015. Other reasons respondents supported the 1st January 2015 as the qualification date were that it:

- Aligns with other schemes, citing the CCA and EU ETS that both have compliance periods aligned with a calendar year.
- Aligns with the respondent’s accounting periods.
- Provides the necessary time to secure the budget to undertake the assessment(s).

The majority of respondents in favour of the **31st March 2015** as the qualification date stated that this date is preferred as it gives organisations a greater amount of time to confirm that they qualify for the ESOS.

Another commonly cited reason was that the 31st March date aligns with the qualification date under the CRCEES. The CRCEES operates in 5 year phases and so the qualification dates of the ESOS and the CRCEES will only coincide in certain years, dependent on the approach adopted regarding the qualification date for future ESOS assessments (Approach A or Approach B in Q5).

The other 33 respondents that didn't indicate a preferred date expressed the following views:

- Early - 14 respondents (14/35, 40%) expressed a preference for the qualification date being "as early as possible". The reasons cited for this preference were most commonly to (1) allow the maximum possible time for enterprises to assess their position and to comply with the ESOS regulations, and (2) to provide as long an audit period as possible before the 5th December 2015 to manage the demand on ESOS assessors.
- No preference - 11 respondents (11/35, 31%) expressed no preference for the qualification date. Of these 4 respondents (4/35, 11%) stated that a "balance" needs to be met between providing enough time for enterprises to review and understand the finalised regulations, whilst also providing sufficient time for those required to comply with the ESOS regulations to set-up their internal processes and complete the audit(s) before the 5th December 2015.
- Late - 3 respondents (3/35, 8.5%) expressed a preference for the qualification date to be "as late as possible".
- Financial year - 3 respondents (3/35, 8.5%) expressed a preference for the qualification date to be linked to an enterprise's financial year, as with mandatory greenhouse gas (GHG).
- Other – the other 2 respondents expressed a view that:
 - (1) The qualification date should be "staggered", as should the audit completion date, to smooth out demand on ESOS assessors.
 - (2) a pilot of the qualification date should be undertaken before the formal launch of the ESOS.

Implications for DECC

In determining qualification for ESOS, organisations will need to assess themselves against the SME criteria (for possible exclusion).

Regarding the turnover and annual balance sheet thresholds, it is assumed that these would need to be assessed over a 12 month period preceding any chosen ESOS qualification date. There are two options regarding the alignment of the 12 month qualification period:

1. "Fixed": The qualification period is the 12 month period preceding the qualification date. This is how we believe respondents have interpreted the proposals.
2. "Flexible": The qualification period is the 12 month period used within an organisation's most recent annual accounts at the time of the qualification date. For reasons set out below, this may be the better approach.

These options will have a significant impact on the cost of possible options because of the complexities in adjusting financial figures to fit a period not aligned with an organisation's financial year. With regard the "Fixed" qualification period approach, DECC would need to assess whether using a 12 month period not aligned to an organisation's financial year presents any issues in using normal accounting rules.

DECC would also need to outline a position and prepare suitable guidance on the treatment of organisational changes during the qualification period and the potential impact on qualification. DECC would need to assess whether normal financial accounting rules would apply to such organisational changes and their impact on qualification for the ESOS. If not, it may need to develop scheme-specific rules (such as the designated change rules under the CRCEES) to cover such changes.

For a "Flexible" approach, on the other hand, DECC would need to define the period within which financial year end or financial reporting dates must fall in order to apply to ESOS. If

they are too early they may out of date; if they are too late they may not give adequate time for organisations to conduct assessments.

Early vs. late as possible qualification date:

The arguments put forward by respondents for an “early as possible” or “late as possible” ESOS qualification date appear to have been developed on an assumption that organisations would need to undertake a compliance action by the qualification date, such as a ‘registration’ (like that under the CRCEES) as required under Option 2 or Option 5 as set out in the Compliance and reporting section of the Consultation.

Comments such as “[the] 31st March 2015 will give organisations more time to prepare for this scheme” is only correct based on the assumption that a compliance action must be undertaken on/around the 31st March 2015, otherwise this later date actually gives organisations less time post qualification to undertake an assessment by the 5th December 2015, compared to a qualification date of the 1st January 2015.

Thus, making a distinction between the qualification date and any subsequent need to make a notification, we conclude that the strong preference in the responses for as much time as possible to comply suggests as early a qualification date as possible, provided that there is sufficient time between the qualification date and any required notification of eligibility.

Alignment with other schemes:

Many respondents cited a preference for the ESOS qualification date based on the regulatory periods and deadlines under other schemes such as the EU ETS, CCAs, CRCEES and mandatory GHG reporting. However, the data collation / emissions assessment periods and reporting deadlines are not consistent across all regulatory schemes. This means there would be no universally preferred ESOS qualification date on this basis. However, often the strongest views on the alignment of the ESOS qualification date came from those currently only covered by the CRCEES.

The annual / bi-annual compliance cycle for an enterprise included in multiple schemes would include the following assessment/compliance periods:

- CRCEES: Under the CRCEES, participants must determine and report emissions for annual compliance periods that run from 1st April to 31st March.
- EUETS: Under the EU ETS, operators must monitor and report their emissions for annual compliance periods in line with the calendar year, 1st January to 31st December.
- CCAs: Under a CCA, an operator must monitor and report its energy usage over a two-year target period, which is based on two calendar years.
- Mandatory Greenhouse Gas reporting: Under mandatory GHG reporting, qualifying businesses have a choice in monitoring and reporting their emissions in line with their financial reporting year or by selecting another 12 month period.

Synergies with the CRCEES:

The ESOS will be organisation-based covering UK legal entities and the definition of an ‘enterprise’ to be confirmed. The CRCEES is also organisation-based for UK entities. As both schemes are share this organisation focus the Government, in order to minimise administrative burden, could look at aligning the qualification dates between the two schemes to avoid duplication of effort in assessing organisation structures.

CRCEES participants already assess their overall structure at the end of each compliance year (31st March) to ensure they have accounted for all qualifying meters correctly and dealt

with any designated changes before submission of their Annual Report. Although the end of a CRCEES compliance year is not the formal ‘qualification date’ under the CRCEES, it does represent a point at which CRCEES participants assess their organisational structure and so this presents an opportunity for synergies between the two schemes with regards to qualification dates, organisational structure assessments and the definition of an ‘enterprise’.

This confirmation of organisation structure under CRCEES suggests a “Fixed” ESOS qualification approach, based on the year to end March. However, in its use of financial data, specifically the turnover metric, CRCEES adopted a “Flexible” approach, in which the data from the previous financial reporting period is used. On balanced a “Flexible” approach under ESOS gives the greatest scope for minimising administrative costs.

Synergies with mandatory GHG reporting:

A business qualifies for the ESOS where that business, on the qualification date, has:

- Greater than 250 employees, and one or both of the following;
- (a) An annual turnover no greater than EUR 50 million, and (b) an annual balance sheet total not exceeding EUR 43 million

The information needed by a UK business in assessing qualification for ESOS, particularly data on turnover and annual balance sheet, will be presented in the company’s annual financial reporting. This would suggest that a qualification date aligned with a business’s financial year (FY) end would best facilitate its qualification assessment. If qualification were based on a company’s FY end date, the assessment of qualification would need to be completed sufficiently in advance of the 5th December 2015 deadline to allow time for the organisation to prepare and conduct the ESOS assessment. This approach supports the use of a “Flexible” qualification date as introduced above.

Synergies with the CCA scheme and EU ETS:

There are fewer synergies between the ESOS and the CCA and EU ETS schemes in terms of data gathering and reporting requirements, as the last two are site based monitoring and reporting schemes. Inclusion within a CCA and the EU ETS is based on the attributes of the site, rather than the organisational structure of the site owner.

Therefore there doesn’t seem a compelling reason to align the ESOS qualification date with the milestones of the CCA scheme or EU ETS.

Ricardo-AEA’s suggestions:

Ricardo-AEA would suggest the following options for the first qualification date dependent on the Government’s adoption of either a Fixed or Flexible qualification period preceding a qualification date and the Government’s adoption of either Approach A or Approach B regarding the qualification date for future ESOS assessments:

Table 5 Qualification date options and implications

Qualification date options for future ESOS assessments	Fixed ‘qualification period’ preceding a qualification date		Flexible ‘qualification period’ preceding a qualification date	
	Preferred qualification date	Key advantage	Preferred qualification date	Key advantages
Approach A (every 4 years)	1 st January 2015	Greatest period to undertake	Financial year	Alignment with financial reporting

		ESOS assessments after qualification date and before the 5 th December 2015 deadline.		& mandatory GHG reporting. Cost / burden minimisation.
Approach B (every year)	31 st March 2015	Alignment with requirements of the CRCEES gives greater benefits where ESOS in-scope assessments are annual.	Financial year	Alignment with financial reporting & mandatory GHG reporting. Cost / burden minimisation.

Overall, a “Flexible” approach to qualification date offers the greatest benefits in reducing administrative costs, since the opportunities for enterprises to use existing data are greatest.

If a “Fixed” approach were adopted, then for more frequent and burdensome yearly assessments of ESOS qualification status (Approach B), it seems better to align the initial and future ESOS qualification dates with the compliance requirements of the CRCEES to minimise effort by drawing on the assessment of organisation structure that CRCEES participants will likely undertake at the end of each year. This comes at the expense of the additional three months that a qualification date of the 1st January would provide for organisations to complete the initial ESOS assessment in 2015.

However, if organisations were only required to assess their ESOS qualification status every four years (Approach A), then for a “Fixed” approach the burden associated with implementing an ESOS qualification date not aligned with the CRCEES is significantly reduced and therefore providing the greatest period of time between the qualification date and the ESOS assessment deadline of the 5th December 2015 would be more important. Therefore in this case the 1st January 2015 would be the preferred qualification date.

Q5. Which of the following approaches do you prefer in terms of when new entrants are required to undertake ESOS assessments?

- A. ESOS would operate in 4 year phases. Organisations identify if they are in scope once every four years and then undertake an ESOS assessment within a year of the qualification date.
- B. Every year, organisations determine whether they are sufficiently large to be included in ESOS based on their size at the qualification date. If in scope, that organisation carries out an ESOS assessment within a year of the qualification date, unless the entire organisation is covered by compliant assessments undertaken within the last four years.

Results Summary

Total Respondents	Responses to Q5	Those who answered:				Not answered
		Prefer A	Prefer B	Proposed Alternative	Other answer	
147	110	57	38	11	4	37

Of the 95 respondents that indicated a preference for Option A or Option B, the additional comments / reasoning supporting the respondents’ decisions fell along a number of common themes.

The two key reasons cited for preferring Option A were:

- Less burdensome / simpler to identify if an enterprise is in scope every 4 years
- A four yearly qualification assessment minimises costs / strain on resources

A wider range of responses were given for preferring Option B including:

- Yearly in-scope assessments with a requirements to complete an ESOS assessment within 12 months, over time, would help in mitigating the four-yearly peak in demand for ESOS assessments
- Undertaking an in-scope assessment is not burdensome as the inclusion criteria (i.e. being a non-SME enterprise) are simple and this data is readily available and is monitored / reported frequently by UK legal entities.
- Yearly in-scope assessments capture the rate of business changes.
- Yearly in-scope assessments provide better information and granularity of information to the ESOS participant.
- Yearly in-scope assessments would be a smaller and simpler exercise compared to a four-yearly assessment.
- Yearly in-scope assessments will help ensure that all enterprises that meet the inclusion criteria are participating in the scheme; increasing overall scheme coverage and facilitating the maximisation of potential energy savings through the ESOS assessment process.
- Yearly in-scope assessments adds to an organisational focus on energy reduction

A small number of respondents (<5) to Q5 misinterpreted the question and confused the in-scope assessment frequency being asked about with the ESOS assessment frequency, which wasn’t being questioned. They stated that it was not practical to undertake ESOS assessments and to implement energy saving measures on an annual cycle.

Although alternatives were not specifically asked for, a small number of respondents suggested options in which the assessment dates are staggered:

- Option A: An in-scope assessment every four years, followed by an ESOS assessment within 12 months, but if the Government allows the initial in-scope assessment to be staggered then this could help mitigate a significant peak in the demand for ESOS assessors.
- Option B: Yearly in-scope assessments could work for large/group enterprises if the Government allowed a staggered approach to undertaking the main ESOS assessments across 4 years (from the point of notification) rather than 12 months. These respondents claimed it would be difficult for them to audit their entire group enterprise within 12 months.

Summary of proposed alternatives

A total of 11 respondents proposed an alternative approach regarding the frequency of in-scope assessments and the application to new entrants. Four respondents expressed that neither approach was suitable, but didn't provide an alternative approach, or expressed no view.

Of the other 11 proposed alternatives, there was no general consensus of a preferred approach. The following alternatives were put forward; the number in brackets denotes the number of responses:

- Flexible / phased introduction (2)
- Every five years in line with CRCEES phases (2)
- Every three years in line with ISO standards / auditing (1)
- Add the in-scope assessment to the full audited accounts submitted by UK legal entities each year (1)
- Continuous self-determination assessment and notification to the regulator within three months of qualification and then notification every four years (1)
- Notification each year but then four years to conduct the audit (1)
- Exemption from undertaking an ESOS assessment via another route as in Q19 (1)
- ESOS assessments (not in-scope assessments) to be conducted each year (1)
- Permit any audit conducted within four years of the 5th December 2015 to count as an ESOS assessment (1)

Implications of the responses

The responses received to Q5 are perhaps not surprising, with the largest number of respondents preferring Option A, principally on the grounds that this option minimises the administrative burden and associated costs of the scheme to qualifying enterprises.

One common view put forward by respondents preferring either Options A or B, is to allow flexibility. The response from Peel Ports outlined their reasoning behind a phased approach: *'Our organisation is too large to attempt ESOS audits across the whole organisation every four years in one year, and this may not suit the individual properties. We prefer approach B as long as it incorporates the text in the consultation document "In the scenario that some elements of the organisation, had completed a compliant assessment within the last four years, those specific parts of the organisation could be excluded". In effect we would be responsible, every year of ensuring that an assessment had been carried out within 4 years.'*

The further reason many respondents suggested a flexible qualification date appears to be based on an assumption that this will permit flexibility in the date ESOS assessments must be completed, with the overall aim being to smooth the demand profile for ESOS

assessments / assessors. However, the Energy Efficiency Directive does not permit any flexibility on the date the first assessments must be completed by (5th December 2015) or any flexibility on the minimum permitted frequency (at least every four years).

There is also very little scope for organisations to voluntarily undertake an ESOS-compliant assessment significantly before 2015 (e.g. in early 2014) to smooth the demand profile across two years.

The drive amongst respondents to smooth the demand for ESOS assessments across multiple years particularly relevant where ESOS assessments are completed by external assessors, since there would be a surge in demand from suppliers. If the assessment can be undertaken by an internal assessor, then the argument becomes less significant (although the challenge for an organisation to resource a once in 4-years assessment would need to be addressed). However, not all organisations may have the in-house expertise to undertake ESOS assessments, so even if ESOS assessments can be undertaken by internal assessors, there is still likely to be a market for external ESOS assessors and therefore still a cyclical demand every four years.

If DECC were to attempt to smooth the demand profile for ESOS assessments, it could require that the second ESOS assessment (mandated by 2019) be undertaken by some organisations on a greater frequency than mandated by the Directive. However, the singling out of certain organisations to conduct a second ESOS assessment before others is likely to be highly contentious and unpopular given the additional cost and burden of undertaking the second assessment earlier.

Yearly in-scope assessments would mean that the ESOS assessments of new entrants could be undertaken at times outside of the four-yearly cycle for existing participants, spreading the workload for external ESOS assessors (if required). However, the impact of yearly in-scope assessments in capturing new entrants and in diminishing the cyclical demand profile for external ESOS assessments/assessors is unlikely to come into effect for a number of years and so there would still be a significant peak in demand for ESOS assessments/assessors in 2015, 2019 and possibly 2023 in line with the four-yearly cycle.

If ESOS assessments are required to be undertaken by external assessors, there is likely to a significant cyclical demand for ESOS assessors. Such a demand profile presents a number of questions, which some respondents have raised in response to Q5:

1. Would a peak in demand every four years present a viable business model for ESOS assessors?
2. What impact would a peak in demand every four years have on the price of an ESOS assessment to a participating ESOS organisation?

The answer to question 1 would be very much dependent on how ESOS assessments might fit amongst the other work being undertaken by ESOS assessors.

The answer to question 2 is less clear as the price of an ESOS assessment will be driven by market factors and will be highly dependent on the total number of ESOS participants and the total number of available, qualified ESOS assessors.

The considerations of internal vs. external assessors and the supply/demand of/on external ESOS assessors were put across concisely by E.ON, in their consultation response:

'Although option A would have less stringent compliance rules, our concern is that an assessment every four years is a long time given that circumstances can change over this period. Furthermore there is a real risk that the expertise to conduct these assessments in-house would disappear, meaning that companies would need to factor in the time and cost of

retraining people. In addition the costs to companies would be greater as the demand in the market externally would have a peak demand and then dwindle, making it hard for independent assessors to gear up and manage the off-peak period.'

Implications for DECC

The primary driver for the frequency of in-scope assessments is the cost of carrying them out (since in practice they have limited effect on the demand for full assessments) therefore Option A appears better. The downside of this is that the in-scope assessments represent a less current view of an organisation's eligibility.

4.3 Minimum requirements and accounting rules

Q6. Is our proposed interpretation of the minimum requirements for ESOS reasonable, on the basis that ESOS assessors would need to exercise professional judgment and discretion as to their application?

Results summary

Total Respondents	Responses to Q6	Those who answered			Not answered
		Yes	No	Comment	
147	104	61	15	28	43

This question required respondents to consider two components. It required both consideration of the Government’s interpretation of the minimum requirements and the role of professional judgement in applying the requirements.

Of the 104 responses received 59% (61/104) responded positively, 14% (15/104) responded negatively whilst 27% (28/104) qualified their response. “Comment” in the above table is where a respondent did not select yes or no but provided commentary anyway, which often indicated support or objection to the proposal.

In addition to this many respondents only answered one part of the question – either concerning the minimum requirements or the role of professional judgement. Some offered mixed responses responding positively in their commentary to one part and negatively to another part.

Those that responded to this question can be broken down as follows. It confirms a positive majority for both elements of the question.

Table 6 Detailed split of responses

Response type	Answer	Yes (61)	No (15)	Comment (28)	TOTAL
Minimum requirement	Yes	22	2	13	37
	No		10	1	11
	No answer	39	3	14	56
Discretion	Yes	35	6	18	59
	No		4	1	5
	No answer	26	5	9	40

Minimum requirements

Of those who responded positively overall and then commented on the minimum requirements few commented any more than stating that they agreed. Positive responses with commentary included noting the relationships to existing and future standards, such as PAS and ISO50001, and the skills of the auditor.

One respondent⁵ noted *“This is a sensible and pragmatic approach given the huge diversity of organisations covered by this scheme. These minimum requirements should be outlined in the proposed Publicly Available Standard (PAS) as part of the process which would link audit requirements to auditor qualifications and certification and supplemented with appropriate guidance (see Q7).”*

Another respondent⁶ noted the following: *“The minimum requirements are consistent with recognised standards for measuring, managing and reducing energy and carbon e.g. ISO 50001 & ISO 14064 – as well as our own extensive experience. At the same time it recognises that a ‘one size fits all’ approach will not be effective considering the wide variety of organisations that would be covered.”*

JRP Solutions noted that:

‘The minimum requirements for ESOS will need to be clearly defined so that the minimum standard expected is understood by all parties. It should set out the key aspects and outputs from the audit and be clear about those areas and aspects where the ESOS assessor can exercise their professional judgement and discretion.’

However where comments or a negative response were received these reflected a wide range of views on meeting the Directive.. Some thought that the requirements did not meet that of the Directive, whilst others thought that the requirements went further than the Directive.

A number of respondents focused on the assessment and audit methodology as a reason for not meeting the Directive requirements. Some put this down to the standard and minimum requirements set whilst another stated that it was related to the element of judgement (see the next sub-section).

One respondent⁷ stated: *“No, the assessment methodology needs to be identified as a minimum standard. A holistic and robust approach to improvements needs to ensure that a correct retrofit procedure is adopted i.e. ‘fabric first’. A face to face consultation should also be required in order to improve the chances of implementation of recommendations for energy performance improvements.”*

Other respondents stated that certain elements of the proposed minimum requirements were not needed. One respondent⁸ stated *“The directive only specifies consideration of energy consumption data / load profiles, whereas the government has proposed a review of both energy efficiency and energy consumption.”*

Some thought that the scheme went beyond the requirements in asking the energy use for the whole organisation to be included, as well as the energy audits.

“In our view, the underlying intention of Article 8 would be satisfied only if an organisation’s audit report includes at least quantification and benchmarking of the total energy used on each of the organisation’s significant sites. The consultation calls for the total energy used by the organisation across the UK to be reported, on a fuel by fuel basis. We believe these

⁵ Food and Drink Federation

⁶ Anglian Water

⁷ EU Skills

⁸ British Glass

figures can only be calculated by summing the energy used at each site and therefore reporting energy use on a fuel by fuel and site by site basis; this would not create an extra burden but would deliver far greater transparency and value for the organisation. Energy used for transport outside of sites should be a further separated item.”⁹

A number of the negative responses also commented on the commercial sensitivity of the information required under the minimum requirements.

One respondent¹⁰ stated “The minimum requirements must also consider the issue of commercial sensitivity. Any published data could provide a competitive advantage to overseas competitors who operate in lower regulatory environments and are not required to publish such data themselves.”

Another¹¹ commented “Data used to specify intensity ratio should certainly never be required to be publically disclosed. This has already been covered by both CRC and CCA public disclosure reviews and government should fully understand the sensitivities of publishing such commercially sensitive data.”

One respondent¹² who responded negatively stated the following:

“As noted in above, we believe that the proposals as currently outlined may fail to meet the requirements of the Energy Efficiency Directive. As stated in the consultation document, an energy audit should allow for “detailed and validated calculations... and clear information on potential savings”. An approach that allows auditors to use their judgement to determine the extent of analysis needed to meet the ESOS requirements is likely lead to a “race to the bottom” which sees them provide very high-level, generic, organisation-wide advice that does not identify specific opportunities for savings, nor drive meaningful action. Furthermore, the Directive also requires that audits “comprise a detailed review of the energy consumption profile of buildings or groups of buildings”. While this is not clearly defined, we do not believe that the suggested approach of allowing organisations to develop their own organisations-wide energy intensity ratio is a reasonable interpretation of the Directive.”

LCA/LCCA/SPP

The inclusion of Life Cycle Assessment (LCA), as a minimum requirement prompted views with 4 of respondents commenting on the distinction between LCA and Life Cycle Cost Assessment (LCCA). NEF commented on the different between LCA and LCCA and observed the Directive’s emphasis on LCCA:

“The Government proposes to base savings on life cycle assessments, and not – as required by the directive – on life-cycle cost assessments (LCCA). As note 45 of the consultation document explains, “Life cycle assessments (LCA) refer to examining the performance of a system or process from-cradle-to-grave. In the context of energy, LCA refers to the consumption of energy right from manufacture through to its use and, ultimately, disposal”. This is based on energy and not cost; there is no discounting over time. In contrast, LCCA is a financial assessment, and includes the capital costs, discounted cashflows over the life of the energy saving measures, and any residual financial value or disposal costs. The Directive, rightly enough, is encouraging this more sophisticated financial appraisal rather than a simple payback period. It passes no comment on the suitability or otherwise of LCA analysis.”

Of those who did consider the distinction all commented that LCCA or whole life costing was the appropriate route rather than LCA.

⁹ Verco

¹⁰ Vale

¹¹ Brit Glass

¹² Green Building Council

However, businesses likely to be mandated to comply with the ESOS generally expressed a preference to not use LCA, whereas other respondents, representing organisations such as trade bodies and energy saving goods and services providers, indicated a preference for LCA. With regard the use of LCA and LCCA, for example, the following comments were made:

E.ON commented:

'We agree that it is right to suggest simple 'payback' is insufficient. Life Cycle costs are much better. Payback implies that the investment always comes from the organisation in question, which is not always true. A Net Present Value (NPV) calculation, again based on OFGEM approved energy price scenarios would result in greater savings across all sectors.'

Lafarge Tarmac commented:

'We question whether the right approach is to specify the use of LCA over Simple Payback Periods (SPP) and suggest that the use of both approaches together would provide the most comprehensive assessment of whether an identified energy saving opportunity is appropriate or not. One reason for questioning the proposed approach is due to LCA being an environmental impact assessment tool which is appropriate for assessing the whole life impacts of e.g. buildings rather than an economical assessment of cost or cost effectiveness as referred to in paragraph 4.5 of the consultation document. Furthermore, we feel that discretion is required about the quantum of either assessment given the varying approaches to / conditions of investment of different industries / geographic areas.'

Intensity ratios

Whilst some stated that publishing intensity ratios was a commercial risk, many felt that such metrics were useful tools and that the use of intensity metrics would be consistent with the requirements of other existing schemes.

For example, BCSC commented that:

'Using an energy intensity ratio is consistent with the requirements under Mandatory Green House Gas (GHG) Reporting.'

Discretion

51% (53/104) of the commentary to this question were positive on the use of discretion in the application of the requirements, 5% responded negatively, the remainder did not respond to this aspect of the question.

In the responses a whole range of reasons were given for agreeing with this approach. Many looked at the variability of organisations and realised that one size cannot fit all. Reasons for this included avoiding duplication of activities with other regulation and existing energy efficiency initiatives.

One respondent¹³ commented *"The Wood Panel Industries Federation (WPIF)'s member companies have already invested a lot of time and money in improving energy efficiency at their sites and in the industrial process. This has been successful and as such there is little that can be done to make further improvements. This means that it may be more difficult for them to comply with the requirement that the assessment include detail on energy savings opportunities. Where necessary the assessment should therefore be able to include a note that energy saving measures have already been introduced and that further action is not needed."*

There was also an appreciation that with discretion comes the challenge of ensuring consistency in approach and level of application.

¹³ WPIF

There were views amongst respondents on the level of guidance that would be required to ensure that discretion could be applied in a consistent and suitable format. Suggested areas of guidance included the size of the organisations and the number of sites to be visited. This reflected the differences in types of organisation and the types of sites that they might operate.

This need for consistency in the approach and the requirement to ensure the professionalism of ESOS auditors was expressed repeatedly in the comments provided in response to this question. Two examples of the comments provided are:

Heineken:

'To ensure that the regulations are applied consistently and equitably across companies, the regulations are likely to have to define how ESOS is applied in some detail. It likely therefore that assessors would not find much scope for exercising their own judgement (e.g. on how many sites within a company should be assessed). To achieve compliance companies are always likely to insist that the minimum requirements of the regulations are followed and an assessor would find it difficult to argue against this.'

SSI-Steel:

'The rules need to be interpreted in a professional way so that they can be applied sensibly across their whole area of application which covers many diverse fields. There needs to be a level of discretion and proportionality within the audit to avoid directing resources away from actually achieving energy savings.'

A number of the comments provided stressed a view that it was important to ensure that the skills of ESOS auditors were suitable and that relevant training and skills monitoring be provided to ensure that the judgement of the ESOS auditors was based on skill and knowledge. (This subject is considered under Question 22)

British Ceramic Confederation (BCC):

'BCC supports the general proposal of allowing assessors to exercise professional judgement and discretion when undertaking audits. However the ability and quality of ESOS inspectors will be variable, as has been the case with other energy efficiency schemes, e.g. Carbon Trust approved energy auditors. Whilst we support the concept of allowing judgement, we are concerned that the application of such flexibility will result in site by site differences.'

Institute of Environmental Management and Assessment (IEMA):

'We support the desire to seek a proportionate response, but believe there are risks in the proposed approach. Many members have expressed concerns about 'poor quality' energy reviews from earlier schemes and initiatives. The reliance upon professional judgement and discretion may be insufficient without further investment in a) training / up-skilling of assessors and b) the development of formal guidance for good practice ESOS assessment.'

Of the 5 negative responses received on the use of discretion a couple focused on the influence of commercial pressures on an auditor and that flexibility could reduce the effectiveness of the scheme. With one respondent stated "There will be commercial pressure on auditors to reduce the coverage of the audit to the minimum."

Implications for DECC

The interpretation of the minimum requirements for ESOS are seen generally as reasonable, however there are a number of areas where respondents have highlighted concerns. These primarily relate to the practical operation of the proposed approach in terms of consistency, independence and guidance.

Many mentioned the need to provide some level of guidance and framework around the level

of sites that should be audited, the level of data and outputs to ensure that a consistent output is generated. We would agree that some level of guidance should be provided. It should provide a framework based on size, type and variability of businesses and on the level and magnitude of the audit that should be undertaken. This point also relates to the responses given to Question 12, for which respondents agreed with the need for assessor discretion on the number of sites that are audited, and highlighted the need for guidance.

Whilst skills and experience of auditors are covered in different questions (Questions 21-25) a number of respondents directly related the judgement and discernment of an auditor is related to their skills and experience. Others challenged the quality of the audits and service that would be provided. Some reflected on previous energy audits that have been carried out through historic schemes, where the quality or tailoring to their business needs and functions was absent, offering low value to their business.

Of the few responses on intensity metrics, there was agreement that they would be a useful tool and way of monitoring progress for each organisation. However, there were few comments made regarding how suitable intensity metrics should be selected. We consistently see metrics that are selected that are not appropriate for all business operations or representative of a business's actual emissions. We would therefore propose that guidance is issued on the types of metrics that can be adopted and examples of where they are or are not successful.

Finally, the use of LCA or SPP was commented on by a few organisations. In most instances neither approach in isolation was seen as the favoured approach. LCA was seen as over complex and not relevant to business needs whereas SPP was seen as being too simplistic and not taking into account the true cost to the business. In our experience many organisations now assess measures on NPV.

Q7. Do you support our proposals to develop good practice guidance for organisations?

Results summary

Total Respondents	Responses to Q7	Those who answered		Not answered
		Yes	No	
147	121	115	6	26

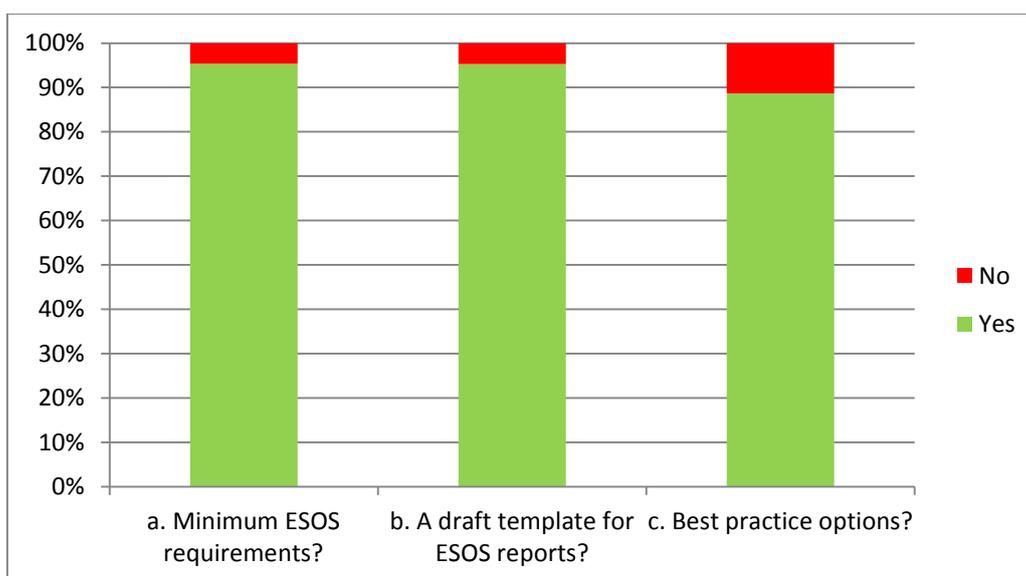
The following table describes the view of the respondents. It includes views on content for those that stated good practice guidance should be developed (First part answer: Yes) and for those that did not state whether guidance should be developed (First part answer: No).

Table 7 Detailed split of Question 7 responses

Number of respondents	a. Minimum ESOS requirements?		b. A draft template for ESOS reports?		c. Best practice options?	
	Yes	No	Yes	No	Yes	No
First part answer: Yes	101	5	100	5	93	12
First part answer: None	2	0	1	0	1	0
TOTAL accepted responses	103	5	101	5	94	12

The chart below shows the proportion of respondents who answered “yes” and “no” to the suggested content of the good practice guide (questions 7a to 7c inclusive). The figures include those who supported the development of the good practice guide (in the main part of Q7) and those that did not answer that part of the question.

Figure 4 Summary graphic of detailed Question 7 responses



The general view of the respondents was in favour of the provision of good practice guidance. The responses show support for all the proposed guidance options described in the consultation. There were a range of suggestions provided by the respondents regarding the contents and use of Good Practice Guidance (GPG). The comments below have been arranged by the topics they cover.

Overarching comments regarding role of GPG

Respondents including the Food and Drink Federation (FDF) and British Gas suggested that material could be created with industry bodies and stated that they could provide an industry/sector perspective. The Freight Transport Association (FTA) suggested that material should be promoted through trade associations and done so as early as possible to enable enterprises to have processes and procedures in place to comply with the scheme. This desire to receive guidance as early as possible was echoed by AB Ports and Willmott Dixon.

The FDF requested that GPG be distinct from guidance applicable to other regulatory regimes:

“it will be necessary to ensure that any guidance appropriate for ESOS is clearly differentiated from any guidance on energy efficiency that is applicable to regulatory regimes”

A number of respondents commented that guidance should be seen as the starting point for an audit but not be prescriptive, and that it should allow for audits to be tailored to the circumstances of the enterprise in question. For example Siemens stated:

“Guidance should give a specification for the audit requirements but NOT a detailed prescriptive template as this would devalue the whole process.”

Scope, coverage and energy accounting

There were many views on the material that should be included in the guidance. Respondents commented on the need to provide guidance and information on the minimum requirements, assistance with reducing administration burden, case studies and details of how other energy efficient instruments such as CCA, CRC and EU ETS fit as a part of ESOS. Further related to content, EU Skills stated:

“The Energy Efficiency in Industrial Processes (EEIP) supports development of a best practice guide. The Guide should contain a draft ESOS assessment, sample action plan, assessment operational guide and a Code of Practice.”

There were a range of views that stated that external standards, guidance documents and toolkits should be referred to from the GPG. These included:

- British Standards Institution BS EN 16247
- IPMVP (International Performance Measurement and Verification Protocol)
- CIBSE Guide F
- Independent organisation’s documentation e.g, BSRIA GUIDE BG 5/2008, Carbon Trust Standards, etc
- Industrial Energy Management (IEM) Best Practice guidance
- Higher Education Funding Council for England (HEFCE) Carbon management guidance
- Intercontinental Hotels Group Green Engage+

The British Standards Institution (BSI) emphasised the potential role of standards, stating:

“Good practice guidance and case studies should be available as much as possible in particular to support smaller organisations who will fall within the non-SME category. Guidance might range from draft templates to links to other helpful publications. BSI will be creating publications and case studies on energy audits and could share these where relevant. Any minimum requirements and templates could be based on standard BS EN 16247-1 Energy audits.”

Identifying and implementing recommendations

Several respondents requested details be provided on audit and calculation methodologies. One respondent¹⁴ commented that guidance is required to support the implementation of

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energy efficiency measures, in addition to the undertaking of assessments, and that this could include advice on how to access funding for implementation.

With regard best practice for knowledge sharing, Wolseley encouraged “peer group mentoring”:

“Yes we support the proposals to develop good practice for organisations. We believe options a, b and c should be included. We also believe peer group mentoring could breed good practice. Organisations could share their experiences to enhance the effectiveness of the scheme.”

Implications for DECC

There is overwhelming support for a GPG and the three elements suggested in the consultation. In addition many suggestions were made regarding content, which DECC should consider further. There were other points raised concerning how the GPG could be used, and other knowledge sharing ideas such as peer group mentoring. Suggestions for sector engagement would also further facilitate the development and promotion of good practice. DECC should consider these as part of wider stakeholder engagement.

Q8. Should the Government set a legal energy spend based percentage threshold, to allow organisations to exempt energy that collectively amounts to no more than this de minimis percentage of total energy spend?

Results summary

Total Respondents	Responses to Q8	Those who answered		Not answered
		Yes	No	
147	106	80	26	41

What percentage should this be and why?

Of the 106 respondents that answered, 75% supported the de minimis suggestion. Respondents were also asked to comment on the suggested de minimis level. The results are shown in the table below. A number of those who answered no to the first part of question on whether there should be a threshold, or did not answer it at all, did respond to the second part on the level of the threshold. Both 5% and 10% were the most popular responses

Table 8 Detailed breakdown of Question 8 responses

Number of respondents	<5%	5%	5-10%	10%	15%	20%
First part answer: Yes	7	13	1	15	1	1
First part answer: No	1	3	1	0	0	0
First part answer: None	3	8	2	5	0	2
TOTAL accepted responses	10	21	3	20	1	3

Those that responded in favour of a de minimis rule also gave reasoning on why they felt the approach and percentages suggested where appropriate. The responses generally fell into two categories, with the most popular first:

- That a de minimis would be in line with existing regulation, primarily CRCEES. (noting that a whole range of percentages were quoted with this statement).
- That a de minimis should be set against energy spend as that would be the easiest way to monitor it.

For example, First Group stated:

'We agree with the principle of allowing de minimus exclusions based on energy spend rather than energy use. We suggest a de minimis amount of 10%, which would keep it in line with the original CRC de minimis.'

Alignment with other regulation was the most popular reason for supporting a de minimis rule, with just under half quoting CRCEES. Those that suggested an energy spend basis, thought that this was appropriate as it would limit administrative burden and encourage focus on the highest energy using sites or sources.

One respondent noted that:

'In many large organisations, a significant part of the total estate is likely to be responsible for a small % of energy consumption. Attempting to cover these small consumers will increase

costs with virtually nil benefit. Businesses need to focus on the large consumers within their overall estate. I suggest 10% would be an appropriate figure.¹⁵

If no, what approach should be adopted to set a statutory de minimis and why?

25% of respondents answered no to the main question. Many made the point that current CRCEES de minimis requirements are aligned to energy consumption rather than energy spend.

For example, the Chemical Business Association (CBA) commented:

'CBA is not clear why it is believed that using a 'spend' basis rather than an energy basis is thought to be advantageous. The prime source of information will be utility bills or other documentation on other fuel purchases. Converting different fuels types into a common energy measure would not be problematic to trained auditors, as this is the approach for other regulatory regimes. CBA therefore feels that any de minimis should be based on the total energy use. CBA feels that the de minimis should be set at no less than 10%. This would allow the auditor to more easily discount minor energy use, but still capture 90% of total energy use.'

In addition many made a point that energy spend was directly linked to energy prices which are susceptible to fluctuations at contract changes. These fluctuations could have an impact on the energy sources that would be included or excluded under de minimis.

Others suggested a range of different percentages that could be implemented dependent on energy spend.

NEF stated:

'We believe that a single percentage threshold will be a blunt tool. For example, in an energy intensive process such as in the steel or chemical industries, an associated administrative building – although a significant energy user in its own right – may well fall beneath the threshold. In contrast, a similar building in the service sector would be subject to a full ESOS audit. For this reason we would recommend either a stepped percentage based on total energy spend (so it might be 5% for total bills under £100,000, 3% for bills from £100,000 to £1 million, 2% from £1 to £10 million and 1.5% above), or a combination of a percentage AND an absolute expenditure, so that (for example) only energy uses that fell below both 5% of the total energy use and had an energy cost of less than £20,000 could be ignored.'

Implications for DECC

The respondents were generally in favour of a de minimis rule and many suggested that the level set should be aligned with current regulation. However it was the suggested energy spend basis that generated the most comment.

Notably many respondents thought that the level could be linked to regulation even if the percentage was set on energy spend rather than (as is the case for CRCEES) energy consumption. It's important to note, however, that the changes to CRCEES under simplification remove the de minimis rule that is referred to by many respondents. Specifically, the minimum 90% footprint coverage has been replaced by exclusion rules based on the type of fuel, meter and use of energy, applied at source level and not on the percentage of energy for the entire organisation.

With regards use of energy spend as the basis for a de minimis rule, some respondents felt that energy prices would have an impact on the sources that would be included under the rule and would lead to fluctuations as utility contracts were renewed and fuel prices changed.

Many felt that energy consumption would offer a more realistic and consistent assessment of

¹⁵ Confidential response

the areas that could be excluded under a de minimis rule.

There were some respondents that were not in agreement with the suggested approach and instead suggested that all energy sources should be included in the audit.

Others suggested different levels of threshold against energy spend which again would be hard to implement should businesses growing or again changing energy contracts that bring them over a threshold.

Overall, the arguments in favour of adopting a de-minimis threshold (principally the cost effectiveness of identifying significant savings opportunities) seem more compelling than those against (rigorous accounting and the cumulative impact of excluded sources). With respondents seeing little benefits of highlighting the costs of energy spend internally and a number of possible other risks associated with the use of energy spend (confusion and exposure to changing energy prices) we would question the value of using it as the source for defining de minimis.

Q9. Do you agree with the Government’s proposed approach to calculating energy usage by:

- a) Allowing use of existing data sets in order to simplify compliance? (I.e. organisations can draw on data gathered over any period during the two years prior to the ESOS assessment being conducted)?
- b) Setting a minimum six month time period which energy use data should cover to inform an ESOS assessment?
- c) Promoting use of 12 months data, with the onus on organisations to comply or explain deviations from this good practice approach?

Results summary

Total Respondents	Responses to Q9	Those who answered		Not answered
		Yes	No	
147	107	90	17	40

The 84% (90/107) of respondents who agreed with the calculation methodology and provided comments (66) were generally in favour of the proposal set out in the consultation.

Of the 16% (17/107) of respondents who answered ‘No’ to Question 9, most (9/17) objected to point b) and expressed the view that the minimum permissible period should be 12 months to adequately reflect seasonal variations in energy use. Four respondents answering ‘No’ expressed the view that allowing the use of existing data sets under existing schemes - point a) - over different periods could lead to a confused picture of an organisation’s energy use. In mitigating such a risk, two respondents stated that this could be avoided by aligning the monitoring/reporting periods of the different data sets.

This question requests respondents to consider three components for calculating energy usage.

a. Allowing use of existing data sets in order to simplify compliance? (I.e. organisations can draw on data gathered over any period during the two years prior to the ESOS assessment being conducted)?

A number of respondents (23) to part (a) commented on the use of existing data sets. The general view was that this was a good idea as it would simplify the route to compliance. There were positive comments regarding the proposed alignment with existing schemes.

A small number of respondents (4) were, however, concerned about the data quality. They agreed that if the data set was relevant, accurate and, where possible, verified then it should be accepted for use. There was a concern raised that enabling the use of data from different and/or shorter periods would have some inherent risks. These risks would include possible overstating or understating of energy use depending on seasonal variations and the creation of a “highly confused picture of energy use and potential savings”¹⁶

There a risk when using existing data that its quality and accuracy does not meet the ESOS requirements. The acceptability of this depends on the standards required from the data for ESOS purposes. There would be a risk that leaving data quality and accuracy open to interpretation could lead to poor practice. It was suggested by respondents that practices similar to existing schemes be adopted.

¹⁶ Response provided by UKGBC.

UK Green Building Council (UKGBC), stated:

“While it makes sense to allow organisations to use existing data in complying with ESOS, using data from multiple periods could lead to a highly confused picture of energy use and potential savings. For example, if data for one site was from a particularly cold year with high heating demand, while other buildings’ data came from a more temperate year, it could lead to the misidentification of the former as a poorly performing site, with inappropriate recommendations made as a consequence.”

Thames Water, stated:

“Data is already required to be provided for CRCEES, EUETS, Mandatory GHG Reporting etc. all of which is required to conform to certain specifications to meet regulatory requirements. In addition it also exposed to a significant degree of independent verification. Therefore to reduce administrative burden and costs and ensure consistency of data this should be made use of.”

b. Setting a minimum six month time period which energy use data should cover to inform an ESOS assessment?

Many respondents provided an additional comment to part (b) stating that they felt that accepted ESOS assessment data should cover a 12 month period and not a 6 month period. There were a number of comments from respondents stating that 6 months data is not sufficient for a range of reasons, as given below. Generally, respondents expressed views that 12 months of energy data is required to:

- Be fully representative of the business activity
- Include seasonal variations in the energy demand of business activities
- Avoid businesses preferentially selecting a shorter period (e.g. 6 months) of reduced energy demand in an attempt to distort the energy intensity ratios of particular business activities and therefore lead the ESOS audit recommendations.

These points were illustrated in the response from Heineken:

“12 month data should be used to remove seasonality and prevent companies using the most energy efficient 6 months they can find. Existing data sources, which are often verified, should be allowed (EU ETS, CRC, and CCA)”

If the respondents did not explicitly provide supportive views on option b or c, they general provided a positive view for mandating that data cover a period of between 6 and 12 months.

c. Promoting use of 12 months data, with the onus on organisations to comply or explain deviations from this good practice approach?

As highlighted above many of the respondents argued for a requirement to measure data over a 12 month period and by inference this suggests that if a minimum of 6 months is specified, then the voluntary adoption of a 12 month period should be promoted.

However, a small number of respondents went on to say that the Government should not only promote the use of 12 months of data but mandate it as a requirement, such as this comment from UKGBC:

“We also believe that data should be for a minimum of 12 months, and that this should be a requirement, rather than being set out in good practice guidance.”

Many respondents who expressed a preference for the use of 12 months of data for ESOS assessments, rather than the proposed minimum of 6 months, caveated their response with the condition that the Government should permit the option to ‘comply or explain’ deviations from this good practice approach, as this would provide the necessary flexibility to still undertake assessments where there is an insufficient period of data. It was also suggested

that there could be situations where energy is attained from a wide range of sources that may not align with the reporting period.

Implications for DECC

We agree with the emphasis on aligning ESOS with existing schemes to reduce the burden, and consider there is strong merit in requiring that the data should cover an annual period, as this will provide more accurate information.

An interesting comment made by Hanson, was to introduce a staged approach for data requirements. This could be useful for those who are not involved with any of the existing energy efficiency instruments. We consider that this approach could be useful for SMEs but large enterprises should be capable of meeting full ESOS requirements.

There are subtleties between the existing schemes which have to be considered, for example the Scotch Whiskey Association noted the slight differences in calculation between the CCA scheme (Gross Calorific Value (GCV) basis of calculation) and EU ETS (Net Calorific Value (NCV) basis of calculation), which could lead to confusion. Though ESOS regulation is aiming to be light touch, it is necessary that clear rules are developed and applied, preferably based on conversion factors for existing schemes with which ESOS participants may be familiar.

Q10. Do you think that ESOS assessments should include an energy intensity ratio as opposed to HMG requiring in law energy consumption profiles for all key buildings, transport and industrial processes?

Results summary

Total Respondents	Responses to Q10	Those who answered		Not answered
		Yes	No	
147	111	79	32	36

Table 9 Sectoral breakdown:

Sector:	Those who answered:	
	Yes	No
Retail	6	2
Utilities	6	3
Hotel chains / hospitality	1	0
Major leisure	0	0
Other primarily office based companies	9	3
Light industry and manufacturing	9	3
Energy intensive industries	11	2
Transport	1	0
Property / land management	4	1
Charities, NGOs and agencies	2	4
Green Economy	7	7
Trade bodies	21	6
Universities and other bodies	2	1

Of the 71% (79/111) of respondents in favour of the Government’s proposals, 38 provided additional views in support of energy intensity ratios. Respondents were generally in favour of the inclusion of an intensity ratio but not mandating energy profiling. For example, the FDF agreed with the government’s position:

“FDF support the proposal not to mandate energy profiling but to support it in good practice guidance and we agree with the analysis and justification presented.”

The respondents in favour of using energy intensity ratios generally set out the advantages of the energy intensity method while explaining why they were apprehensive of profiling, for instance the Confederation of Paper Industries (CPI) described the concerns they would have if the results of a technical process such as profiling were made public.

“An Energy Intensity (EI) ratio – provided the organisation has the power to choose an appropriate denominator - would be flexible and informative. Mandatory energy consumption profiles would be inflexible and may invite inappropriate comparisons by non-technical commentators and so should be avoided.”

There was support from respondents for the proposed approach of allowing enterprises to decide the most appropriate intensity measure, on the basis that it would result in a lower administrative cost.

Some enterprises stated that the intensity metrics could be advantageous in helping demonstrate their energy efficiency to stakeholders. This is illustrated below by Yorkshire Water, who suggested the use of more than one metric.

“On balance, the energy intensity ratio is probably more reflective of the efficiency of use of energy, as opposed to the amount of energy used. In the context of looking for energy savings opportunities, we believe this measure will be more appropriate. We would like the ability to use more than one intensity ratio if we felt it would be more representative of our performance to our stakeholders.”

Of the 29% (32/111) of respondents opposed to the Government’s proposals, many expressed concerns regarding the applicability of standardised ratio(s) and the potential that the information generated would not be meaningful, due to the sector-specific nature of ratios and the influence of other external factors. Examples of external factors cited included economic and geographical factors.

A small number of respondents (<5) highlighted that they would struggle to apply a standardised ratio to their diverse business activities that would give meaningful results.

An view expressed by a small number (2) of respondents answering ‘No’ to Question 10 was that Government should prescribe standardised metrics to prevent organisations “cherry picking” the most favourable metric(s), in an attempt to distort a view on their energy performance.

With regards the Energy Efficiency Directive, there was a difference in opinion amongst respondents opposed to the Government proposals as to whether the proposals met, or go beyond, the requirements. Two respondents expressed the view that an energy intensity ratio was not specified by the Directive and therefore the Government should not mandate it. Two other respondents did not believe that an energy intensity ratio went far enough in meeting the Directive and that energy consumption profiling was required to meet the requirements of the Directive.

NEF, in supporting the proposed approach, commented on the intended meaning of energy consumption profiles within the Energy Efficiency Directive, suggesting a broad interpretation:

“Annex VI (b) of the Directive requires that audits should “comprise a detailed review of the energy consumption profile of buildings or groups of buildings, industrial operations or installations, including transportation”. While there is no clear definition of what is meant by “energy consumption profile”, we believe that the original intention was that this should be interpreted in its everyday English sense of an analysis of the manner and use of energy, rather than the narrower sense of a review of energy consumption over time.”

There were not many comments relating to profiling as most respondents preferred the use of energy intensity measures. However, a small number of respondents did state that energy intensity ratios were too simplistic for complex organisations and one respondent cited their preference for both energy consumption profiling and energy intensity ratios to be provided as options to ESOS organisations.

Implications for DECC

The respondents overall supported the energy efficiency intensity metric although raised some caveats regarding its use. These concerns included the use of the metric for comparison against their competitors and against other companies and the possibility of others gaining competitive advantage with the information.

Since the primary aim of the intensity measure is to assist the ESOS enterprises in monitoring trends and identifying opportunities within their organisations, and not to provide a comparison between firms, then it could have value even if the results are not made public. On the other hand, if results were to be published then there would inevitably be

comparisons made between companies within the same sector. As a result of this we believe that a sector based intensity measure should be defined, which could be established with input from the sectors themselves. For instance, the water industry already measures energy intensities with submissions to OfWAT as highlighted by Dwr Cymru / Welsh Water, which could be used as a possible metric.

With regards sectoral performance measures, a sector average value could be published enabling enterprises to benchmark themselves. This approach could encourage enterprises without mandating the use of the same metric.

Other caveats to the use of intensity metrics included their applicability given the diversity of business operations between and within enterprises. In response, therefore, a more flexible approach to the application of intensity metrics could help them be used as a beneficial tool to monitor energy and identify anomalies and trends in ways that are relevant to the enterprises concerned. Companies should be encouraged to follow the guidance and not be limited to a single value. This is echoed by the InterContinental Hotels Group who stated:

“We agree that the energy intensity ration should be chosen by the organisation, and in some cases would be agreed by an industry sector where best practice exists.”

Q11. Do you agree that ESOS assessments should only include all significant energy use directly paid for or produced by the organisation?

Results summary

Total Respondents	Responses to Q11	Those who answered		Not answered
		Yes	No	
147	117	92	25	30

The question raises several aspects and in general respondents have commented against these. Specifically:

- Whether only significant energy should be included, or whether it should be all energy.
- Should energy responsibility be assigned according to who uses it, and or who pays for it.

Inclusion of all significant energy

Those that supported inclusion of only significant energy paid for or produced by the organisation cited the additional costs associated with accounting for all energy, expressing the view that to measure all energy could place an unfair burden on some organisations¹⁷ and increase complexity¹⁸, whereas by focusing on the most significant energy costs ESOS could be most cost effective for organisations¹⁹. Others pointed to the potential for consistency with other systems, such as the CRCEES²⁰. The counter-view expressed was that small amounts of non-significant energy use can have a large environmental impact when accumulated, so should be included²¹, or that excluding them would allow organisations to disregard potentially large areas of energy usage and would not give an overall picture of the energy usage of the company²².

There were few views on how significance could be defined (although many respondents did provide views on de minimis energy levels when prompted to do so by question 8). As mentioned above, some suggested alignment with CRCEES, whereas one respondent, Seven Trent Water, suggested the organisation itself determines what it considers to be significant:

“Organisations should be allowed to determine what is significant for their Organisation and to justify it if required by the administrator. This is the approach used in mandatory GHG reporting where the company decides on materiality and justifies as necessary.”

Energy directly used or paid for by organisations

Many respondents argued that ESOS should only include the energy that an organisation uses directly. This agrees with the aspect of the proposal that ESOS includes energy used by an organisation, but as explained below, views were provided on the limitations of attributing energy according to payment. The main reason given for including energy use for an enterprise was that this is the energy that they could most easily measure and control, since those that control the energy use can more readily make savings. The point regarding control is especially relevant to cases where tenants consume energy and several

¹⁷ E.g. Telereal Trillium

¹⁸ SMMT

¹⁹ IRP Solutions

²⁰ Saint-Gobain

²¹ CICS Global

²² UKAS

organisations that act as landlords suggested that an approach based on control should be considered, and that it would need careful definition.

For example, Heathrow Airport stated:

“Heathrow pays for 3rd party energy use – tenanted and leased but may not be able to undertake measures to save energy. Therefore, the requirement for ESOS needs to be on the energy that an organisation can ‘control’ as oppose to just ‘influence’ e.g. HAL may install the ‘shell and core’ of a space but a retailer may ‘fit out’ the space.”

Peel Holdings Ltd suggested that an operational control test be used to define responsibility for energy, since this would align ESOS coverage with the party best placed to improve energy efficiency:

“We feel that there is a misunderstanding of the landlord-tenant barrier which has led to a simplistic interpretation of responsibilities. For example we have recently had a very large industrial property which has one main incoming electricity supply, but two large energy-consuming tenants (one a cold-store food distributor and the other an automotive components manufacturer). These are tenants, but we as the landlord have no scope for improving their energy consumption, and the only reason we pay the bills for these facilities is because of the large cost of splitting (as opposed to sub-metering) the incoming supply. Again an “operational control” test would reflect which party would be best placed to bring about an improvement in efficiency.”

Peel Holdings Ltd went on to state that payment is not an adequate criterion for assessing control, and that an approach could be based on who controls the energy consuming equipment or processes. There were other comments made in relation to who pays for the energy. As illustrated by UK Contractors Group (UKCG), there can be a difference between which organisation pays for the energy and which controls its usage:

“Excluding energy which is not paid for directly may exclude significant sources of energy use and emissions. This may also lead to inconsistent profiles and hinder the ability of organisations to identify how they are performing consistently or what improvements can be made. In construction, we often use energy which is not paid for directly, but which is under our control (i.e. energy provided to us by clients).”

This concern that a payment-based definition of coverage could exclude significant energy was echoed by UKGBC, who stated:

“The exclusion of energy that is not paid for by an organisation potentially excludes a very significant proportion of energy used in buildings, and may lead to a failure to identify a wide range of energy-saving opportunities. The consultation document states that the Directive’s intention is that organisations’ own energy usage is audited, which would suggest that tenants’ energy use, even where not directly paid for, should be captured in some form.”

By contrast, the inclusion of energy that is used by one organisation but supplied by another raises the possibility of double counting, as expressed by Tata Steel:

‘The complexity of, for example, including energy paid for by supplier companies, would be impractical to administer. Further in many cases this energy will be reported separately under ESOS by these companies, hence there is a risk of ‘double counting’ by including energy that is not directly paid for by the organisation in question.’

The point raised by Tata Steel above that an approach in which energy responsibility is assigned to a third party use raises the possibility of double counting by both the supplier and user. A possible solution, as suggested by Peel Ports, is to adopt a rule to exclude the energy from the supplier’s responsibility, akin to the CRCEES onward supply rule:

‘For ESOS to be workable, it is essential that any payment criterion recognises the existence of private networks and does not base its definition of supply on the balance and settlement system metering (Meter Point Administration Number (MPANS) for electricity and Metering Point Registration System (MPRS) for gas). At the Port of Liverpool there are hundreds of

independent, extremely large-scale, organisations procuring energy from our utility business on a private network. Peel has no operational control, knowledge of the operations, or ability to influence energy use in these businesses. We would not be able to gain access to audit these facilities or indeed provide energy data about these to third parties. Thus an “ultimate end-user” condition needs to apply to ESOS so that these businesses will be responsible for participating in the scheme (where they meet the required threshold) in their own right. If, as we recommend, the CRC supply criteria form the high-level basis for inclusion of supplies, then the “unconsumed” supply rules would exclude these supplies.’

Other relevant views

There were questions raised about the definition of organisation. One respondent felt that they were unable to provide full disclosure of information due to their PFI status. This is because there are questions about whether they would be considered private or public for the purposes of ESOS. This is a question that would have to be addressed.

One respondent noted that the inclusion of significant energy as identified in this question could be utilised to encourage savings prior to the implementation of other future policies. The view was provided by CIGA:

“We note that the provisions of the Energy Act 2011 in relation to non-domestic properties do not come into force until 2018 and that ESOS could provide a route to identifying potential improvements in advance of their introduction.”

Implications for DECC

Taken in isolation from the points about assigning responsibility for energy according to use or payment, we consider there is a strong argument for only including significant energy. The main arguments for excluding non-significant energy support the development of a cost effective ESOS system: that measuring small amount of energy can be burdensome, and; that the greatest savings opportunities will lie with the greatest areas of consumption. By contrast, the counter argument does not seem that strong: the position that all energy should be accounted for because even small energy accumulates to a large amount across all participants and that the approach would allow organisations to disregard potentially large areas of energy usage. Both of these points could be mitigated by carefully defining what is or is not significant energy, so as to prevent the exclusion of genuinely large energy supplies.

With regard the definition of significant energy, there has been no clear and simple approach suggested in the consultation responses. Some respondents suggested alignment with CRCEES, but this would in effect be a fuel-based definition, limiting static energy use to electricity and gas, and potentially excluding significant energy use from solid or liquid fuels. The CRCEES approach would also not address the question of significant transport energy.

The suggestion that the organisations define their own level of significant energy and then justify it is required seems to have significant weaknesses. It offers no assurance that consistent approaches will be adopted and it is reasonable that participants will expect a clearer definition of what they should and should not exclude.

Further consideration should be given to how significant energy could be defined. One option that brings together some of the differing views of consultation responses could be for alignment with CRCEES for electricity and gas (i.e. larger sources) with a de minimis threshold for other fuels and fuels for transport (discussed elsewhere).

The responses highlight many of the supply responsibility points that are also common to other systems such as CRCEES. The consultation question mentions several aspects that do not overlap completely. For instance the question mentions energy use, and payment, but it is clear from the responses that the user does not always pay (directly or in some cases indirectly) for the energy it uses.

With regard to payment, the position proposed in the question is similar to that in the

CRCEES Phase 1, in which the recipient is responsible for energy that it receives, uses and pays for. Importantly, during CRCEES policy development the original suggestion that the entity responsible be the counterparty to the supply contract with the licenced supplier was generalised to be the counterparty to *any* supply contract. In more recent developments (for Phase 2 of the system) the requirement for payment was removed, making the supply rule based on usage rather than payment. The “unconsumed supply” rule also follows this approach, in which enterprises are not responsible for energy that they supply to third parties. The only exception being that landlords are responsible for the energy they supply to tenants.

In its response to Question 11, UKCQ commented that the construction sector often uses energy which is not paid for directly but which is under their control. The energy is paid for by the construction company’s clients. Under the CRC in Phase 1, the responsibility for this energy would be determined using the CRC supply rules and the landlord / tenant rule.

Building on this CRC experience, and the comments made by respondents to this ESOS consultation, an ESOS definition based on usage appears more closely aligned with the ESOS aims to cut usage than does a payment-based approach. It would also align well with the CRCEES approach and address many ESOS consultation response concerns about onward supply. The key decision would then be whether to apply the CRCEES landlord/tenant rule, or depart from that and require tenants to take responsibility for the energy that landlords supply to them. From the consultation responses the latter could be better, because tenants have operational control over the energy that they use, in general. Also, there may be difficulties requiring landlord access to tenant occupied premises for the purpose of an ESOS audit.

With the above approach a definition might be required of what constitutes energy usage. Some aspects that could be considered:

- Energy conversion/carriage. As an example a landlord consumes gas and provides hot water to a tenant for heating purposes. The question is whether the energy is consumed by the landlord or the tenant. There are different outcomes depending on whether ESOS accounts for fuel or energy.
 - It is implicitly a *fuel* system (as described in the consultation document) in that fuels and electricity are accounted for – in the same way as CRCEES. In the above example the landlord would be responsible for all of the gas, and the tenant for nothing (not the gas or the hot water).
 - The alternative is an energy accounting system. Strictly the landlord consumes the gas, but not the hot water, and the tenant consumes the hot water. Thus an energy usage approach could attribute all of the gas energy to the landlord and all of the hot water energy to the tenant. This would have the advantage of assigning energy to the party that controls its usage (the gas boiler efficiency for the landlord and the hot water consumption for the tenant (noting that in some circumstances the landlord could control the heading)). However, this is a radical departure from the fuel-based system in that heat is then accounted for. This raises difficulties in the complexity of requiring heat accounting, the measurement of heat, and the risk of double counting (to avoid double counting in our example, the landlord would need to net off the energy in the hot water supplied to the tenant).
- Based on the above discussion an energy accounting system seems to have significant drawbacks, but a fuel accounting system leaves the landlord responsible for the energy it converts to provide onward energy to tenants. The latter seems the best compromise. Note that importantly under a fuel accounting system, in which electricity is treated like other fuels, the landlord could pass on the responsibility of electricity to tenants, since this is more easily metered and accounted for between the two parties.

The suggestion that an operational control approach be developed based on control of individual energy consuming assets does not seem that appropriate as it would be extremely

complex.

Q12. Do you agree that ESOS assessors should be given discretion as to the number of site visits they undertake as part of an audit?

Results summary

Total Respondents	Responses to Q12	Those who answered		Not answered
		Yes	No	
147	114	96	18	33

Of the 114 respondents that provided answers to this question 84% (96/114) agreed with the government’s view of giving assessors discretion when choosing the number of site visited.

Of the respondents who were in favour of discretion the comments (50) could be broken down into three types:

- Respondents that accepted that given guidance through formal accreditation it would be acceptable for assessors to choose the sites assessed (40% 20/50).
- Those who agreed that it was appropriate for assessors to use their own discretion (32% 16/50).
- Respondents that thought a limit should be placed the number of audits (either maximum or minimum) (24% 12/50).

The largest group (20) of comments related to guidance and associated accreditation for assessors. There was generally recognition that some training or guidance as part of the accreditation process would support assessors in developing site audit strategies. The aim being to ensure that there was some consistency in the way that discretion was applied. It was also suggested that this approach would offer some value, in that there would be a level of flexibility in the number and types of sites that could then be visited tailored to the specific nature of the business. Primarily, this approach would allow assessors to focus on auditing large sites or high energy using sites and identifying the greatest energy savings in an economical manner. Respondents commented that this level of discretion could mean auditing sites by type and being able to offer generic measures that could be applied to multiple sites or auditing large sites that would form the focal point of energy reduction investment.

Some respondents suggested that a sensible route to giving guidance on how to decide upon a suitable number of sites would be by providing assessors with some training during the accreditation process. This would help to ensure a level of consistency. It was also considered that guidance and training would be relevant where auditor discretion/flexibility is required.

Siemens illustrated this with their comment in which they stated:

‘Site characteristics vary immensely and it is not sensible to provide a ‘one size fits all’ approach. The expertise of the auditor should be exploited here (again, assuming the requirements for auditors is robust!).’

The approach required to focus on meaningful energy savings outcomes is also mentioned in other responses. For example, Wessex Water commented:

‘To cover 90% site visits by number we would have to do ~2,000 site audits, but to look at 90% of the power we would have to do ~330 sites. The later would be more manageable and more useful to us as a business.’

This point about cost effectiveness was also raised by those who supported discretion but did not emphasise the associated role of guidance and accreditation (16/50 identified above). They generally commented on the number of audits having a correlation with the

administrative cost of the scheme, and that as the number of audits increased so did the overall cost. They also commented on how the level of energy reduction potential would diminish for smaller sites. For example Anglian Water stated:

'Discretion rather than a 'one size fits all' approach will be cost effective and allow resources to be targeted to maximise the savings opportunities.'

A similar view was provided by the WPIF, who stated:

'discretion means that assessors can target their visits proportionately and in a way that makes the most business sense for the organisation being assessed.'

The third group of respondents (12) commented on the potential for limits to be placed on the number of audits, mostly concerning about the costs and time that could be spent.

Heineken highlights that with a minimum limit it may be unlikely that additional sites are audited:

'... No two companies are the same and its human nature that the company being assessed would want the least amount of sites to be audited whilst still adhering to the regulations. As ESOS is regulatory, if the minimum requirements of the regulations are being met it would be difficult for an assessor to make a case that he should be doing more.'

SSI Steel are keen to constrain costs by limiting the maximum number of visits that the assessor may choose to undertake:

'As well as other aspects of the scheme, discretionary approach should be followed regarding site visits as this would involve resources and time. It will be necessary for auditors to carry out their assessments with due considerations to the situation of the individual businesses. Hence, we subscribe to discretionary approach in this regard provided that there is some provision to limit the maximum number of visits to a reasonable amount'

This was reinforced by others who suggested that unless a legal limit was put in place then the flexibility offered by the scheme could be taken advantage of. E.ON commented:

'Yes, but within a tolerance band, for example 10-30% of all sites should be visited. If it is left open to too much interpretation it will not create a level playing field for businesses.'

There were views from a couple of respondents, including EDF Energy, which related to Questions 23 and 24 on assessors, suggesting that assessors should be formed of in-house teams. It was argued that in-house assessors would have better understanding of the sites and in some cases may already be conducting similar activities.

Of the 16% (18/112) negative responses received many mimicked those responses received in the positive section. 8 of those who responded negatively commented that guidelines should be given on how to determine the number of sites to be audited.

One respondent²³ said *"No, and we believe guidelines are required in this area. There is a limit to what can be ascertained through a desk top exercise, but many organisations have a diverse portfolio of buildings and infrastructure. Some will require more audit than others and deciding how many assessments to do will influence the overall cost of the audit."*

Three respondents talked about commercial pressures that could lead an assessor to audit less than reasonable. One respondent²⁴ speculated that this would be the case and that BSI and PAS standards should give sampling guidance. They said *"This would lead to commercial pressure to reduce the number of site visits. The site visit requirement should be clearly stated in the scheme documents based on the need to ensure the rigour of the audits, including any arrangements for sampling for multisite organisations with similar sites. This would be a role for BS EN 16247 or the new PAS or both."*

²³ British Gas

²⁴ UKAS

Two respondents stated that all sites should be audited to give a full range of measures with one respondent²⁵ saying *“If the Government is serious about reducing energy consumption, then a site visit to each site is vital; as often energy efficiency advice is specific to individual building assets and the operational use of those assets.”*

Three respondents said that the reasoning for selecting a sample should be given in the output of the audit.

Implications for DECC

We agree that ESOS assessors should be given discretion on determining the number of site audits.

We believe, that whilst there should not be a minimum or maximum number of site visits expected to be carried out, (as every site is different) some level of guidance on the percentage coverage or types of approaches that could be adopted would offer a framework and potentially some consistency.

Likewise we would propose that there be a requirement to record within the audit explanation of why a particular audit strategy is adopted. This would be of benefit in a number of situations:

- During QA of the audit as a transparent record
- For the following assessment as a guide of what was previously done and why
- To provide some legitimacy for assessors when agreeing an audit approach with an organisation that is less willing to carry out a reasonable level of audits.

As discussed in questions 22-24 the accreditation and experience of the assessors will determine their ability to develop an audit strategy. However providing them with suitable tools, guidance, training or case studies on how could be approached would support their interpretation of the requirements.

²⁵ Quidos

Q13. With respect to buildings, do you agree that where an organisation has installed DEC's or chooses to comply by undertaking Green Deal assessments for some or all of its buildings within the past four years, those buildings should not need to have an ESOS assessment conducted too in order to comply with the requirements of the Directive?

Results summary

Total Respondents	Responses to Q13	Those who answered		Not answered
		Yes	No	
147	106	65	41	41

Of the 106 respondents to this question 61% (65) responded positively and 39% (41) responded negatively. Of the 65 who responded positively, 22 provided comments. Of the 41 who responded negatively, 15 provided comments. Of those who did not provide a yes/no response, six provided comments.

Of the 22 positive respondents who provided commentary on the question, ten offered commentary on DEC's. Their commentary varied but included the following points:

- The use of DEC's would the roll out of DEC's in the private sector.
- That whilst they supported the use of DEC's, the data and detail of a DEC should meet the requirements of ESOS.
- Avoiding duplication – DEC's should therefore be further utilised.
- If a DEC was considered as an exemption for a building it should not mean that a building is not included in the wider audit of the organisation.

Of those who provided commentary seven mentioned the Green Deal Assessments:

- As above that the data and detail of Green Deal Assessment methodology should meet the requirements of ESOS.
- That there was a benefit in using the methodology to reduce the burden and utilise another existing method such as Green Deal
- That it was likely to increase the uptake of the Green Deal Assessments
- One respondent simply stated “Green Deal Assessments – No” with no explanation.

Two respondents commented on the use of the TM22 methodology as an alternative method for carrying out audits.

E.ON

“We support the principal of avoiding duplication, however if the scheme is to be truly successful in improving the energy efficiency of buildings, we believe that DEC's are too light touch and do not provide enough meaningful information to companies. Therefore its usefulness is limited.”

Hilson Moran

“DEC's are effective at identifying and comparing energy consumption and should definitely be considered under an ESOS ‘family’ of solutions. In addition, an Energy Management Strategy should also be developed in order to have a route for on-going energy efficiency – otherwise progress may not be made.”

BCSC

“Yes, this negates the need to duplicate data and allows an organisation to choose which method suits their organisation the best; but as with the use of CRC and GHG Reporting data for ESOS, it is important to ensure that the minimum requirements are still met. While

we support the concept of using data that already exists, these are all provided in different formats; auditors will need to normalise this data if there is to consistency and comparability of data.”

Of the respondents who provided negative responses 15 offered comments. Unlike the commentary from those who had responded positively (where they had provided caveats to DEC and Green Deal suitability) these responses were negative and gave clear reasons why. Many of these respondents felt that the use of DECs and Green Deal assessments would be too simplistic and not offer tailored and specific energy efficiency measures. Many commented that ESOS was about establishing energy efficiency measures against an operational energy consumption, whereas DECs and the Green Deal were based against nominal energy consumption calculated based on the building size and type.

Quidos explained why they believed that the Green Deal would not be acceptable stating:

“A Green Deal assessment is not fit for purpose as it uses an EPC and the Simplified Building Energy Model (SBEM) methodology which take into account the building fabric, and not the operational energy use of a building.”

With another respondent²⁶ stating the following: *“The Green Deal software, iSBEM, does not allow for a detailed audit to take place. Take lamps for example; it does not allow each individual lamp to be accounted for, rather it groups lamp types together regardless of running times. This leads to certain assumptions being made. It is not detailed enough to make accurate savings calculations and therefore not accurate enough to make an impact on ESOS.”*

Implications for DECC

Whilst the respondents to this question, on the face of it, offered up a positive majority the commentary says something slightly different. Where organisations have responded positively to the question, they have been cautious and offered a “yes, but” answer. However those who have responded negatively have been very clear in their reasons why.

Those that responded with commentary, irrelevant of their “yes/no” answer, all appeared to imply the same thing. That the DEC and Green Deal methodology do not align with the underlying requirements of ESOS. ESOS is designed to encourage enterprises to take up operational energy efficiency measures, and should be based on real energy data. Taking each of the possible options separately it is possible to see why there has to be some consideration on their applicability.

DECs are based on actual energy use which is then assessed, based on floor area and adjusted by temperature variations of a given year, against benchmarks. Behind a DEC certificate a further assessment and an advisory report issued, which contains energy efficiency measures and is valid for 7 years. Whilst it is based on real energy usage, many of the measures identified may be generic and also completed if the Advisory Report is 4 years old. Therefore whilst DECs could be considered compliant and may offer some ability to provide measures, however care would need to be taken that they were not outdated, if not fitting with the sequencing of the 4 yearly ESOS audit.

The Green deal methodology, at present, is based on the EPC methodology, meaning that it utilises standardised calculations based on predetermined factors that are not specific to the site being audited. In doing so the specific nature and operational energy performance of a site is not captured. Therefore if a site or multiple sites were to be assessed in this manner it could give misleading results indicating that some sites are performing better than others or that certain measures would be more valid than others when in reality, when real data is captured, may not be the case. Therefore we question if the use of the assessments would

²⁶ Utilitywise

support ESOS requirements in full.

However the Green Deal assessments are quick and simple to carry out, they reduce the administrative burden and could therefore be used as a pre-audit assessment to support development of a multiple site audit strategy.

Whilst both of these schemes offer elements of support to ESOS we feel that they would need to compliment rather than replace an ESOS assessment of an organisation or indeed a building. It should of course be noted that similar may well need to be considered for the Green Fleet Review.

4.4 Transport

Q14. With respect to transport, which one of the following approaches should be adopted in relation to international aviation and/or shipping:

- a) All fuels purchased within the UK should be considered within scope of ESOS
- b) Energy usage of all flights/shipping departing the UK should be considered within scope of ESOS
- c) All fuels purchased anywhere in the world should be considered within scope of ESOS
- d) Alternative

Results Summary

Total Respondents	Responses to Q14	Those who answered:				Not answered
		Prefer A	Prefer B	Prefer C	Proposed Alternative	
147	87	56	3	15	13	60

87 responses were received from a range of sectors. The results summary shows that the largest proportion of responses (64%) were in favour of either option A (UK fuels should be considered) or option C (17%) (all fuels purchased anywhere should be considered). The remaining 19% of responses were mostly either alternative suggestions or mixed responses, with very few respondents in favour of including flights/shipping as part of the scope of ESOS.

Figure 5 Summary of Question 14 responses

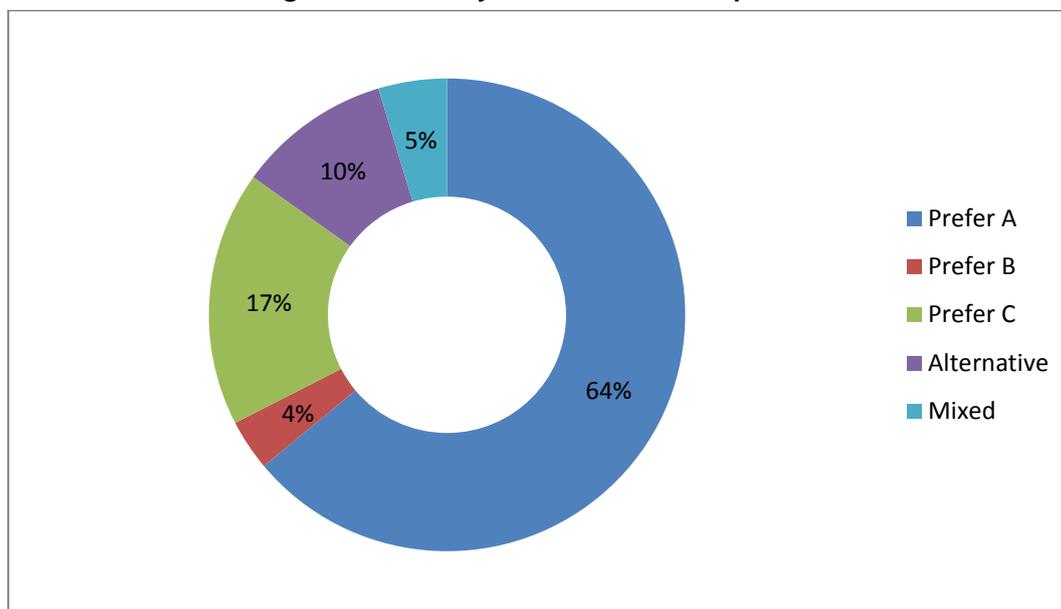
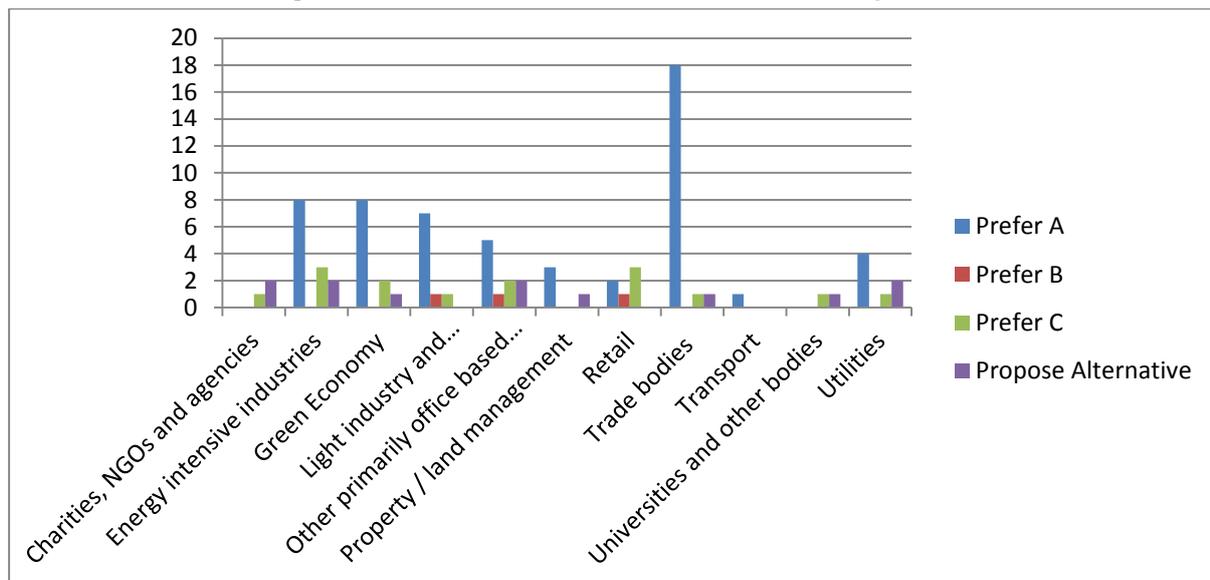


Figure 6 Sectoral breakdown of Question 14 responses



The responses broken down by sector show general support for option A. The collaborative responses from trade bodies (18 for A, 1 for C, 1 for alternative) also indicate that there is greater overall preference for option A. However, some sectors gave either alternative suggestions or a preference for option C, rather than option A. These sectors had comparatively low response rates and are: retail, charities, NGOs and agencies as well as Universities and other bodies.

Most comments passed in support of option A centred on the requirement to keep the process simple to administer, especially when only a small amount of energy used by the business is in shipping or aviation. It was felt that including aviation and/or shipping would use difficult metrics to calculate fuel use and there would be little control companies would have in the efficiency of these modes of transport.

There were also comments regarding the overlap with other policies especially when a company is a multinational. Comments were specifically made about the EU ETS, in regards to the carbon emission reporting by the aviation sector; that their efficiency was already being measured and incentivised therefore having ESOS cover this would be double accounting. Other multinationals detailed that if the parent company is outside the UK then it would be difficult to define the scope of the reporting for the UK based part of the organisation. Comments made by two organisations outlined that ESOS should use the same principles as outlined in Regulation No 1099/2008 on energy statistics.

Some comments were made about overlap with other company reporting, especially when a company uses shipping or transport sub-contractors.

*'This could be particularly pertinent in the Scotch Whisky industry as large volumes of spirit are moved, sometimes long distances, from distilleries to maturation complexes and then on to packaging plants in Scotland. Option B is fraught with difficulties as companies often use third-party logistics providers to manage their exports (94% of all Scotch Whisky sales are outside of the UK; in 2012 exports of Scotch generated £4.3bn (£135 or 40 bottles per second)). Option C might lead to overlaps with other parts of the same business. For example a spirits company might have operations in multiple EU member states. Energy use associated with transport in other (non-EU) countries might be double-counted.'*²⁷

Those in support of option B gave comments that this would represent a good proportion of their business and/or they could report on it easily, and due to there being standards which already cover this area of transport, it could be easily adopted.

²⁷ Scotch Whisky Association

*'Standard BS EN 16247-1 measures energy use rather than cost (using cost makes accurate measurement over time less accurate as cost depends on energy prices, inflation, taxes, etc.). Currently in production and due for publication in Spring 2014 is EN 16247-4 on energy audits for transport. This standard was mandated by the European Commission as a result of the Energy Efficiency Directive. Any approach in relation to aviation or shipping in terms of audits should meet the requirements of this standard, or equivalent.'*²⁸

Those in support of option C commented this option was preferable as it didn't allow gaming by companies by using foreign fuel and it provided a more thorough approach to measuring energy efficiency. One respondent outlined that they report the fuel use from all sources; therefore it would be administratively possible.

Some gave caveats to agreeing to option C.

*'Heathrow Airport is supportive of aviation joining the ESOS scheme. However, the policy that the Government adopts with the aviation sector must be consistent with the approach used for other energy legislation such as EU ETS and CRC.'*²⁹

Those who proposed alternatives almost all agreed with one or more of the proposals, they detailed issues with overlaps with other schemes and proposed that transport should not be included in the scope of ESOS.

Those who gave a response with more than one answer favoured a mixture of B and C or A and B, so to widen the scope of ESOS and adapt it accord to the industry.

*'It was suggested by Energy Institute (EI) members that transport could be included in the de minimis, if its contribution to the overall energy consumption of the organisation was insignificant. However, in instances where transport was a significant energy user within a company, EI members feel either option A or B would be suitable, but do not support the adoption of both approaches. EI members suggest that option C should not be adopted in relation to international aviation and/or shipping.'*³⁰

Those who did not provide a response to the question often had an issue actually including transport in ESOS. There was an issue also raised by a few respondents regarding whether shipping should be included, due their being significant overlap with other legislation in the process of the being implemented by the European Commission.

*'It should be noted that aviation and shipping emissions are dealt with at a global level and it is anticipated that market based measures will be introduced to curb emissions. For example, the European Commission is currently consulting on the introduction of a monitoring, verification and reporting scheme for all ships leaving and arriving at an EU port. Therefore including international aviation and shipping in ESOS may become largely redundant in future.'*³¹

Implications for DECC

Respondents strongly supported option A with good reason; to keep the process simple and to not allow for overlap with other foreign operations, which could be covered by policies in other countries. Very few responses detailed that travel should be excluded, showing that there is general support for the inclusion of transport in ESOS. The problems identified regarding overlaps with the EU ETS were justified for the aviation sector; therefore this should be taken into consideration when implementing ESOS. As ESOS will overlap with CRC and the EU ETS for a lot of activities, comments about excluding foreign travel from the scope of ESOS (outside of the aviation sector), would de facto be interpreted that all activities covered by CRC and the EU ETS should not be included in ESOS; these comments are therefore not just relevant for transport. Those who supported C identified it

²⁸ BSI Group

²⁹ Heathrow Airport

³⁰ Energy Institute

³¹ Freight Transport Association

be possible to use foreign fuel as opposed to domestic fuels, if option A was adopted. .

The responses provided cross -sector support for option A with sound principles. However, if deciding to choose option A DECC should make provision for the use of foreign fuel as a mechanism of gaming, and should consider the approach it takes in regards to the aviation sector (due to overlap with the EU ETS). So to address these issues DECC may considering altering the approach of ESOS for transport and shipping providers; we suggest that fuel used (regardless of point of purchase) for particular journeys (e.g. those outgoing from Britain) may be considered in scope for ESOS.

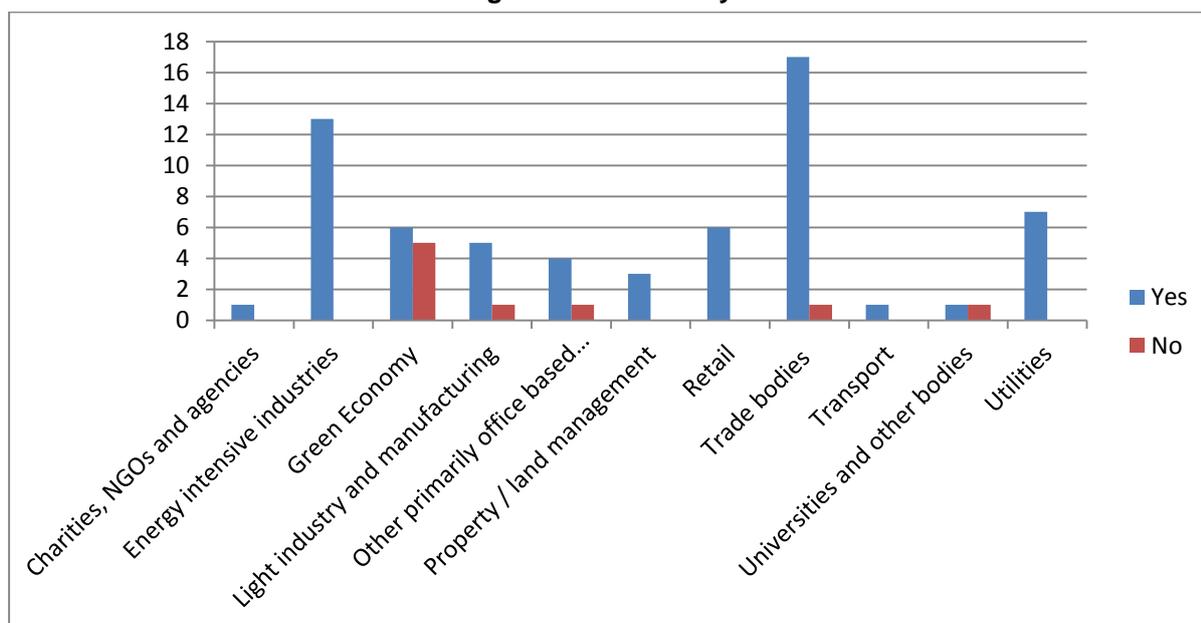
Q15. With respect to transport, should an organisation’s vehicle fleet be deemed to have undertaken the equivalent of an ESOS assessment if it has been subject to a Green Fleet review conducted within four years prior to the energy audit deadline, and are there other reviews similar to Green Fleet reviews that should also be considered?

Results summary

Total Respondents	Responses to Q15	Those who answered		Not answered
		Yes	No	
147	74	65	9	73

Figure 2 shows support was unanimous in favour of ‘yes’ from 7 out of the 11 sectors analysed. Out of the 4 that had some votes for ‘no’ only two sectors had a significant number of ‘no’ to ‘yes’ votes; the Green Economy sector (6 ‘yes’ and 5 ‘no’) and Universities and other bodies (1 ‘yes’ and 1 ‘no’).

Figure 7 Sector analysis



Comments from those in support of the proposal to exempt Green Fleets outlined it would reduce administrative burden by not having a reporting function for both and it would incentivise the use of Green Fleets further.

‘Operating a ‘Green Fleet’ is already strongly incentivised through vehicle excise duty and fuel duty mechanisms which penalise high carbon vehicles. The benefits of a green fleet should be further promoted’³²

Others outlined that other schemes, in addition to Green Fleets should be considered, such as membership to the FTA Logistics Carbon Reduction Scheme (LCRS). And although some agreed to the inclusion of green fleets some respondents outlined that organisations’ fleets should be exempted by application, not by default, so to allow for a case by case basis assessment.

³² Tata Steel UK Ltd

Comments from those opposed to the exemption of Green Fleets, detailed The Green Fleet's scope is insufficient to cover the ESOS requirements as it doesn't consider energy consumption of vehicles, it only covers vehicles in England, and it doesn't cover vehicles that weigh more than 3.5 tonnes.

Implications for DECC

Although there was a high level of support for the exclusion of Green Fleets and other fleet reviews from the scope of ESOS, it is clear from comments received that such fleet reviews may not be sufficiently comprehensive. Issues of Green Fleet reviews not covering vehicles above 3.5 tonnes and only including vehicles in England, raises concerns that exemption of Green fleets may result in a large part of an organisations' fleet in the UK not being subject to any energy efficiency audit. The actual mechanism used in a Green Fleet review is not criticised, only its' scope is commented upon. In order to ensure consistency of approach by ESOS over other exemptions discussed in the consultation (e.g. ISO 14001), the objectivity and scope of the Green Review should be compared with requirements of ESOS so to decide on whether an exemption should be permitted for this review of other review mechanisms highlighted in the comments.

Although concerns about scope are significant, the cross -sector support for these proposals has sound principles and should not be ignored. The exemption of vehicles subject to a Green Fleet Review from an ESOS audit could be achieved effectively by a company submitting a registry of all vehicles in its fleet alongside the green fleet review, and documenting which vehicles are covered. Any vehicles not covered by the Green Fleet review may be included in the ESOS audit, helping reduce administration.

Any other fleet review mechanisms such as the FTA LCRS, or those implemented in Northern Ireland, Scotland or Wales, may also gain certification for exemption from the ESOS audit, under the same premise provided above for the Green Fleet Review.

Q16. With respect to transport, do you agree with our proposed approach to employee travel on company business?

- a) That 'grey fleet' should be included within the scope of ESOS;
- b) That travel purchased via contractual arrangements (e.g. train tickets) should not be included as a minimum requirement for ESOS;
- c) That commuting should not be included within scope of ESOS; and,
- d) That good practice guidance should promote the advantages of going beyond the minimum requirements of ESOS.

Results summary

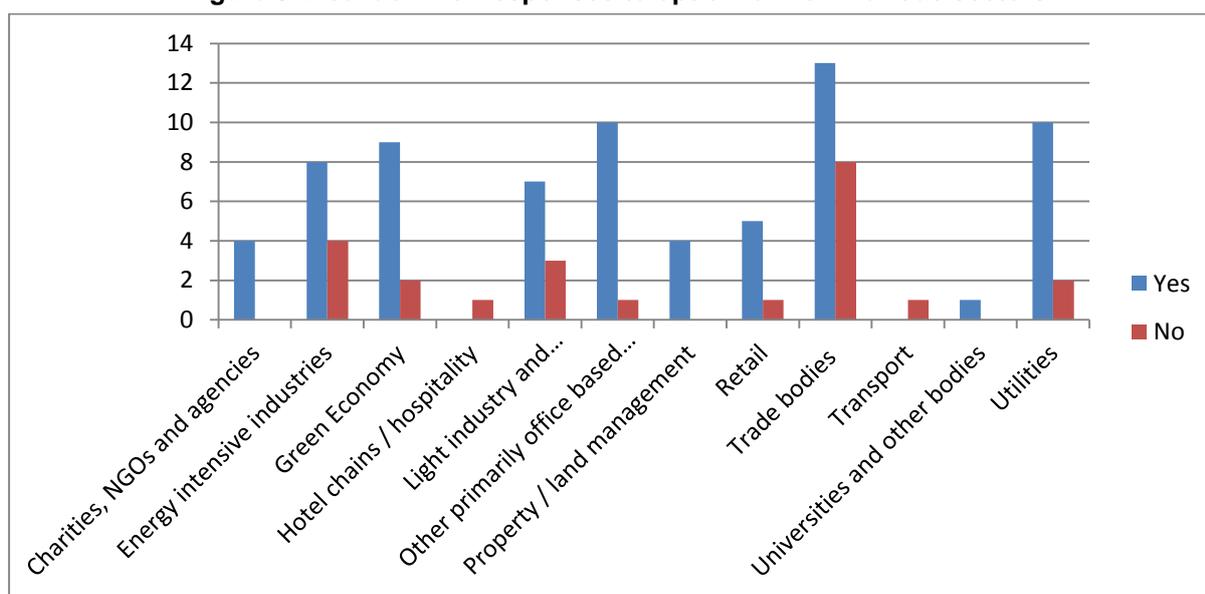
Total Respondents	Responses to Q16	Those who answered		Not answered
		Yes	No	
147	90	65	25	57

'Yes' and 'No' responses to Q16 often came with comments supporting or not supporting a, b, c, or d. From the 'yes' responses (72%) all broadly agreed with a, b, c & d, only 4 provided a negative response to either of the proposed approaches. From the 'no' responses, comments show that the response of 'no' was made to one or more of the proposals, with 7 providing comments which agreed with 3 of the proposals. Some supported a, b, c or d, when they provided no response, a summary of responses may be found below.

Table 10 Summary of responses (drawn from comments) in support of a, b, c and d

Option	Agree	Disagree	No answer (or no comments that were relevant)
a	72	22	42
b	83	9	42
c	87	3	42
d	87	4	40

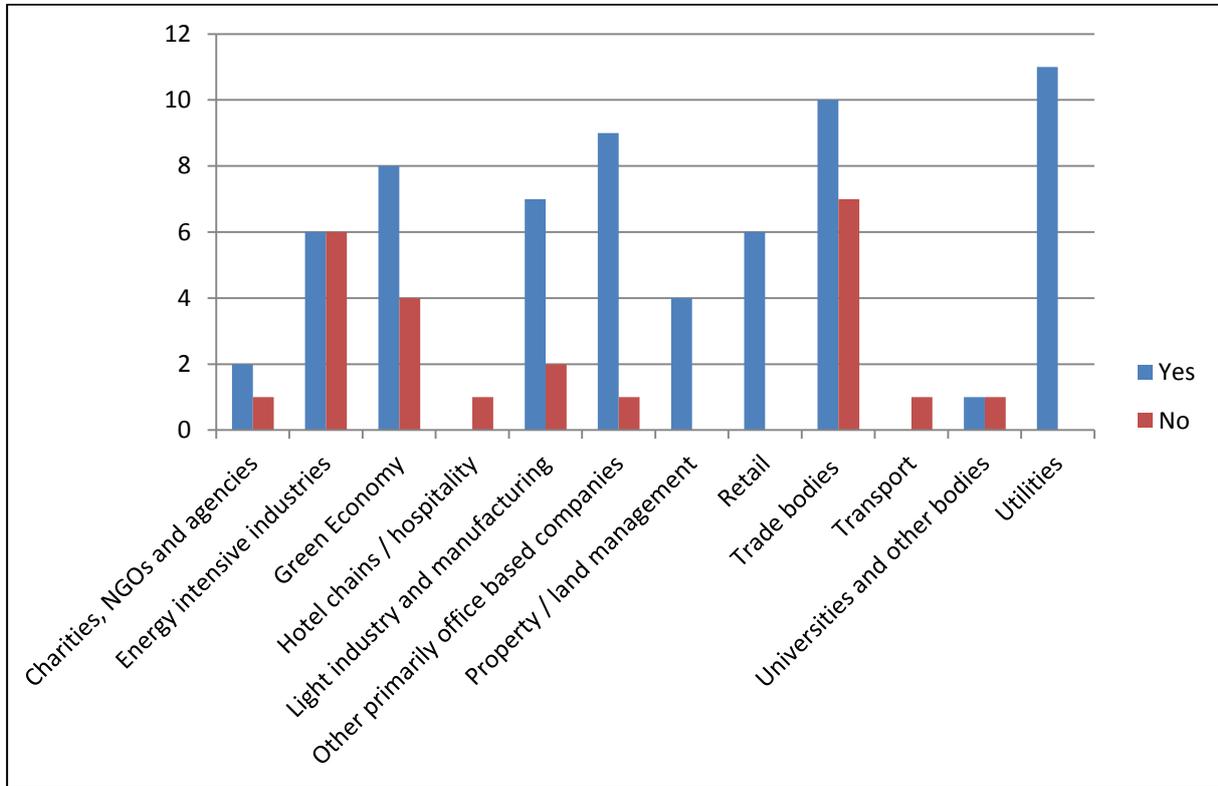
Figure 8 Breakdown of responses to option 'a' from various sectors



Figures 8 and 9 show the breakdown of 'yes' and 'no' responses to option 'a' as well as the overarching question, from various sectors. Although results show that across the sectors there is agreement with the proposals, within sectors there is significant dispute over the

proposals provided, particularly in; energy intensive industries, green economy and trade bodies. Many of the trade bodies which have an industrial focus (e.g. Wood Panel Industries Federation, Chemical Industries Association, UK Petroleum Industry) felt including the ‘Grey fleet’ would provide unnecessary administrative burden, whilst those trade bodies in the service and retail sector (e.g. Dairy UK, British Retail Consortium, IEMA) felt including the ‘Grey Fleet’ would bring extensive benefits.

Figure 9 Breakdown of responses to Q16 from various sectors



Across the comments received for those who responded ‘yes’, ‘no’, or provided no response, there was broad agreement that b, c and d were acceptable proposals. The main point of contention was over whether the ‘grey fleet’ (a) should be included in ESOS.

Those in support of including the ‘grey fleet’ detailed that the travel delivered by ‘grey fleets’ is extensive and it is not covered by any other policy, therefore it would add significant value to the exercise.

‘It is estimated that there are approximately four million “grey fleet” cars in the UK – more than three times the number of company cars. Therefore, it is crucial that opportunities to reduce emissions and cut costs are identified. It is also essential that an organisation embraces the “grey fleet” from a duty of care perspective and although ESOS is focused on the energy saving agenda, the benefit to safety of drivers would be an additional spin off benefit from including “grey fleet” in the ESOS audit.’³³

Although a number gave support to the inclusion of the ‘Grey Fleet’ in ESOS, conditions were provided so to reduce the administrative burden, such as: that it should only include measurements of miles actually used by the ‘Grey Fleet’; consideration should be taken over how difficult it is to measure the efficiency of the grey fleet; it should only be calculated by expenses claimed.

Those not in favour of including the ‘grey fleet’ made comments arguing that it would be too administratively burdensome for the amount of energy used in that area of the business.

³³ Energy Savings Trust

*'For energy intensive industry this would introduce a large administrative burden for little additional benefit. The suggested de minimis level of 5% would come into play in most cases in the ceramic sector'*³⁴

Those who did not directly respond to the question with a 'yes' or 'no' answer have comments that responded to whether they agreed with a, b, c or d. Outside of this, a few comments were made detailing travel purchased for a client should not be included within the scope of ESOS. Other relevant comments made include those regarding travel by other means as alternative for the grey fleet, and whether this mileage should be included, if not conducted for a client.

Implications for DECC

The consultation strongly supports b, c and d proposals. Some respondents identified that travel by contractual agreement (b) should be included, however little guidance had been provided about travel purchased by contractual agreement, which confused respondents, this should be included in information provided under ESOS. The consultation supports the inclusion of the Grey Fleet and good practice guidance, whilst supporting the exclusion of commuting and travel purchased via contractual agreements. The principles of including the 'Grey Fleet' is strongly supported by respondents whilst the administrative burden incurred by including the 'Grey Fleet' is of considerable concern.

It is proposed that DECC include the 'Grey Fleet' in ESOS audits but measures should be put in place to reduce the administrative burden of such a practice. The recommendations to only include vehicles which have travelled on the organisations behalf, and subsequently have had mileage claimed on expenses, would be a good premise for the audit. It may be that only vehicles which have travelled over a certain distance (e.g. 100 miles in a year) for the company should be included in the audit so to minimise audit administration. Guidance provided on how to conduct a desktop study of the 'Grey Fleet' would also be of benefit to company who receive an ESOS audit. By getting owners of vehicles included in the 'Grey Fleet' audit to submit the make, model, fuel type, fuel efficiency and carbon emissions of their vehicles to the organisation, fuel used may be calculated by mileage delivered for the company. Data is available for vehicles registered before March 2001, for fuel efficiency and carbon emissions, therefore some guidance on where to gain information for vehicles will also assist in reducing administration. This practice is likely to improve GHG reporting for other legislation and also identify areas where companies may make a choice about which of the 'Grey Fleet' to use for mileage.

³⁴ British Ceramic Confederation

4.5 Industrial process specific questions

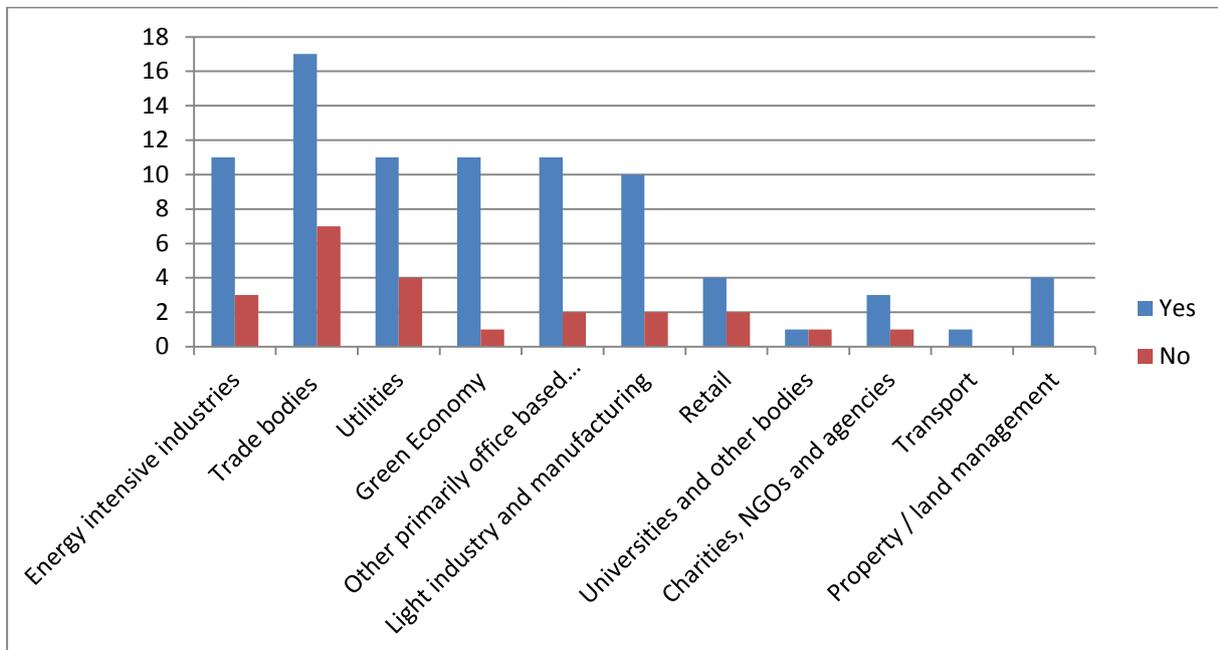
Q17. With respect to industrial processes, should ESOS assessments cover all energy use, including waste heat recycling and use of process waste as fuel?

Results summary

Total Respondents	Responses to Q17	Those who answered		Not answered
		Yes	No	
147	107	84	23	40

When analysed by individual sector the responses show consistent support for including all energy use (only in the retail sector for which there was just two responses was there an equal number of 'yes' and 'no' responses) (see Figure 10).

Figure 10 Breakdown of responses to Q17 from various sectors



The majority of those who responded 'yes' outlined that every source of energy should be included so as to cover all energy efficiency measures that may be deployed. One respondent stated that this would be necessary to comply with regulation (EC) 1099/2008 on energy statistics. A number of comments were received about including waste heat recycling, with arguments that it presents itself as a promising way for industry to improve efficiency and therefore that it is vital that it is considered in industrial assessments. It was also stated that waste heat recycling should be included as it follows the principles of the waste hierarchy.

'We agree that all energy use should be assessed including heat recycling and the use of waste as fuels. The assessment should look to optimise all consumption. Just because energy/heat comes from waste does not mean that efficiencies (energy, carbon and cost) cannot be made³⁵.'

Comments from those who said 'yes' also supported the inclusion of organisations that are covered by CRC. Comments made supported the overlap so as to; increase the importance

³⁵ National Grid

of energy efficiency (to bring this to the attention of the board), maintain the integrity of the ESOS scheme, and; minimise administrative burden through use of similar data.

Some respondents answered ‘yes’ but provided caveats to their support. For example, Tata Steel UK Ltd suggested that waste heat should not be included in the energy output from some sources such as chemical feedstock, as they are not associated with the energy inputs covered by the scope of the energy audit. Furthermore, a few respondents commented that it is important to not only look at energy consumption but the amount of total energy or fuel used to meet demand. A number of respondents also paid particular attention to the use of onsite combined heat and power; stating that it is more efficient than using national grid energy, and sales of energy to other parties should be taken into consideration. For instance:

‘CHP is less electrically efficient than centralised electricity generation, but, overall is more energy efficient as it is generating heat as well as electricity....To stimulate greater deployment of decentralised generation technologies, a proportion of the national value of this carbon benefit must accrue to the host site to offset the increase in costs.... A primary energy saving metric is a critical step in calculating the carbon reduction from energy saving and must therefore be the basis of ESOS audits³⁶.’

Another comment from an energy producer also outlined that although they support the proposal they felt there is no added benefit to finding energy efficiency measures due to cross over with the EU ETS and Environmental Permitting Regulations (EPR):

‘This will not provide any added value for the power sector which is already covered by the European Union Emissions Trading Scheme for carbon dioxide (EU ETS) and the Environmental Permitting Regulations (EPR). The EU ETS already provides a strong incentive to maximise power generation efficiency, through the carbon price.³⁷

Of those who answered ‘no’ to this question some cited the cost effectiveness and practicability of energy measurement. For example, it was detailed that reporting direct energy usage (e.g. electricity or gas used) would be measurable and would cover scope 1 and 2 emissions, whilst if other factors, such as waste heat or waste material for CHP needed to be measured this would be administratively burdensome. Others suggested that establishing a measure for waste heat recycling and energy from waste would be difficult and may lead to inaccuracies. For instance:

‘The learning from CRC is that this adds complexity and cost without any significant benefit. Restrict to just electricity and gas. For example in our organisation, electricity alone amounts to over 85% of our energy use (including gas, heating and transport fuels)³⁸.’

Comments also stated that measuring elements such as waste heat may lead to double accounting and would restrict the reward of implementing other energy production measures.

‘Waste heat will presumably already have been counted once³⁹.’

‘The use of waste and process heat is in effect an energy efficiency, as it avoids the use of virgin fuel/energy. Where it is viable it will probably be the most cost efficient way of delivering a saving compatible with wider Government policy aspirations. The suggestion could have unintended impacts, costs and be incompatible with other Government aspirations⁴⁰.’

Implications for DECC

The consultation responses overall support the inclusion of all energy used by an organisation, including waste heat recovery and process waste as fuel, with particular

³⁶ Energy Management Alliance

³⁷ EDF Energy

³⁸ Dwr Cymru Welsh Water

³⁹ Argyll Environmental Limited on behalf Landmark Information Group Ltd (LMIG)

⁴⁰ Thames Water Utilities Ltd

support for the use of onsite CHP. The principles for this support are that it allows for completeness and compliance with other standards set by the European Commission and energy audit standards. Those who did not support the proposals stated that the benefits would be negligible whilst providing considerable administrative burden and cost, and that the benefits to energy efficiency of implementing onsite generation of energy would not be adequately rewarded in the ESOS audit.

It is clear that when an ESOS audit takes place and the total energy use of the organisation is to be determined, the auditor must take care not to double count energy. Such double counting may occur if the fuel inputs and waste heat flows are aggregated. Waste heat flows will normally be the result of fuel combustion on the site and the energy content of the waste heat will be derived from the energy content of the combusted fuel. This can be avoided by accounting for energy consumption in primary energy terms (see below).

The method used to determine the energy consumption of the organisation should reflect the primary energy efficiencies associated with CHP. This would be achieved by reporting the organisation's energy consumption as primary energy consumption and not delivered energy consumption. This means, for the example of CHP, not reporting the quantity of CHP electricity consumed but the fuel used to generate the CHP electricity consumed. Accounting for energy in primary energy terms incentivises the efficient generation and transmission of delivery energy (electricity and heat). There are well established conventions for doing this.

Some organisations will both consume delivered energy (electricity and heat) and generate it. For example, an organisation might operate a CHP to meet its demand for heat but export a large part of the generated electricity. The organisation will have no control over the efficiency with which the exported electricity is consumed and arguably should not be held responsible for it. Therefore, consideration should be given to declaring the energy consumption of an organisation as the primary energy associated with the delivered energy (heat and electricity) consumed by it. This would avoid including in the organisation's energy consumption energy that is actually exported and consumed in another place, over which the organisation has no control. There are well established energy accounting methodologies to do this, which are used in CCAs.

Waste heat recovery is clearly regarded as an important way of improving organisations' energy efficiency. However, robustly scoping out the scale, costs and benefits of the opportunity (as required in an ESOS audit) can be difficult and demanding. For example, if the organisation is not able to provide good estimates of its own, determining the quantity of heat being wasted can involve having to access difficult to reach places and the use of specialist equipment. This could raise questions of health and safety and insurance on the part of the auditor. Fully scoping out the opportunity involves matching the quantity, conditions and profile of the waste heat to a waste heat receiving technology or technique (e.g. feed material pre-heating, combustion air pre-heating, electricity generation, absorption chillers, export to another point of demand). Doing this well requires knowledge of the technical limitations and costs of the available heat recovery options. Therefore, robustly identifying and scoping the opportunities for waste heat recovery may require on the part of the auditor:

- Good process knowledge
- Availability of and training in the operation of specialist monitoring equipment
- Potentially a lot of data gathering over potentially a long time, if the organisation does not have good estimates of the quantity, conditions and profile of waste heat
- Knowledge of the technical requirements of the technology that would take waste heat and its costs.

Q18. With respect to industrial processes, are there any specific issues that you wish to raise in relation to implementing the requirement to conduct ESOS assessments, including with regards to the overlap with existing schemes?

Results summary

Total Respondents	Responses to Q18	Those who answered		Not answered
		Stated issue	No issue	
147	97	68	29	50

All sectors provided comments to Q18 with exception of universities and trade bodies. For Energy Intensive industries, who this question is particularly relevant to, 10 answered with comments whilst only 2 did not provide comments (from those who responded). Nearly all those who commented stated that the cost of audits is increasing with each scheme introduced therefore aligning methodology of reporting would greatly reduce the burden on the business. Some suggested exempting organisations’ activities that are covered by the CRC or EU ETS, whilst others believed that with the changes to the EU ETS and CRC reporting mechanisms, it was unlikely that ESOS would be able to be introduced by the target date of 2015. The list of regulatory measures mentioned by varying organisations as having significant overlap with ESOS include;

- Climate Change Agreements (CCA),
- The EU Emissions Trading Scheme (EU ETS),
- Carbon Reduction Commitment (CRC),
- Carbon Price Support,
- GHG reporting requirements,
- Integrated Pollution Control licence
- activities governed by Ofgem for licensing electricity transmission (for power companies).

Others stated that mechanisms such as CRC had done a great deal in achieving energy efficiency, therefore new regulation would be of little added value. With regard the overall policy landscape, the British Ceramic Confederation suggested excluding energy that is covered by certain other systems, commenting:

‘[ESOS] will also create an extra bureaucratic layer on much of the UK energy intensive industry, which presently has to comply with Climate Change Agreements (CCA), The EU Emissions Trading Scheme (EU ETS) and the Carbon Reduction Commitment (CRC), all of which are currently undergoing various change.... To reduce the initial set up complexities the opening compliance could accept compliance with a range of present initiatives (CCA, EU ETS) in addition to the intention to link to the CRC.... We recommend that energy use covered by CCA and EU ETS should be excluded from the scheme in the long term.’

This view was echoed by the Motor industry, with the Society of Motor Manufacturers and Traders (SMMT) stating that

‘The automotive sector has delivered significant improvement in energy efficiency, and many companies in the sector have ISO140001, are considering moves to ISO50001, and are also covered by climate change agreements (CCAs), the EU emissions trading scheme (EU ETS) and the carbon reduction commitment energy efficiency scheme (CRC), which help drive action. SMMT strongly supports maximising the usage of these schemes to demonstrate equivalency/compliance with ESOS.’

Others noted the overlap and also expressed the view that ESOS should not be too detailed or prescriptive. For example, Tata Steel stated:

‘Organisations in CCAs are already committed to achieve, and demonstrate, actual energy reductions and through participation in EU ETS they have ample drivers to further improve. Compulsory review of the impact of audits, i.e monitoring the level of implementation of recommendations, will be onerous and is overly prescriptive – organisations shouldn’t have to justify actions to that level of detail. An audit will produce recommendations regarding energy savings measures. It should be up to the organisation to decide whether they are technically feasible and economically attractive for them’.

Other respondents highlighted how other systems potentially overlap with the scope of ESOS.

A further comment from the UK District Energy Association stated that ESOS assessments should include an assessment of the potential of district heating as an option, which it stated would be a cost-effective measure to save organisations energy and money.

Implications for DECC

Many respondents expressed concerns over the impact of introducing ESOS without due consideration for other schemes, particularly the CRC, EU ETS and GHG reporting requirements, especially regarding auditing costs and provision of data. Misalignment could cause organisations to be resistant to the ESOS scheme. The recommendation to align data reporting mechanisms is sensible, so to minimise administrative burden on organisation, however the practicalities of this needs reviewing. For instance, the mail overlapping systems are CCA, CRC and EU ETS, but these have differing energy scopes, reporting timescales and rules regarding allocation of energy responsibility. It is not therefore feasible to achieve perfect alignment with all of these. The following aspects should be considered further:

- Alignment of ESOS organisation definition with CRC, since the latter applies rules to define organisations (CCA and EU ETS are site based and mandatory company GHG reporting is not prescriptive on organisation groupings).
- Consider alignment of energy accounting rules with CRC, since this has explicit treatment of aspects such as unconsumed supply and landlord tenant. Clear and stated departures from these CRC rules may be necessary.
- The EED is prescriptive regarding ESOS deadlines and these do not align with reporting deadlines under EU ETS, CRC or CCA.

Some respondents suggested that with the changes to the EU ETS and CRC reporting mechanisms, it was unlikely that ESOS would be able to be introduced by the target date of 2015. It’s not clear what is meant by this. EU ETS Phase III changes have now been implemented and further significant changes (to Monitoring Reporting and Verification (MRV)) are not expected before 2020. CRC Phase 2 changes have been defined and do not appear to prevent the progression of ESOS. We suspect that these sentiments expressed simply reflect more general concerns over regulatory complexity and change.

4.6 Standards and alternative compliance

Q19. In addition to ISO50001 and ISO14001 (where it includes an energy audit), are there any other EU / international management systems which you think should also provide an ‘exemption’ (i.e. an alternative compliance route)?

Results summary

Number of Respondents	Written Responses	Not answered
147	90	57

61% (90) of the respondents to the consultation provided a written response to this question. Of those 90, 25 recommend other energy management systems, and of those 7 offered evidence on why their suggested systems should be adopted.

A breakdown of the schemes noted by the 25 respondents is given below:

- **Standards:** Carbon Trust Standard (29%), ISO standards (other than ISO50001 and ISO14001) (21%), EU Eco-Management and Audit Scheme (EMAS) (21%), Certified Emissions Measurement and Reduction Scheme (CEMARS) (17%),
- **Other:** Global Reporting Index (GRI) (8%)
- **Regulations:** EU ETS (8%), CRC (4%)

A common theme within the responses was that the chosen standard or standards should specifically require the monitoring of energy consumption and delivery of energy audits.

One of the respondents stated that *“EMAS is a well-established approach to environmental management based on ISO14001 and with a further public reporting / disclosure requirement, underpinned by independent verification and European regulation.”*⁴¹

Around 42% (38/90) of the respondents that answered this question also commented primarily on ISO50001 and ISO14001. 35 of them agreed that ISO50001 and ISO14001 standards are sufficient and that following these standards is key to ensuring that an audit is actually carried out.

However the majority of these 35 respondents noted concerns on using ISO14001 and ISO50001 for exemption. A common agreement was that ISO50001 should provide an exemption as it involves an in depth look at energy consumption and the setting of energy reduction targets and that ISO14001 should provide an exemption as long as it incorporates an effective energy audit.

Several respondents noted that it is important to have internationally accepted standards and that the ISO series is internationally accepted. For example the Energy Institute and Saint-Gobain both highlighted that there needs to be a focus on international certification bodies, which would enable the cross border use of energy expertise (e.g. between UK and the Republic of Ireland).

⁴¹ IEMA

For example one respondent stated, “Both ISO 50001 and 14001 should be acceptable where they include energy audits (plural, not singular as in the consultation question) for the relevant buildings and processes. This is not automatic in either case, as they are management standards, not audit standards.”⁴²

Several negative responses were received on using either ISO50001 or ISO14001, mainly due to the lack of emphasis on energy savings. For example, according to E-ON UK, “We are however concerned that ISO50001 and ISO14001 do not provide actionable information about how to make energy savings or “reduce your energy waste” and therefore would encourage organisation to undertake the ESOS audit as well. Any site with an Environmental Permit requiring energy efficiency audits to be conducted should be exempted.”⁴³

Around 27% (24 out of 90) of the respondents either stated that they are not aware of any EU/ International management systems that can provide an ‘exception’ or stated that they have that there are no other EU/ International management systems that should meet the exemption.

Implications for DECC

While around half of those that participated in the consultation responded to this question, only a small number of them responded with other suggestions for exemptions. However the majority of comments were in support of the use of ISO 14001 and ISO 50001 as suitable routes for exemption.

Our view is that whilst both provide energy and environmental operational system they can be followed as a process for compliance rather than to drive energy or environmental impact reduction. As the underlying aim of ESOS is to drive energy reduction we agree that there should be additional checks in place. These checks would look to ensure that the standards are being applied and delivering the criteria set out under ESOS.

Secondly there may well be need to ensure that the coverage of transport emissions and other process emissions are captured under any pre-existing standard operation. Therefore the scope would need to be confirmed with each organisation prior to exemption being offered.

Only a small number (7) of respondents suggested alternative options and provided evidence on why other options should be adopted. These included a range of schemes that could be split between other existing regulation and other possible certification schemes. The most popular scheme mentioned was the CTS followed by EMAS and CEMARS. With these three schemes being recognised under the CRC as metrics to measure an organisation’s pro-activity it may be that they could be considered as part exemption too. Similarly, both CEMARS and CTS have the benefit that they require on-going energy reduction to maintain certification, something that the ISO standards do not require.

Some respondents suggested that participation in an existing regulatory scheme should offer some exemption from ESOS, specifically EU ETS and CRC.

⁴² CIBSE

⁴³ E.ON UK

Q20. Do you agree with the proposed transitional arrangements to consider whether certain existing UK schemes can be deemed compliant with the Directive’s requirements for audits conducted in 2015? In particular:

- a) Do you think the Carbon Trust Standard meets the minimum audits criteria set in the Directive?
- b) And are there any other UK initiatives that you think should be deemed to be compliant for audits conducted in December 2015?

Results summary

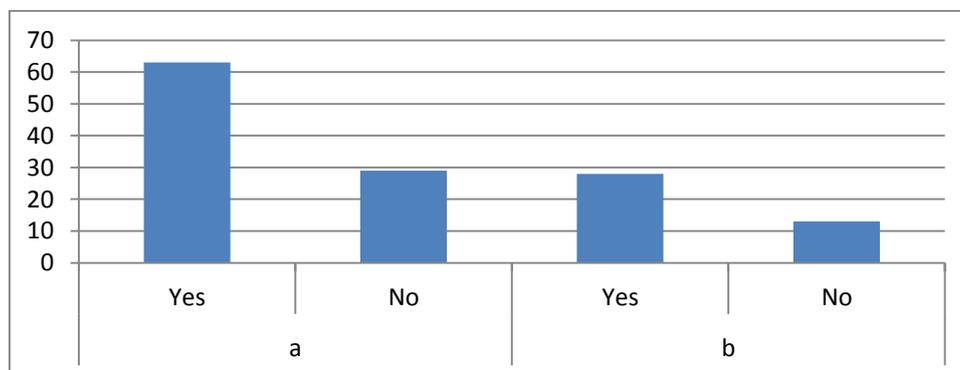
Total Respondents	Responses to Q20	Those who answered			Not answered
		Yes	No	Only comment	
147	114	81	31	2	33

The table below describes the statistics pulled out from the comments received by analysing the comments individually and separating them to parts (a) and (b).

Table 11 Detailed breakdown of responses to Question 20

a		b	
Yes	No	Yes	No
63	29	28	13

Figure 11 Summary graph of responses



114 responses were received for Question 20.

Overall 71% of the respondents agreed with the proposed transitional arrangement to consider whether certain existing UK schemes can be deemed compliant with the directive. Around 21% of these respondents stated that ‘Yes’ for part (a) and (b) both, while around 56% and 12% respondents stated ‘Yes’ for only (a) and (b) respectively. The remaining 10% did not provide reasoning on their response ‘Yes’.

More than 90 responses were received for part (a) while only around 40 responses were received for part (b) with suggestions on other UK initiatives that should be deemed to be compliant for audits conducted in December 2015. However there is an overlap of around 20% of the respondents who provided clear reasoning for both parts (a) and (b).

20a. Do you think the Carbon Trust Standard meets the minimum audits criteria set in the Directive?

Of the 92 who responded to part (a), the majority agreed to that CTS meets the minimum audit criteria. The most commonly stated benefit was that it would avoid duplication and

increase cost effectiveness. CTS was also identified by several respondents as a robust, well established scheme. One respondent stated:

“We believe that the Carbon Trust Standard is compliant with the Directives’ requirements and would represent the most cost effective manner for organisations that have achieved the standard as this would avoid duplication of effort. This could also help with a potential shortfall in availability of ESOS assessors to complete the audits within the specified timeframe.”⁴⁴

Some also noted that there is a need for additional modifications to fit to ESOS criteria. For example the National Energy Foundation suggested that there should to be an additional element for assessors to provide additional advice on improvement recommendations:

“Yes, with reservations. The National Energy Foundation was involved with the Carbon Trust Standard (CTS) from its inception until earlier this year, and remains on its Advisory Board. The Standard imposes a high standard of energy audit in a carbon context, and requires auditors to profile energy use, in the sense that we use the term in Q10 above. It also expects CTS assessors to agree with management a suitable carbon intensity metric, with a bias towards financial ones (i.e. CO2 per £ of turnover). Our reservation is that there is no formal requirement to provide additional advice on improvement recommendations, and that this would need to be added as a CTS-plus element.”⁴⁵

However not all respondents were positive, with two of respondents suggesting that CTS may exceed the requirement due to the requirement for on-going year on year improvement. Around 5 respondents stated they wouldn’t agree because CTS is not an internationally recognised standard. Other negative comments included: that CTS does not demand an effective energy audit, it is a commercial product, the audit does not provide sufficient recommendations and it is not being externally checked. For example one respondent, stated,

“Carbon Trust Standard does not require audits and hence would be a loophole. It is not truly a standard in the sense that BSI would produce a standard. The Carbon Trust is also an commercial business that offers a commercial product (CTS). While this product does have some value, it should not be specified as a compliance route as this would further bias the market towards a commercial entity that has already founded much of its intellectual property with public money.”⁴⁶

20b. And are there any other UK initiatives that you think should be deemed to be compliant for audits conducted in December 2015?

41 responses were received for part (b) suggesting a number of alternative UK initiatives including (numbers shown where more than one):

- CEMARs, Continuous Emissions Monitoring (CEM) (10 respondents), ISO standards (5 respondents),
- EU ETS, CRC(3), CCA’s (3)
- Airport Carbon Accreditation scheme, EMAS,
- The Energy Performance of Buildings Directive, the Green Deal and the Energy Company Obligation (including the Carbon Saving Obligation), Office of Rail Regulation (ORR) and BREEAM.
- 3 respondents stated that BS EN 16247 should be considered to assess if the activities of the scheme meets with the Directive’s requirements.

Those who said ‘No’ to part B did not provide any justification.

⁴⁴ BRC
⁴⁵ National Energy Foundation
⁴⁶ Utility Partnership, Ltd

Some of these initiatives were also suggested in Question 18 and 19. For example, regulations such as CRC and EU ETS were recommended in both questions 18 and 19. The CCA scheme was recommended in question 18 and regulations such as CEMARs, ISO standards and EMAS were suggested in question 19.

It should be noted that respondents to question 18 highlighted overlap with other systems and some suggested that these could be considered equivalent. EU ETS, CRC and CCA were mentioned in particular, but other systems with overlap highlighted under question 18 were:

- Carbon Price Support,
- GHG reporting requirements,
- Integrated Pollution Control licence
- Activities governed by Ofgem for licensing electricity transmission (for power companies).

Under question 19, alternative standards that could be used as the basis for ESOS exemption were highlighted. There were:

- Carbon Trust Standard
- ISO standards (other than ISO50001 and ISO14001)
- EU Eco-Management and Audit Scheme (EMAS)
- Certified Emissions Measurement and Reduction Scheme (CEMARS).

Implications for DECC

Majority of the respondents clearly noted their reasoning for part (a) of the question. However in part (b), none of the respondents provided reasoning as to why they suggested the various UK initiatives. However the list provides DECC with the opportunity to look further into what the most appropriate schemes are to hold compliant for audits.

a) The response to the suggestion of using CTS as a transitional was received positively however there were a number of comments surrounding the alignment of CTS to ESOS requirements. Conflicting responses were received firstly that the scheme goes above and beyond the requirements in demanding on-going energy reduction and secondly that the levels of auditing required under the scheme are not sufficient for the scheme.

b) A number of other initiatives were mentioned as alternatives to CTS. This included a range of other voluntary standards which have been designed in a similar way to CTS, Most specifically the CEMARS system which is also accepted, alongside with CTS under the CRC as an early action metric. CEMARS has over 125 organisations certified to its scheme, By allowing this scheme and others that have been accepted as a CRC early action metric as an alternative option for these transitional arrangements DECC would be encouraging market equality and increasing the number of organisations that would be eligible for initial compliance. Other suggestions included considering participation in existing regulation as a possible route to compliance, namely CRC, CCAs and ETS. Each of these schemes and the overlaps with the directive has to be taken into account. Secondly With all of these schemes CTS and other the question of coverage would need to be addressed as in many instances schemes such as CTS does not cover the whole organisation as CRC, ETS and CCA's may well not. Likewise it is likely that transport would not be addressed by any of these existing standards or regulation so some consideration would need to be given to how this additional scope could be covered – potentially linked to the Green Fleet Review.

4.7 Who will conduct the audits, standards and accreditation

Q21. Is there sufficient capacity within the energy efficiency advice sector to meet the demand that will be generated by ESOS, and particularly to ensure all organisations are able to conduct assessments by December 2015?

Results summary

Total Respondents	Responses to Q21	Those who answered			Not answered
		Yes	No	Only comment	
147	90	37	28	25	57

Of the 90 responses received for this question 41% (37) thought there is sufficient sector capacity and 31% (28) thought there is not. In addition a further 25 responses were received where no specific yes/no response was given.

Of the respondents that felt that there is already sufficient auditing capacity to meet ESOS requirements m commented that there are already large numbers of assessors already trained to standards developed by CIBSE and/or other Bodies, and felt that this should be sufficient to meet the demands of ESOS without the introduction of further qualification requirements. A number of respondents suggested that the Register of Professional Energy Consultants (RPEC) could be used initially as a basis for identifying ESOS assessors. Others felt that the use of in-house assessors will be essential in ensuring that capacity is sufficient to meet demand.

One respondent⁴⁷ stated “companies need to be given support to develop in house expertise whilst acknowledging the support that external specialist advice (e.g. compressed air) can provide as energy management systems mature.”

A small number of responses also highlighted the demand cycle for delivery of the scheme.

One respondent⁴⁸ said “There probably will be sufficient capacity in the sector, but there is a risk of significant peaks and troughs in demand with the scheme’s phasing. The earlier the scheme can get established the better in order to give the sector time to respond (see also Q4 response). Nevertheless, the main issue will be matching the appropriate level and type of experience to the site/s in question to ensure that the advice is fit for purpose.” Another⁴⁹ commented “We think that there is adequate capacity, given that many organisations will be deemed to have met some or all of the audit requirements through alternative mechanisms. We are however very concerned that the way this is being introduced means that there will be a short term peak of demand during 2015, followed by a three year fallow period.”

Within the group of respondents stating that they felt there would be sufficient capacity to fulfil ESOS demands, there were a number of responses that were caveated by the need to up-skill existing assessors – although many respondents stated that this should be straightforward. However, several respondents highlighted concerns on this issue, commenting that it will be essential that any processes or standards introduced are not overly onerous.

One respondent⁵⁰ said “Gemserv agrees that there is sufficient capacity within the energy efficiency advice sector to meet the demand for audits. However, our concern would not be

⁴⁷ Saint-Gobain

⁴⁸ Confidential response

⁴⁹ NEF

⁵⁰ Gemserv

around whether there were enough assessors to conduct the audits, but whether adequate time will be available for these assessors to be sufficiently up-skilled in the additional requirements of the new PAS specification and the ESOS scheme to fulfil their new roles to the required standard. A sufficient number of training sessions will need to be made available to accommodate all assessors.

Our experience from our roles in the Green Deal and the Micro-generation Certification Scheme (MCS) has shown that training the supply chain is a key element of setting up a new scheme and ensuring that the scheme runs smoothly from the outset. It is critical that the supply chain is fully trained as swiftly as possible to ensure that all organisations are able to complete their assessments well in advance of the 5th December 2015 deadline. We would therefore recommend that the new PAS specification be developed as quickly as possible, whilst still ensuring the requirements are robust and appropriate, to enable the supply chain enough time to sufficiently upskill and deliver high quality assessments.”

Overall, respondents were in agreement that the Government must provide clarity on the standards that assessors are required to meet as soon as possible in order to ensure the availability of suitably skilled and experienced assessors and a successful outcome for ESOS.

31% (28 out of 90) respondents felt either that there is currently insufficient capacity within the sector to meet the requirements of ESOS, or that the resultant increased demand for energy audits will lead to insufficient capacity in future.

A number of respondents raised issues with the high level of demand that will be seen as the deadline for each cycle of audits approaches. There is concern that this will create a bottleneck, leading to low availability of resource, high costs, and decreased quality of audits. In a number of responses it is suggested that this may be resolved through the design of the scheme to improve the spread of the workload (for example, the use of a phased deadline, or recognition of alternative compliance methods such as Carbon Trust Standard or ISO 50001). There are a number of examples where these concerns have arisen as a result of the past experience of the respondents. For example:

“I’m mindful of the mad rush to EU ETS Phase III baseline verification where there were not enough assessors”⁵¹.

This respondent also raised further potential issues with the planned phasing of the scheme, which were common to a number of responses that thought the capacity is sufficient:

“[Also], there will be a spike of energy assessment needs every four years as the short time before the first deadline (31 Dec 2015) means that most companies will be requiring assessments in the second half of 2015, second half of 2019 etc. In generating a large number of trained assessors, what will these assessors do in the interim periods of low demand? Having a regulatory system that allows companies to use an international standard to prove compliance reduces the number of trained energy assessors required as the international standard certifier is auditing the company’s management system and not its equipment”.

This is aligned to a range of other responses received, which provided comment on the same issue, highlighting concerns that the rise and fall in demand created by the four year cycle will mean that it will not be cost effective for businesses to fund their own internal staff to become accredited to meet the requirements of ESOS. Many of these respondents were of the view that it will be impractical for a new standard or accreditation to be introduced, particularly given the short timescales before the 2015 deadline, and that existing energy efficiency assessor qualifications and experience should be recognised in addition to any new standard developed.

⁵¹ Heineken

Many responses highlighted the short nature of the timescales leading up to the 2015 deadline, and commented that accreditation development and training processes will need to be fast tracked in order to allow businesses to meet these timescales. The current lack of guidance on the standards that will need to be met by assessors was flagged as a barrier to ensuring suitable available capacity for the scheme. A number of responses called upon Government to provide financial support for assessor training, and to thoroughly review the requirements of ESOS to ensure that they do not conflict with those of other schemes such as EU ETS. In addition, some respondents commented that any new qualification or standard set up for the purposes of ESOS must be aligned with existing industry training requirements to ensure consistency.

A significant number of responses received noted the difficulty in developing a 'one size fits all' approach to assessor training. Concerns were raised that many of the more generalist energy assessors already practising may not have sufficient levels of specialist sector/process knowledge to make effective audit recommendations. Respondents were keen to see a scheme which provided a useful and high quality outcome. In these instances, a number of comments were received which suggested that the transferability of existing auditor skills may be insufficient to achieve a successful outcome.

Implications for DECC

The number of trained energy efficiency assessors already within the market, together with in-house staff in energy efficiency roles, means that the current ability of businesses to undertake energy audits is seen as good. However, the demand placed on the market by ESOS, and the 'spike' in activity that tends to be seen just prior to a deadline for such schemes, could potentially lead to a shortage in capacity, limiting the potential of businesses to meet the requirements of ESOS. DECC should consider options to manage this issue in order to mitigate the risk of audits becoming expensive and/or low quality. One such way to do this may be to encourage phasing of when the assessments are carried out, thereby spreading the demand for assessors over a longer time period. This will have two advantages in that it will facilitate businesses to undertake high quality audits and will improve the balance of the workload for assessors, thereby incentivising work in this area. Phasing could be applied through staggered deadlines (perhaps by sector or enterprises size) or by permitting enterprises to carry out assessments on parts of their portfolio in advance of the deadline.

It is clear that assessors will need to be able to demonstrate that they are suitably qualified to undertake ESOS audits. At the present time, the lack of availability of information on the requirements of ESOS and its assessors presents a barrier to new assessors being trained to undertake audits. This will limit capacity in the short term and DECC should act quickly to define requirements in order to ensure that an appropriate number of assessors are able to be appropriately qualified in time to undertake the first round of audits. In doing this, the specific skill sets that may be required for different sectors must be considered and taken into account. It may be the case that some sectors require a greater level of up-skilling than others, and this could be aligned with the potential phasing of deadlines. Dependent on the level of qualifications that are ultimately defined, DECC may wish to subsidise training programmes through Professional Bodies in order to facilitate uptake of training by potential assessors within a timescale that is appropriate to match the demands of ESOS.

In finalising the design of ESOS, DECC should review the other schemes to which participating businesses are likely to be exposed in order to ensure that requirements align rather than conflict with the demands on the assessor pool that may be made elsewhere.

Q22. Are there existing industry specific qualifications / standards which we should take account of in developing an ESOS assessors PAS specification?

Results summary

Total Respondents	Responses to Q22	Those who answered			Not answered
		Yes	No	Only comment	
147	91	63	15	13	56

81% (63) of those that responded to this question did so positively. More than 60 of the 63 respondents who said 'Yes' and suggested specific qualifications/ standards. Almost all respondents suggested several qualifications/ standards and did not limit to one most preferred minimum. These standards varied but included:

- Energy Institute's Chartered Energy Manager Status (25% of the respondents)
- CIBSE's registers of Low Carbon Consultants and Low Carbon Energy Assessors (22% of the respondents)
- Chartered Institution of Building Services Engineers (19% of the respondents)
- Standard BS EN 16247 (14% of the respondents)
- Membership with Register of Professional Energy Consultants (RPEC) (11% of the respondents)
- Green Deal Qualification (8% of the respondents)
- ISO standards (E.g. ISO 50001, ISO 50002, ISO 50003 and ISO 40001) (6% of the respondents)
- Chartered Environmentalist status (5% of the respondents)
- IEMA's environmental auditor scheme (3% of the respondents)
- National Occupational Specifications for Energy Assessors (3% of the respondents)

In addition to the above a very small number of respondents also suggested other qualifications including international qualifications such as Certified Energy Manager (USA) and TUV energy engineer (Germany). Other qualifications mentioned included Energy Assessor NOS/QCF, Non-domestic GDA NOS/QCF, ECO software specific assessor qualifications and training, C&G 6066 Qualification of Energy Auditors, DEC assessors, EPC assessors, Carbon Trust assessor scheme, UKAS accredited personnel certification schemes for energy assessors and BREEAM.

Several respondents also noted that in addition to professional expertise it is also important to consider 'experience' when verifying the quality of an ESOS assessor. For example, the Energy institute stated that the Chartered Energy Manager qualification is a way of measuring the depth and breadth of an individual's experiences and benchmarking their expertise and competencies. Carbon Saver stated that no single existing scheme is likely to meet the requirements of the PAS, particularly with regards the requirements for identifying an energy ratio relevant to the business or for life cycle cost analysis of potential solutions.

Only 15 respondents provided further explanation as to why they suggested the above schemes. One of the reasons provided was, *"Conducting energy audits for large enterprises is complex and requires advanced energy auditing skills and specialists for particular industry sectors. Accredited ESOS auditors should be required to have an appropriate engineering degree, a minimum quantity of auditing experience with proof that audits have been delivered to BS EN 16247 or equivalent standard, client references and be registered with an approved industry body such as the Register of Professional Energy Consultants."*⁵² CHPA further

⁵² CHPA

noted that industry body registers, approved to accredit ESOS auditors, need to establish an ESOS sub-register that clearly identifies the particular sector specialism of each auditor as well as the minimum standard for entry.

Very few (less than 5) respondents stated their reasons for responding with a 'No'. One respondent (Emerson) stated that due to the complex nature of energy efficiency assessments in large scale process industries an in-depth process engineering and sector-specific business/operations experience is more relevant than energy qualifications. They further stated that the "pool" of in-house experts is currently the most significant single resource pool.

Implications for DECC

While most of the respondents recommended qualifications/ standards, only a very small number provided reasoning behind their suggestions.

Most responses seem to be based on the view that the experts who will build up capacity under PAS are already likely to have some level of competency under existing schemes. Most of the responses also indicate that they agree with the benchmarking suggested by DECC in the consultation document. Particular agreement was with CEM, RPEC and CIBSE's registers of Low Carbon Consultants and Low Carbon Energy Assessors.

We would highlight the underlying comment about sector knowledge and experience. In many instances/sectors organisations have quite sophisticated knowledge of measures and efficiency themselves, more so than external auditors/consultants. Therefore this knowledge should be used and applied correctly. The process of carrying out the audit and the key steps that should be taken within the audit should be consistent, but the skills required to do so in some instances may well be different from that of the technical measures.

Q23. Do you agree with the Government’s proposals on lead ESOS assessors:

- a) That a ‘lead assessor’ should sign off each ESOS assessment, drawing on the input and assessments of more technical specialists as appropriate, as part of checking that all significant energy use across the organisation has been considered?
- b) That minimum qualifications should apply to lead assessors only, rather than to all those participating in an assessment?

Results summary

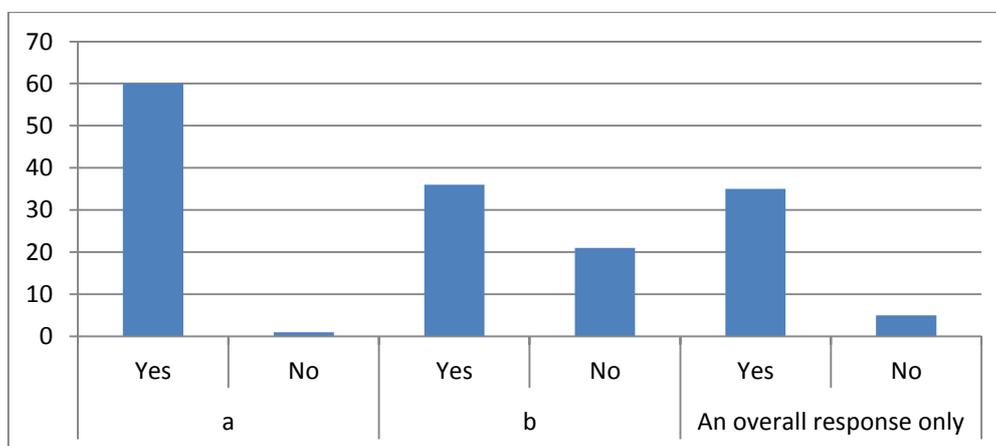
Total Respondents	Responses to Q23	Those who answered			Not answered
		Yes	No	Only comment	
147	115	92	22	1	32

Question 23 was divided into two main parts (a and b), with the respondents providing an overall Yes or No (presented in the table above)⁵³. The table below provides a breakdown of the number of responses received for each main part. It shows the number of respondents who provided ‘Yes’ or ‘No’ to both parts a and b separately.

Table 12 Detailed breakdown of responses to Question 23

a		b		An overall response only	
Yes	No	Yes	No	Yes	No
60	1	36	21	35	5

Figure 12 Summary graph of responses



23a Should a lead assessor sign off each ESOS assessment, drawing on the input and assessments of more technical specialists as appropriate, as part of checking that all significant energy use across the organisation has been considered?

60 respondents specifically stated that they agree with a lead assessor having the sign off responsibility. The majority of them also stated that it is essential to ensure that the lead assessors have the required qualifications and experience.

One of the respondents agreed this to be a pragmatic approach and further stated,

⁵³ Please note that the overall ‘No’ sometimes meant the respondent not agreeing to either a or b and the overall ‘Yes’ sometimes meant the respondent agreeing to both a and b, however this was not consistent among all respondents.

*"The lead assessor responsible for the audit of a large company may not be involved in every site visit but would be responsible for: directing the audit process, collation and checking of data, engaging expert technical opinion, drawing conclusions and making recommendations and signing off the audit report."*⁵⁴

One respondent (JRP Solutions) stated that having a lead assessor to sign off the assessment is a common practice in energy consultancies and that it would ensure the standard of all assessments (both internal and external).

Some respondents agreed that the lead assessor could offer external expertise, whilst several other respondents highlighted that it is important to identify internal expertise that will be more cost effective and have the necessary knowledge on company processes.

Only one respondent specifically noted it should not just be the lead assessor that should have suitable qualifications and the necessary expertise to deliver the audit. *"We do not agree with the Government's proposals regarding the minimum qualification to apply to the lead assessor only. We believe that the lead assessor and any technical leads should all meet the minimum ESOS assessor qualification requirements, given the potential complexity of technical issues. We believe that it is unlikely that every lead assessor would have sufficient technical expertise for all 3 aspects of energy use covered by ESOS."*⁵⁵

Of the 5 respondents who provided an overall 'No', the majority stated concern over whether the lead assessor would be able to have all the required qualifications. One respondent stated, *"There is a need for experienced and competent lead assessors who will in turn have responsibility of ensuring effective audit team and approach. High professional standards are central to this."*⁵⁶

23b The minimum qualifications should apply to lead assessors only, rather than to all those participating in an assessment

There was broad acceptance (with 36 respondents specifically agreeing) that it is sufficient for only the lead assessor to meet the minimum standards. Comments indicated that the lead assessor should meet the requirement of having the knowledge and the capability to guide and supervise the less qualified team of assessors. Most respondents also noted that this is a more cost effective approach.

However, a number of respondents also highlighted that in addition to having a minimum qualification only for lead assessors it is also important to assess the skills of all assessors and have specific training on energy auditing for these assessors for quality assurance and consistency. For example one respondent stated, *"I feel that a lead assessor would ensure the standards of both internal and external assessments. I would suggest these qualifications are sufficient for the lead role as there is unlikely to be justification for an army of such highly qualified assessors. However, specific training in energy auditing is strongly recommended for anyone engaged in this activity, both within energy user organisations and within consultancies."*⁵⁷

Twenty one respondents disagreed with the proposal that only lead assessors should have a minimum qualification. They stated that it is necessary for all assessors to have a minimum qualification to avoid complications and errors and to ensure that standards are maintained.

For example, one respondent stated,

*"WWF agrees that minimum requirements should be placed on lead assessors. However, audit team members should have minimum levels of competence to ensure any data collected is accurate."*⁵⁸

⁵⁴ Tata Steel

⁵⁵ NPower

⁵⁶ Balfour Beatty Group

⁵⁷ Energy International

⁵⁸ WWF

A similar statement was received from another respondent, in the Utility Sector, “*EDF Energy agrees that the lead assessor should sign off the assessment. However, all assessors should have the minimum qualifications to ensure consistency in quality of the assessments. The lead assessor would rely on other assessors to provide the data and so it is essential that there is a consistent quality standard across all activity.*”⁵⁹

Implications for DECC

There is support by the majority of respondents for the suggested approach in which a ‘lead assessor’ signs off each ESOS assessment drawing on the input and assessments of more technical specialists as appropriate. It was less clear with the second part of the question on accreditation for the rest of team where the responses were more balanced (60/40% in favour of minimum requirements applying to lead assessors only). Many responses reflected on the level of skills that each team member should and would be required to have.

We agree that the appointment of a lead assessor would offer a suitable solution to the auditing of large multi-site enterprises. Their role would be to oversee a team of auditors and to provide support in the delivery of the audit process. Similarly they must have some technical capability to be able to appreciate the results that are generated during the audit.

There were also a number of comments on the capability of the supporting staff – many organisations commenting that their internal teams would have better capability than an external auditor or that their business required specialist knowledge from an auditor with specific sector skills. This led to a lessening in the positive responses for the second part of the question. We agree that team members in these audits should be suitably qualified and experienced to provide value to the audits and indeed the overall programme. To ensure that this level of quality and value is added it may be that some level of accreditation is required.

⁵⁹ EDF

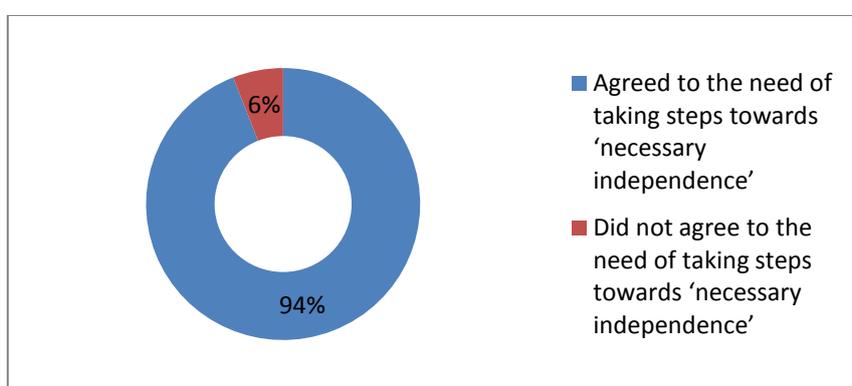
Q24. What particular steps will need to be taken by organisations to ensure that in-house experts had the ‘necessary independence’ to audit business activity?

Results summary

Total Respondents	Written Responses	Not answered
147	101	46

The responses can be broken down into two main categories; those who agreed to the need to take steps towards ‘necessary independence’ and those who didn’t.

Figure 13 Breakdown of responses to Question 24



94% of the respondents agreed to the need of taking steps to ensure that in-house experts have the ‘necessary independence’ and to be in line with what is aimed by ESOS.

One respondent highlighted its views on the value of in-house assessors, stating, *“It is necessary for an assessor to have a clear understanding of how the organisation functions, which may include a range of processes, buildings and transport systems. Therefore it is seems advantageous amongst EI members to employ an in-house expert who already possesses a working knowledge of the company and its components, rather than requiring time for an external assessor to become familiar with the organisation. This may save time and money and fundamentally produce a higher standard of assessment as the assessor can illustrate a stronger understanding of the organisation.”*⁶⁰

Around 7% of the respondents highlighted that there would be difficulties to enforcing independence, mainly due to in-house assessors being close to activities of the organisation. One respondent stated, *“Gemserv believes that it will be very difficult to have truly independent in-house experts. The fact that the expert undertaking the assessment is employed by the organisation being assessed means that they can never be truly independent.”*⁶¹

The respondents also provided suggestions on what measures are needed to ensure there is a degree of independence. Some of the recommended measures include: clearly outlining the role and responsibility of the assessor as a part of the assessment, assessors not having direct responsibility with the budget associated with the business activity being assessed, ensuring that the assessor is not directly engaged with activities on the site being audited; providing clear guidance on how the above points could be applied in practice.

⁶⁰ Energy Institute
⁶¹ Gemserv Limited

For example one respondent stated, *“There are a number of safeguards in place to ensure independence when using an in house expert, for example – Avoid any conflict of interest, Dedicated role away from commercial interest and pressure, The results of any assessment are not related to a reward such as a bonus”*⁶²

Several respondents also suggested that there should be a QA inspection by the lead assessor or that the audits could be externally assessed or verified (for e.g. external lead assessor). UKAS noted that the requirements should be clearly stated in the scheme requirements and a robust approval process of auditors needs to be carried out.

Another respondent stated, *“It is absolutely vital that the energy manager [has] a role to play in the auditing process. This person should be responsible for delivering the conclusions of the audit. However, in the majority of cases they are likely to be too close to the activities to be independent. The concept of an external lead assessor reviewing and signing off the assessments would be a suitable solution and should be considered as part of the guidance.”*⁶³

Around 20% of the respondents stated it is important to ensure the in-house experts comply with the minimum accreditations and qualifications required by ESOS. For example the Energy Institute noted that high level qualifications in energy auditing (such as chartered professionals) not only ensure standards but also can be considered a ‘byword’ for independence of the assessor. Less than 5 respondents noted that impartiality and independence can be verified through relevant ISO standards.

6% (6 respondents) of the respondents stated that it is not necessary to take measures to ensure that the in-house experts have the necessary independence. One highlighted reason was that the in-house experts are already committed to helping deliver against challenging targets in reducing energy consumption and costs and are hence well placed undertake audits in their business areas. One respondent also stated, *“We believe that this question is wrong. The focus of ESOS is not to carry out an independent audit, but to identify energy saving opportunities. It is therefore completely irrelevant on whether or not the auditor is independent. You would want them to be directly involved in the operations to get maximum value of the assessment.”*⁶⁴

Implications for DECC

The question is aimed at identifying how the ‘necessary independence’ of the in-house experts can be achieved. Options should look not only at the skills of the individual but the role, position and responsibilities that they hold to establish a desired level of independence. A further option would be to require an external review similar to that of a lead assessor to check and ensure that both process and technical audits have been carried out against the requirements of ESOS. The time taken to review an internal audit would be smaller compared with that of getting an external auditor to complete the task. A further possibility would be for the independence check to form part of a Director sign-off and/or compliance check carried out by the scheme administrator.

⁶² Certsure LLP inc.

⁶³ Carbon Saver

⁶⁴ Balfour Beatty Group

Q25. Which approach to accreditation would you prefer to be put in place and why?

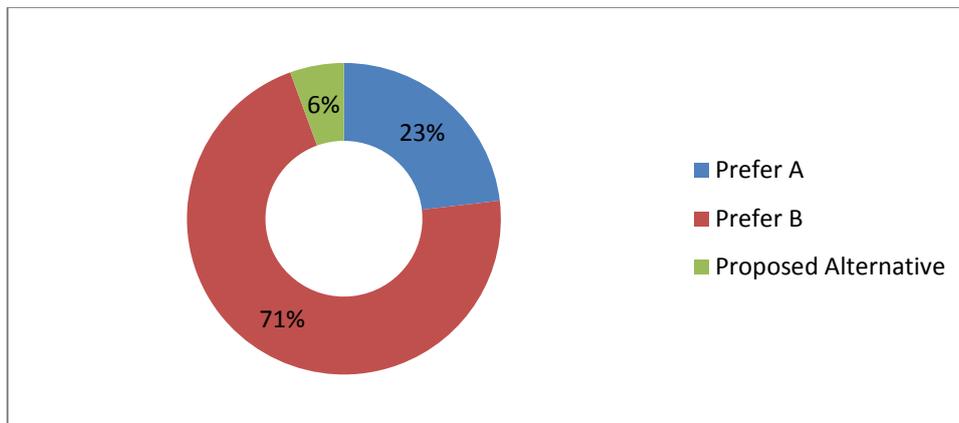
- a) UKAS accredit certifying bodies to certify ESOS assessors
- b) The scheme administrator approves lists of ESOS assessors which are managed by professional bodies

Results summary

Total Respondents	Responses to Q25	Those who answered:				Not answered
		Prefer A	Prefer B	Proposed Alternative	Comment only	
147	113	25	77	6	5	34

77 (68%) of the 113 respondents to this question preferred Approach B (Scheme Administrator approved Professional Registers) with only 25 (22%) stating that they preferred Approach A (UKAS approved Certification Bodies). The remainder either proposed an alternative or only provided comments. The figure below illustrates the percentage split of those that chose either A or B or proposed an alternative (i.e. excludes comment only responses).

Figure 14 Breakdown of responses to Question 25



Of those that preferred Approach B, 41 (53%) provided details of existing registers that could be considered to meet ESOS scheme’s requirements with some modification. Many of those who preferred Approach B commented that they considered UKAS accreditation to be a long and costly process and that they doubted the approach might be able to meet the 5th of December deadline. They also noted that option B would retain much more flexibility within the scheme to help allow a larger number of ESOS assessors to be available.

Of those who preferred Approach A, 18 (72%) commented that it is a well-established, robust accreditation system, and they were already familiar with it.

One respondent stated the following points as reasons for choosing approach A, “a. UKAS is the UK representative to ISO on matters of conformity assessment (the ISO 17XXX series referred to above). b. The procedures involved are well understood and recognised in the EU and elsewhere. c. Impartiality is improved if the accreditation function is separate from the

scheme administration. d. The 17xxx series includes a well-recognised set of terms and definitions which could usefully be applied to ESOS.⁶⁵

4 of the respondents commented on the Green Deal as an example that successfully uses UKAS accreditation.

The breakdown of responses according to respondent sector is shown in the following table.

Table 13 Responses preferring approach A, B and proposed alternatives, received per sector (as categorised by DECC)

Sector	No. of responses A	No. of responses B	Propose alternative
Trade bodies	4	26	1
Green Economy	5	9	2
Light industry and manufacturing	2	9	1
Other primarily office based companies	3	9	-
Energy intensive industries	3	9	-
Property / land management	-	5	-
Universities and other bodies	-	3	-
Utilities	4	3	-
Charities, NGOs and agencies	-	2	2
Retail	3	2	-
Other primarily office based companies	3	-	-

The main profession schemes that were suggested are:

- Chartered Institution of Building Services Engineers (CIBSE) Low Carbon Assessors and Low Carbon Consultants (29%)
- Energy Institute: Register of Professional Energy Consultants (RPEC) (27%)
- Energy Institute: Chartered Energy Manager (CEM) (12%)
- IEMA: environmental auditor scheme (10%)

CIBSE was suggested across almost all sectors and hence was the most popular.

Given the large number of respondents from Trade Bodies that chose approach B, we have examined their favoured professional schemes. An equal number of these respondents recommended CIBSE, EI (RPEC and CEM) and IEMA. However, among the Green Economy and Light industry and manufacturing sectors, EI's RPEC was most recommended. For example Siemens stated, " RPEC is already in place and supported by the Energy Institute and ESTA and would be easily expanded to cover the ESOS requirements"⁶⁶

In addition, one respondent (Heathrow airport) from the industrial and transport sector recommended to include sector specific professional bodies such as Institution of Civil Engineers, Institute of Mechanical Engineers (IMechE), Institution of Engineering and Technology (IET) and Chartered Institute of Highways and Transportation.

Further recommendations (by a very small number of respondents) were the Institute of Chemical Engineers, the Institute of Mechanical Engineers, the Institute of Engineering and Technology (IET), Association of Energy Engineers, European Energy Manager

⁶⁵ BizDef Limited

⁶⁶ Siemens

(qualification), Certified Energy Manager (qualification), the British Pump Manufacturers Association (BPMA)'s CPMA scheme for the pump sector and Carbon Trust Standard assessors.

Implications for DECC

The majority of responses received expressed a preference for approach B compared to option A. The key reason highlighted by the majority was the flexibility in approach B which could allow more assessors to become certified in time to meet the December 2015 assessment deadline. However it is important to ensure that there is a methodology to reduce any complications that could arise from managing assessors from multiple registers rather than one UKAS register.

The consultation document estimates that 200-500 auditors will be required to carry out ESOS assessments. It can also be seen that the suggested schemes (in approach B) in this consultation could cover this skills requirement: for example Carbon Trust: 400 Active auditors; Energy Institute: 200 Auditors and; CIBSE: 1000 CIBSE Low Carbon Energy Assessors.

The suggested schemes capture skills of assessors across various criteria. For example, RPEC consist of consultants capable of leading whole organisation energy audits, with expertise in building, industry and transport energy efficiency and is specifically intended for independent consultants, while CEM is for in-house experts such as cooperate energy managers. IEMA's Environmental Auditor Register is for consultants and in-house individuals with knowledge and experience of both environmental issues including energy and energy efficiency and audit experience and expertise.

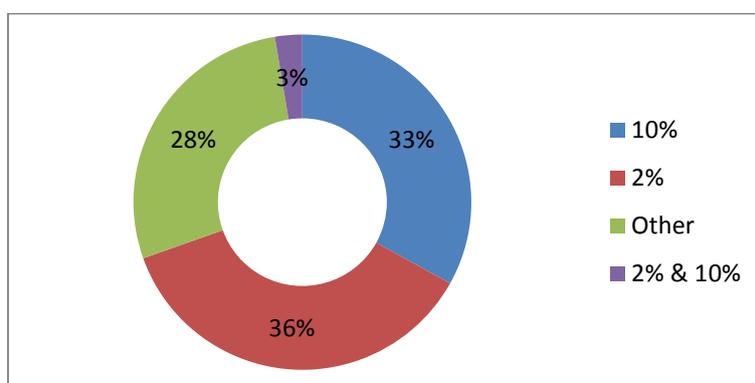
The variability of skills of the assessors from the various possible registers should also be addressed by the scheme administrators when selecting the schemes (under approach B) and also attention given to ensuring both consultants and in house experts are included.

Q26. Do you have any views on the proposed quality assurance arrangements for ESOS assessments; in particular, what percentage of audits should be subject to quality assurance (e.g. 10% as is the case with the CRC or 2% as is the case with EPCs and DEC)s)?

Results summary

Total Respondents	Responses to Q26	Those who answered:				Not answered
		10%	2%	Other	2% and 10%	
147	115	38	42	32	3	32

Figure 15 Breakdown of responses to Question 26



Of the 115 respondents that answered this question, 38 (33%) suggested that a 10% audit sample was suitable however 42 (36%) suggested that a 2% sample would be suitable. 3 respondents suggested that both sample sizes would be suitable and 32 others chose to respond with comments only.

The reasons given by the respondents who suggested 2% of the audits be quality assured can be summarised as:

- A reduction in costs and minimisation of use of resources (20%)
- Some of the respondents noted that having only 2% audited will be appropriate for the light touch approach and that the 10% requirement for CRC is due to it being a taxation based scheme that requires a higher level assessment.

Of the respondents (33%) who suggested 10% of audits should be quality assured, the majority of the comments highlighted that it would ensure better quality, avoid duplication and help consistency of the audits overall.

Around 20% of these respondents stated that the 2% quality assurance in DEC)s and EPC)s is commonly seen as be poor hence following CRC’s 10% quality assurance is more appropriate.

One respondent stated,

“Compliance needs to be policed and ensuring that assessments are of a high quality is really important. We have had reports for both DEC)s and EPC)s that the accompanying reports on recommendations for improvements are not always produced to a high quality (and in some cases, that the DEC)s themselves also have critical mistakes e.g. stating the

wrong type of heating systems being in place). Therefore we think a higher percentage audit rate would be preferable. The current rate of 10% used by CRCEES should be a minimum.⁶⁷

A similar number of respondents (about 20% of those favouring 10% quality assurance) also suggested that it is best to consider 10% of the audits at the early stages of the ESOS scheme and gradually reduce the number with experience.

Three respondents agreed to both 2% and 10%. This included a response from EON UK, who stated that a range of 2-10% is appropriate to allow the quality assurance rate for major energy users to be set at 2%, and for all other organisations 10%.

Out of the 32 respondents who did not agree with 2% or 10% of assessments being subject to quality assurance, more than 30% (10 out of 32) stated that 5% is the most appropriate level for ESOS. The reasoning was broadly based on 10% being seen as too high to be cost effective and 2% being too low for effective quality assurance.

Several respondents noted that the desired level of quality assurance would depend on the arrangements for accreditation and the use of relevant standards. For example the Energy Institute stated that using professional bodies should ensure that relatively limited sampling would be required by the scheme administrator.

However, 2 respondents (including UKAS itself) who agreed to UKAS accreditation in question 25, stated that if UKAS accreditation is used it would provide a more holistic approach for quality assurance in audits without the need for an independent quality assurance scheme.

Implications for DECC

Almost the same proportion of respondents favoured the two quality assurance levels suggested in the consultation (33% for 10% and 36% for 2%). Many noted that the 10% would be similar to that of CRCEES but others suggested that 10% would be too high and that a lower threshold should be set for ESOS.

Our view is that the level of QA should be related to the standards for accreditation that the assessors are asked to have. Should the scheme be based on unaccredited assessors supporting an accredited lead assessor then a 10% QA threshold would seem reasonable. If however all auditors are expected to be accredited then perhaps the QA threshold could be lowered to 2%, based on the expectation that the impartiality and quality of the work would be higher.

Some respondents suggested that there could be a case for a higher level of QA in the first round of energy audits to ensure that the scheme has been interpreted correctly in its first phase of application. Whilst this idea seems sensible, with a four year gap between audits it is likely there will be some churn in the assessors. We would therefore suggest that maintaining the starting level of QA would seem logical.

⁶⁷ UKCG

4.8 Compliance and disclosure

Q27. Should ESOS assessment records should be stored for 6 years, as with the CRC?

Results summary

Total Respondents	Responses to Q27	Those who answered		Not answered
		Yes	No	
147	71	48	23	76

A significant number of respondents (68%, 48 out of 71) agreed with the six year storage requirement on the basis that it aligns with other existing obligations that they need to meet for records storage.

Many respondents (32%, 23 out of 71) felt that a six year storage time did not align well with the four year cycle of the scheme. In a number of cases it was suggested that records be retained for either four years (i.e. one cycle), or eight years (two cycles) in order to better align with the nature of ESOS, and allow trends to be identified. This would help to measure progress, and for this reason some respondents felt that records should be retained for up to ten years:

“Gemserv is of the opinion that ESOS assessment records should be stored for longer than six years. With the CRC scheme, reports are produced every year, meaning that there will be a minimum of six previous reports for comparison with a newly submitted report (once the scheme has been running for six years). The ESOS scheme however only requires audits to be undertaken once every four years. By only storing records for six years, this means that the latest report can only be compared with the previous one. This limits the ability for an organisation to understand, for example, how changes to production over time have affected their energy intensity ratio.

Gemserv recommends that, instead, ESOS assessments are stored for a minimum of ten years. This will allow assessments to be compared with at least two previous reports, whilst not placing too great a storage burden on participants.”⁶⁸

The table below shows the range of different storage times suggested by respondents and the level of support for each*.

Table 14 Suggested storage times

Storage time suggested	Number of respondents
4 years	5
6 years	48
8 years	9
10 years	4

**Note that the total number of respondents in this table does not correspond to the total number of respondents for the question, as not all respondents indicated a preference for a specific storage period.*

⁶⁸ Gemserv

Some participants questioned the value of retaining any records, or holding them beyond the point at which a new assessment is required. In a number of cases it was felt that record retention was an unnecessary administrative burden.

A number of respondents commented that records stored for longer than six years were unlikely to retain relevance and would therefore be unnecessary.

Implications for DECC

Storage of records is good practice in energy management, and will be essential in maintaining the integrity of the scheme. In order to maintain a measure of the success of the audits, to provide an auditable evidence trail, and to promote good practice, DECC should require that participants retain their records for a minimum period of time. It is recommended that some guidance is provided as to which records should be retained, and that this also includes information on the value of holding these records, beyond simple compliance.

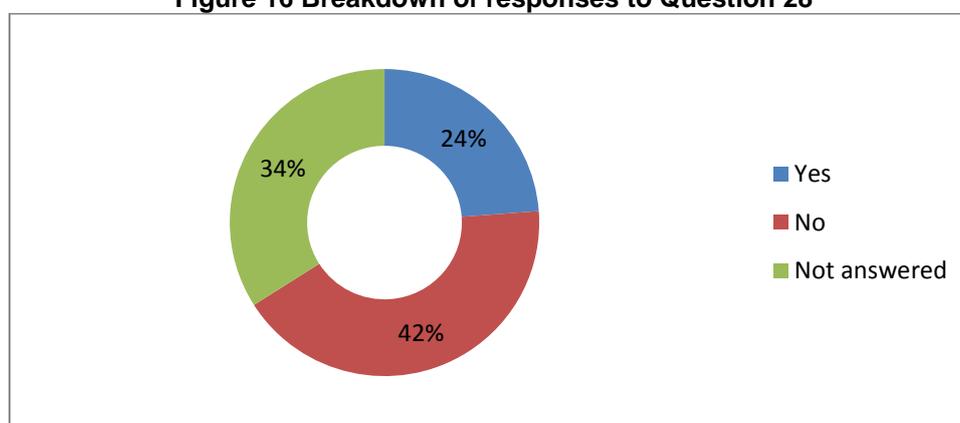
Storage of records for a period of six years provides good alignment with many existing business practices (including the CRC Energy Efficiency Scheme), and would allow comparison of records with the previous assessment. . However, DECC may wish to review the relevance of the six year proposal within the context of the four yearly ESOS cycle, and to consider extending this to eight years (i.e. two previous ESOS assessments would be available for comparison).

Q28. Would a survey based approach to collecting data on the number of large enterprises participating in ESOS / complying by means of EMS (option 1) be adequate, given the UK’s obligation to report to the European Commission on uptake of energy audits, and the aim to develop a targeted enforcement regime?

Results summary

Total Respondents	Responses to Q28	Those who answered		Not answered
		Yes	No	
147	97	35	62	50

Figure 16 Breakdown of responses to Question 28



A total of 88 respondents (91%) provided a comment in answer to Q28.

Those respondents providing a comment in support of a ‘Yes’ to Q28 (36%) cited a number of common reasons for their answer, including:

- The view that the ESOS regulations should be ‘light touch’
- A preference for the adoption of the least costly and least burdensome approach
- The view that a survey is good as a gauge of the level of compliance and that the regulator’s confidence that all qualifying enterprises are complying with the regulations would increase with the number of surveys undertaken.
- One respondent suggested that sector associations / trade bodies could conduct the survey, rather than the regulator.

Additional comments from the 62 respondents (64%) not in favour of a survey based approach generally echoed the views expressed by DECC in the Consultation, with some providing further justification for not favouring a survey based approach and others suggesting alternatives. Justifications included views that:

- The estimate of ESOS compliance levels produced by a survey is not sufficient or would not meet the requirements of the Energy Efficiency Directive.
- A survey would be ineffective as it is only taking a sample and makes the ESOS programme less enforceable.
- A survey may result in some organisations judging that the risk of non-compliance with the regulations is a risk worth taking.
- A survey doesn’t support a risk based approach to compliance.
- A survey would be an additional burden to the requirements of the CRCEES.

- A survey would require lots of monitoring by the regulator to be effective and this could result in a costly scheme where costs are passed onto those participating.

A small number of respondents (<5) used their response to Q28 to either show support for one of the other options outlined in the Consultation or to propose an alternative. Responses included:

- Support for Option 2 – mandatory basic notification to the scheme administrator
- A suggestion that the ESOS assessors report to the regulator on the ESOS assessments undertaken, either:
 - just the number of ESOS assessments undertaken, or;
 - additional details of the enterprises that have undertaken an ESOS assessment

Implications for DECC

The views expressed by those not in favour of a survey based approach seem to reflect an overarching opinion that there needs to be suitably robust enforcement regime to ensure all qualifying enterprises comply with the regulations – i.e. a level playing field for all enterprises. The feeling is that a survey would not be suitably robust.

The views expressed by those in favour of a survey based approach have commonly cited their preference for the ESOS scheme to be “light touch” and for the Government to adopt a position, with regards to the design and governance of the scheme, that minimises administrative burden and costs.

There is also a question regarding whether an estimated level of the UK’s compliance with Article 8, produced via a survey, would be adequate for DECC to meet its obligations for reporting to the European Commission. Article 8 states, with reference to the roll out of energy audits:

“Member States shall ensure that enterprises that are not SMEs are subject to an energy audit carried out in an independent and cost-effective manner by qualified and/or accredited experts or implemented and supervised by independent authorities under national legislation by 5 December 2015 and at least every four years from the date of the previous energy audit.”

The Directive doesn’t stipulate an accepted level of assurance that Member States should be looking to achieve regarding checking compliance with the requirements of the Directive. However, other areas of the EED do identify that ‘estimates’ are acceptable.

A large number of respondents did agree with the Government’s position that a survey did not support a risk based approach and that the mechanics of any survey would need to be clearly defined in order to identify non-compliance.

If the mandatory basic notification to the regulator (Option 2, see Question 29) is straightforward, this would seem to strike the right balance between a robust enforcement regime and minimising the administrative burden of the scheme.

Q29. To support an effective enforcement regime, should large enterprises be required to notify the scheme administrator that they are in scope and have conducted an ESOS assessment (or complied by another means)? (option 2 in the Impact Assessment)?

Results summary

Total Respondents	Responses to Q29	Those who answered		Not answered
		Yes	No	
147	106	94	12	41

A total of 94 (89%) respondents provided a ‘yes’ answer to Q29, showing strong agreement with the Government’s proposal to implement some form of mandatory notification to the regulator that an enterprise is within the scope of the ESOS and has conducted an ESOS assessment (or will do so by a certain date).

Many of these respondents cited some common perceived advantages to requiring a regulator notification, including: ease of compliance, familiarisation amongst enterprises in providing such notifications (CRCEES, CCAs), cost and administrative burden minimisation for ESOS participants and least bureaucratic route of ensuring wide-scale compliance – the last two points being made in comparison to central reporting (Option 5) and a survey-based approach (Option 1) respectively.

Further to the point made regarding a preference for the least bureaucratic route to ensuring wide-scale compliance, some respondents also highlighted that ‘*Option 1, although reliant on a random selection of participants, would be more burdensome for those companies selected to provide data.*’⁶⁹ Therefore, respondents are not in general agreement that a survey is less bureaucratic and burdensome than a basic notification to a scheme regulator.

Some respondents providing a ‘Yes’ answer went further and suggested routes for ESOS qualifying enterprises to notify the regulator. The suggested routes were:

1. Via the annual CRCEES return (Annual report)
2. Via an enterprise’s directors’ report (mandatory GHG reporting)

Of the 12 (11%) respondents that provided a ‘No’ answer to Q29, many of those that provided comments did not disagree with the concept of providing an in-scope notification to the regulator but they answered ‘No’ to affirm their view that the notification should be undertaken via a pre-existing mechanism (e.g. CRCEES reporting), rather than as a separate and new notification.

Respondents providing a ‘No’ response also suggested alternatives to an in-scope notification, including options for:

1. DECC to undertake a survey
2. ESOS assessors report on the compliance status of enterprises to the regulator

Implications for DECC

The responses to Q29 show strong agreement with the Government’s proposal to require

⁶⁹ Wood Panel Industries Federation

qualifying enterprises to notify the regulator that they are in scope and have undertaken an ESOS assessment.

The suggestions that the notification could be done via another route, such as via the annual CRCEES return, are sensible as a way to minimise the administrative burden on enterprises already participating in such schemes. However, there will not be a complete match between the coverage of the CRCEES / mandatory GHG reporting and ESOS, as there are significant differences in the qualification criteria for each. If the notification were permitted via such a route, or routes, the regulator would still need to provide a separate notification route to capture those not participating in such schemes. Those participating in the CRCEES or mandatory GHG reporting may still wish to submit a separate ESOS notification, so there would need to be flexibility in the notification system to permit this. This could end up being more expensive and more burdensome for the regulator, compared to a single notification route.

In considering permitting ESOS notifications via more than one route, DECC should also consider when notifications would be submitted via the other permitted routes (e.g. CRCEES annual reporting, as a possible notification route, is completed by the end of July each year) and how this may impact on DECC's requirements to report to the European Commission on the uptake of energy audits in the UK within the timescales outlined in the Energy Efficiency Directive (Article 24).

The alternative option put forward by one respondent, of requiring ESOS assessors to notify the regulator of all ESOS assessments undertaken, only substantiates that an assessment has been undertaken (every four years). This approach doesn't substantiate that an enterprise is in scope, which may be required of enterprises on a more frequent basis compared to assessments (see Question 5). This suggestion is also based on the assumption that assessors will be external and independent. However, the assessor may be internal to the enterprises with the ESOS obligation. If assessors were internal representatives, there are questions regarding how they would be included in a record of qualified assessors (see Question 25) and how the regulator would monitor their independence to audit business activity (see Question 24).

Q30. What is your preferred approach to disclosure of an ESOS assessment (option 3 in the Impact Assessment)?

- a) Do nothing
- b) Mandatory disclosure that an ESOS assessment has been conducted
- c) Mandatory disclosure of an organisation’s overall response to ESOS assessment
- d) Voluntary disclosure of an organisation’s overall response to an ESOS assessment with a light-touch enforcement regime for those organisations which do so

Results summary

Total Respondents	Responses to Q30	Those who answered:				Not answered
		Approach A	Approach B	Approach C	Approach D	
147	112	24	27	32	29	35

As can be seen from the number of respondents choosing Approaches A-D, there is no consensus on a preferred approach regarding the public disclosure option (option 3) within the consultation. A large number of respondents (99) provided some additional commentary in support of their preferred Approach.

Respondents providing additional comments in support of Approach A were in support of a “do nothing” approach. Answers given here were often predicated by a strong response in favour of option 1 (survey based approach) or option 2 (notification to the regulator) in the preceding two questions (Q28 and Q29). Respondents expressed a number of different views in support of Approach A, such as:

- That other options (Approaches B-D) go beyond the requirements of the Energy Efficiency Directive and that the UK’s translation of the EU Directive should not go beyond the minimum requirements.
- That disclosing an enterprise’s overall response to an ESOS assessment (Approach C) would disadvantage those that have already been proactive and/or invested heavily in implementing energy efficiency measures already, as the options identified by the assessment are likely to be those that require the highest level of capital investment (i.e. the enterprise has exhausted the most economically viable shorter term options) – thus making the enterprise’s response look less proactive, where in fact significant action has already been taken.
- That the results of ESOS assessments are likely to contain commercially sensitive information about an organisation and should therefore either be disclosed on a voluntary basis (Approach D) or not disclosed at all.
- That without prescribing an accepted route/vehicle for public disclosure, organisations will choose to disclose via different media (e.g. directors’ report, website, CSR report etc.), making it difficult for the regulator to check compliance and enforce the scheme.
- That an alternative disclosure to the regulator, rather than the public, is preferred along with a requirement to provide an in-scope notification to the regulator (option 5).
- That disclosure achieves nothing, as was seen with the CRCEES Performance League Table.
- That disclosure duplicates effort with the mandatory GHG reporting regulations, where a GHG disclosure is already required to be outlined in an organisation’s directors’ report.

Respondents providing comments in support of Approach B were in support of minimal disclosure. Views in support of Approach B included:

- That this level of disclosure is enough to ensure that action has been taken.
- That this type of disclosure avoids having to detail an organisation’s overall response to an ESOS assessment, which may include commercially sensitive information.
- That any additional disclosure above the level suggested in Approach B would incur additional costs.
- That Approach A is not satisfactory for the Government’s reporting to the European Commission and that Approaches C and D stray too far into an organisation’s Corporate Responsibility (CR) or sustainability reporting.
- That Approaches C and D are “gold plating” the Energy Efficiency Directive (EED)
- That an alternative to Approach B could entail organisations providing the Government / regulator with a copy of their ISO standard / Carbon Trust Standard / ESOS assessment every four years.
- That an alternative to Approach B is to tie in the disclosure with the mandatory GHG reporting requirements or annual reporting requirements.

In support of how mandatory notification affects compliance rates, one respondent, Quidos, cited a previous regulatory example:

‘Without mandatory lodgement then situations such as happened with Air Conditioning (AC) Reports in England & Wales or Scottish EPCs will occur. Essentially although there was a legislative requirement to obtain AC reports (UK wide) or EPCs in Scotland, compliance levels were less than 5% until mandatory lodgement rules were introduced. Hence it was almost pointless there being legislation as it was not observed, and no benefit was realised by the economy through energy efficiency.’

Respondents providing comments in support of Approach C were in support of a more detailed level of disclosure. Respondents put forward a number of views in support of Approach C, such as:

- That disclosure of an organisation’s response to an ESOS assessment raises awareness of energy saving opportunities at board level.
- That disclosure incentivises organisations to take action to improve their energy efficiency and grow in a sustainable way (i.e. reputational drivers).
- That disclosure is essential in delivering the goals of the EED and the ESOS.
- That there is no requirement in the EED to implement the measures identified in an ESOS assessment, so Approach C would encourage action beyond the minimum compliance level.
- That disclosure is acceptable as long as the minimum requirements are not too detailed.

Respondents providing comments in support of Approach D were in support of voluntary disclosure. Respondents put forward a number of views in support of Approach D, such as:

- That this approach provides organisations complying with the ESOS flexibility to only disclose information that isn’t commercially sensitive.
- That the EED doesn’t mandate mandatory disclosure and so the Government should not look to go beyond the minimum requirements of the directive.
- That this is a sensible approach whilst encouraging disclosure.

Implications for DECC

The responses to this question show no consensus amongst respondents with regards to the public disclosure of ESOS assessments or the level of detail to be disclosed.

The high level sectoral categorisation of respondents and their responses is as follows.

Table 15 Sectoral split of responses

Respondent grouping	Approach A	Approach B	Approach C	Approach D
Large energy-intensive organisations	13	12	3	11
Consultancies / green industry service/product providers	4	10	19	4
Trade bodies	7	4	7	13
Academic institutions and NGOs	0	0	3	1

The preferred approach amongst respondents that would likely benefit commercially from an ESOS assessment, in providing goods and services in assisting an organisation to comply with ESOS and implement the measures outlined in an ESOS assessment, is Approach C - mandatory disclosure of an organisation’s overall response to ESOS assessment. This option mandates the disclosure of the most information on the results of an ESOS assessment and so would be of commercial value to goods and service providers. It would also raise in the view of the ESOS participant the importance of high quality assurance of the assessment, since it is made public.

The responses from large energy-intensive organisations do not show a clear preference between Approaches A, B and D. However, comparatively, few respondents in this grouping opted for Approach C, indicating those organisations, which are likely to be required to comply with the ESOS generally do not support the mandatory disclosure of an organisation’s overall response to the assessment.

The responses from trade bodies, academic institutions and NGOs are also split between different options. Approach D is perhaps the non-committal option for trade bodies, as it leaves the decision in the hands of their members. For NGOs and academic institutions, Approach C provides the most sector-specific information that will be useful to both as part of further sector analysis and identifying trends and common issues.

A total of 13 respondents (12%) highlighted that the results of an ESOS assessment may contain commercially sensitive information about an organisation’s activities/assets that they would not want to be disclosed publically. Therefore, although many of these respondents see the value in disclosure as a viable way for the Government to report on ESOS uptake, they have highlighted the need for this to be done in a way that doesn’t compromise an organisation’s market competitiveness. There was no consensus amongst these respondents on the best Approach, with respondents choosing Approach A, B, D and C (although with the option/ability to redact certain information) to similar degrees.

Many respondents used Q30 to cite their preference for Option 2 (Question 29) or Option 5 (Question 32) as outlined in the accompanying Impact Assessment. Respondents preferring some form of mandatory notification agreed with the Government that without this the scheme would prove to be harder to enforce and that this could affect compliance rates.

Q31. If you are in favour of public disclosure, what sort of information would you like to see disclosed?

Results Summary

Total Respondents	Written Responses	Not answered
147	108	39

A total of 52 out of the 108 comments (48%) received to Q31 provided some support for one or more of the options put forward in the question regarding what information might be required to be disclosed.

Table 16 Detailed breakdown of responses to Question 31

Proposal	No. of responses in support of the proposal
Cost savings available from audit recommendations	11 (16)
Action taken in light of an ESOS assessment	10 (15)
The organisation's energy intensity ratio	11 (16)
All of the above	(5)
Other	15

Table 17 Sectoral breakdown for those in support of/against public disclosure

Sector:	Yes	No
Retail	2	1
Utilities	7	2
Hotel chains / hospitality	1	0
Major leisure	0	0
Other primarily office based companies	10	1
Light industry and manufacturing	10	0
Energy intensive industries	6	5
Transport	1	0
Property / land management	2	2
Charities, NGOs and agencies	3	2
Green Economy	12	1
Trade bodies	14	5
Universities and other bodies	1	1

There were 15 other suggestions made by respondents as to what information should be disclosed following an ESOS assessment. Some respondents made suggestions for specific details, whereas others provided a list of information they would like to see disclosed.

Suggestions for the disclosure of specific details included information on:

- An emissions baseline
- An emissions/energy reduction since the previous assessment
- A list of energy reduction opportunities identified
- Details of the investment required alongside energy reduction opportunities

- Plans for implementation.

Where respondents outlined a list of information they would like to see form part of a public disclosure, the suggestions often looked to:

1. Further define the organisation's activities (sector categorisation)
2. Further define the method of compliance
3. Provide further details on the audit scope / process
4. Energy split
5. Categorisation / ranking of energy savings opportunities (e.g. by investment cost)
6. Contextual details (e.g. savings as a percentage of energy spend)

A total of 23 respondents (23/108, 21%) provided a comment to re-affirm their position that they do not support public disclosure. In doing so, some respondents added a comment that the Government should ensure that any disclosure does not duplicate information already being provided under schemes such as the CRCEES, CCAs or mandatory GHG reporting.

Many opposed to public disclosure also made linkages with the CRCEES Performance League Table; expressing a view that publishing information about organisations with different structures, scopes and energy profiles is meaningless. Furthermore, these respondents expressed concern around the perceived fairness of an all-encompassing metric for energy intensity based on their experience with the CRCEES.

The other responses to Q31 (31 responses) were in relation to Q31b, regarding the possible sign-off of a disclosed audit by a Director.

Implications for DECC

Many of those opposed to, as well as some in favour of, public disclosure provided a comment to Q31 to highlight that any disclosure should avoid duplication between the ESOS and other schemes; namely the CRCEES and mandatory GHG reporting.

It is unlikely that the details the Government outlined in the Consultation would duplicate any mandatory details reportable under the CRCEES. However, under the CCA scheme an underlying agreement requires the operator to retain "records of energy saving actions and measures implemented during each target period" (clause 14.2.2.). Also, the newly implemented mandatory GHG reporting initiative now also requires qualifying companies to report on an emissions intensity metric of their choosing on an annual basis as part of its directors' report. Thus, mandating the public disclosure of actions following an ESOS assessment and/or an organisation's energy intensity ratio will, to some degree, duplicate information already being retained / reported by some ESOS organisations.

It should be noted that the ESOS inclusion criteria are broader than other systems and so it would likely cover organisations not included in the CRCEES, CCAs or mandatory GHG reporting. In those cases there would of course not be any duplication.

The point regarding the commercial sensitivity of data is also a pertinent point. In implementing the EED the Government must strike a balance between meeting the minimum requirements of the Directive whilst also avoiding measures that disadvantage UK businesses relative to their European competitors. A number of respondents highlighted that the public disclosure of the results of an ESOS assessment could disadvantage UK businesses and argued that public disclosure amounts to 'gold-plating' of the EED, as it does not form part of the minimum requirements.

The advantage of public disclosure is the ability to capture the results of ESOS assessments

whilst retaining the reputation drivers associated with disclosure. The results of ESOS assessments could be an invaluable source of qualitative information regarding energy reduction opportunities and quantitative data on the energy saving potentials for the UK on a macro (UK scale), sectoral and micro (business scale) level. However, collating publically disclosed information to report to the European Commission on the uptake of energy audits in the UK will be more labour intensive for DECC / a scheme administrator, compared to the other Consultation options. Effort levels by DECC / an administrator could be minimised by mandating the public disclosure mechanism(s) – e.g. annual reports or website.

This information and data would be a powerful tool for the Government in informing and driving future energy policy developments in the UK. The information and data, if captured centrally and shared amongst ESOS qualifying organisations, could also become a useful resource for organisations looking for further information on energy saving opportunities and best practice.

One approach to meeting the desire for the information and data on opportunities and potential energy savings, whilst avoiding commercially sensitive information, would be through a disclosure to the regulator. The regulator could be given the authority to publish the anonymised data, either in a raw (as reported) or aggregated form. However, the decision to anonymise or internalise the data removes the reputational drivers associated with disclosure.

As noted in section 6.23 of the Consultation, a disclosure to the regulator would also aid the regulator in assessing uptake / compliance levels and enforcement, whilst minimising the administrative burden for the regulator and ESOS qualifying organisations. Minimising the administrative burden for the regulator is also likely to minimise any fees levied on ESOS qualifying organisations by the regulator. In disclosing the results of an ESOS assessment to the regulator, one would also expect that data would be available sooner, compared to public disclosure.

Should a Director of a large enterprise be required to sign off on the corporate ESOS disclosure?

Results summary

Number of Respondents	Those who answered:		Not answered
	Yes	No	
90	70	20	57

The majority of respondents to this question provided a ‘Yes’ answer (78%). This was a follow-on question from Q30 and the first part of Q31 aimed at those in favour of disclosure, as per the wording of the question. The overwhelmingly positive responses might imply that the majority supported the idea of disclosure and that an ESOS disclosure should be signed off by a director. However, a large number of comments provided in support of a yes answer indicated that the respondents did not necessarily hold the view that disclosure was appropriate. In commenting on this question many said that although they didn’t support disclosure, if it were to be implemented then they felt that any disclosure should be signed off by a director.

Noting the above, respondents in support of ESOS disclosures being signed off by a director, expressed views such as:

- It facilitates buy in / interest from senior management

- It demonstrates an organisational commitment to energy reduction
- Sign off at this level mirrors that already in place under the CRCEES (Senior Officer contact)
- It adds credibility to the assessment

The comments provided by those respondents opposed to the ESOS disclosure being signed off by a director ('No' answers) indicated that they were not opposed to the concept of director sign off but rather opposed to mandatory disclosure. The views expressed include:

- Disclosure is not preferred
- Disclosure should be voluntary, so the person signing it off should also not be mandated
- The disclosure should be signed off by the CEO and CFO
- Obtaining director level sign off is too time consuming

Implications for DECC

The responses to this question show support for the sign off of ESOS assessments by a director should mandatory disclosure be implemented (rather than support for disclosure itself). This question is predicated by the responses to Q30 and Q31a.

The benefits of mandating a director-level sign off of publically disclosed ESOS assessment results are that it raises awareness at the most senior level within the organisation and this, in turn, facilitates buy-in to implementing economically viable energy saving measures.

When the CRCEES was introduced in 2010, it raised the profile of an organisation's energy usage and carbon emissions at management level. This was achieved, in part, by the requirement to nominate a 'senior officer' contact within the organisation / group who was, and still is, ultimately responsible for the organisation's compliance with the CRCEES regulations. Under the CRCEES, the senior officer is required to sign-off an annual internal audit of the organisation's evidence pack, the documentation that substantiates the organisation's reporting under the self-verification scheme.

Implicit in providing sign off of any publically disclosed results is an understanding and acceptance of the results by the signatory. In understanding the results, the signatory is aware of the potentially positive and/or negative impacts of the results; and as part of good business practice should be looking to implement an action plan to minimise any negative impacts of the results and capitalise on any opportunities.

Through the CRCEES, the senior management of UK businesses are now more aware of their energy use and emissions. However, they may not have the internal knowledge of how to go about reducing their energy usage. This is what the results of ESOS assessments could provide to these senior managers.

Under the ESOS, the public disclosure of ESOS assessment results combined with the requirement for a director level sign off would raise awareness of the audit results at the highest level within an organisation and one would expect that this would facilitate action to implement at least the most cost-effective energy saving opportunities to realise cost savings for the business. The other business driver to take action to implement energy saving measures is the negative impact associated with inaction regarding ESOS assessment results amongst business stakeholders (e.g. shareholders, customers, company analysts etc.) – e.g. If the second and third ESOS assessment results highlight the same energy saving opportunities at the first results, this shows inaction by the business and this could be construed by stakeholders as representing a lack of focus on energy efficiency and wider environmental improvements and goals.

However, as pointed out by respondents to Q30, public disclosure, either with or without the need for director signoff, could disadvantage organisations that have already been proactive in implementing energy saving measures within their business. The results of ESOS assessments for such businesses are less likely to highlight opportunities that are economically viable (many may be too expensive with unacceptable payback period) or feasible (due to involvement of emerging / unproven technologies). The resulting apparent inaction could reflect badly on the business. Any negative impact could be mitigated by allowing the director/business to include a statement alongside the ESOS assessment results, as is permitted currently as part of an annual report under the CRCEES.

Overall, requiring director level sign off of publically disclosed ESOS assessment results is advantageous because of the focus and awareness it creates at the highest level within a business. The experiences of the CRCEES have shown that mandating senior level involvement does raise awareness. The results of ESOS assessments will build on this awareness, giving senior managers the information they need to go about implementing the energy saving measures that are most advantageous for their business.

Q32. Should large organisations be required to report on key ESOS assessment findings to the scheme administrator (option 5 in the Impact Assessment)?

Results summary

Total Respondents	Responses to Q32	Those who answered		Not answered
		Yes	No	
147	106	51	55	41

Respondents providing a comment in support of a ‘Yes’ answer (48%) expressed views that disclosure of the results of an ESOS assessment to a regulator would generally promote best practice, transparency, full compliance and action based on the results of the assessment. Supporting comments included views that disclosure to a regulator:

- Promotes full compliance with the ESOS regulations.
- Instils ‘reporting discipline’.
- Creates strong incentives for businesses and introduces a competitive aspect.
- Facilitates effective enforcement by a regulator.
- Facilitates the cross-checking of the variability and practicality of the audits and the highlighted potential savings (monetary / energy).
- Encourages implementation of the energy saving measures highlighted during the assessment.

Other comments provided by respondents in support of disclosure to a regulator focussed on the benefits and potential uses of the data, if submitted to a regulator. Some respondents went further and provided suggestions on data formats and reporting methods:

- Benefits / uses of ESOS assessment data:
 - Disclosure to a regulator is the easiest way for the Government to meet the requirements of the EED.
 - ESOS assessment data would provide a lot of useful non-domestic energy data.
 - The Government can compile more meaningful and more grounded statistics on the UK’s energy abatement potential.
- Data formats and reporting methods:
 - Disclosure should only include basic information to keep reporting straightforward and less burdensome.
 - A regulator should implement a web-based reporting interface and utilise a tick-box format to summarise the recommendations of the assessment, so effort can be focussed on the assessment itself and follow-up actions.

The comments provided by some of the 52% of respondents opposed to the requirement of disclosing the results of an ESOS assessment to a regulator (‘No’ answers) cited general concerns around; the treatment / disclosure of commercially sensitive information, the administrative burden and associated cost of reporting to a regulator and concerns that this proposal is not in-keeping with the concept of “light touch” regulation and goes beyond the requirements of the Energy Efficiency Directive. Comments supporting these views included that:

- Duplication with other existing schemes:
 - Organisations are already incentivised to improve energy efficiency through the CCA scheme and the EU ETS.
 - The CCA scheme and the EU ETS implicitly include energy efficiency improvement plans.

- Above minimum requirements:
 - Disclosure to a regulator goes above the requirements of the Energy Efficiency Directive and amounts to “gold plating” by the UK Government.
 - Disclosure to a regulator is not compatible with a “light touch” scheme.
 - Disclosure to a regulator could be made voluntary.
- Commercially sensitive information:
 - A high level of data security would need to be implemented by a regulator to protect commercially sensitive data.
 - Freedom of Information (FoI) Act requests could require a regulator to release data and this could include commercially sensitive data of ESOS organisations and their assessments.
- Other concerns
 - The audits alone will drive organisations to intervene and implement energy efficiency measures.
 - There need to be clear and demonstrable benefits to ESOS qualifying organisations of a regulator publishing / sharing the results of ESOS assessments, even in an anonymised form.

One respondent, although not in support of disclosure between the organisation and a regulator, did outline support for the ESOS assessor disclosing the results of the ESOS assessment directly to a regulator.

Implications for DECC

The Table below indicates the views of respondents who may qualify for ESOS, may represent service providers or who are trade bodies or academic institutions. The identification of which respondents may qualify is uncertain and we have made an estimate. Trade bodies may represent qualifying enterprises or service providers.

Table 18 Grouping of selected responses

Respondent grouping	No. supporting disclosure to a regulator - “Yes”	No. opposing disclosure to a regulator - “No”
Possible ESOS qualifying organisations	10	31
Consultancies / green industry service/product providers	26	6
Trade bodies (academic institutions)	14 (1)	17 (1)

It should be noted that representatives from consultancies or potential energy reduction/efficiency service and product providers showed strong support for disclosure (26 of 32 responses in favour). These organisations would be likely to benefit commercially from supporting ESOS qualifying organisations, either through the provision of compliance services (e.g. consultancy support in submitting a disclosure) or the provision of products to implement identified energy saving opportunities

Possible ESOS qualifying organisations on the other hand generally opposed disclosure. Only 10 large potentially qualifying organisations likely to be required to comply with the ESOS supported a disclosure to a regulator. This is compared to 31 such respondents who oppose the proposal of mandating the disclosure of ESOS assessment results to a regulator.

Alternative suggestions

As suggested by Robert McCann of International Hotels Group (IHG), disclosure of an ESOS assessment to a regulator could be facilitated by the ESOS assessor, rather than the organisation itself.

The suggestion is that an ESOS assessor completes an ESOS assessment pro-forma and, following completion of the audit, provides this to a regulator.

In considering this as an alternative to disclosure by the organisation itself, it is important to assess:

- How might it impact on the organisation's awareness of the assessment results and recommendations?
- How would this tie-in with the option to comply via other routes (EMS)?
- Whether or not director sign off would still be required, and if so, how would this be incorporated in the pro-forma (or otherwise) when an assessor is submitting the ESOS assessment results?
- What opportunity and recourse would an organisation have to challenge the assessment results / recommendations?
- What opportunity would an organisation have to highlight commercially sensitive information with the assessor?
- Who is ultimately responsible for ensuring the ESOS assessment is submitted to a regulator?
- If assessors are incorporating a cost of submitting the disclosure to a regulator within the overall cost of an organisation's ESOS assessment, does this really lead to a cost saving for the organisation versus them undertaking the disclosure themselves?

One option to implement assessor notifications could be to adopt a system like the one used by the Environment Agency in the verification and submission of Annual Emissions Monitoring Reports under the EU ETS. The system has defined online areas and workflows for operators and verifiers such that verifiers can undertake tasks. Alternatively, ESOS assessors could be provided with ESOS participant agent access, and submit information in that way, as can be carried out under the CRC system.

The value to the Government of having the results of ESOS assessments readily available through the central reporting of the results to a regulator needs to be weighed up against the additional burden central reporting puts on ESOS participants above and beyond what is mandated by the Energy Efficiency Directive.

Some UK businesses are already complying with the reporting requirements of several existing schemes, such as the CRCEES, CCA scheme, EU ETS and mandatory GHG reporting. These schemes have different reporting regimes, with the CRCEES, CCA and EUETS schemes requiring central reporting to a scheme regulator and mandatory GHG reporting requiring public disclosure.

On the basis that the majority of current schemes require central reporting to a regulator (the Environment Agency) then this compliance route, although more burdensome to organisations, allows the greatest opportunity for the central reporting of ESOS assessment results to:

- Mirror the current reporting requirements of other schemes
- Be incorporated as part of the reporting under another scheme (e.g. CRCEES)

Using predominant reporting regime also presents the greatest opportunity for a joint regulator to look for efficiencies to streamline the reporting of all schemes, which could lead to less reporting burden for organisations compared to a variety of reporting regimes. This would necessitate though that the Environment Agency implements ESOS (which is discussed under Question 35 below).

If yes, what information should be disclosed and how should it be stored/disclosed

There were 52 responses in total.

What information should be collected and how?

Responses to this sub-question focussed more on what information should be collected, rather than how it should be stored/collected. The few respondents that did indicate a preference on how the information should be collected all suggested an online system of recording ESOS assessments.

There was greater variability in the preferences expressed regarding what information should be collected. Some respondents simply expressed a high level view, whereas other respondents suggested a list of information they'd like to see collected.

High level views:

- Collate the same information as collated under mandatory GHG reporting, the Green Deal or EPCs.
- Collate the minimum data in accordance with the requirements of the EED.
- Strike a balance in the information collected between requesting meaningful detail and avoiding unnecessary administrative burden.
- There should be a further engagement once the ESOS compliance and reporting routes have been agreed.

Suggestions regarding the inclusion of specific information to be included in a disclosure to a regulator (more commonly cited to less commonly cited):

- Overall energy usage.
- Energy savings identified.
- Assessment recommendations / Energy saving measures identified.
- Details of the assessor conducting the assessment.
- Key energy performance indicators.
- Energy intensity ratio.
- Associated carbon savings (tonnes of carbon dioxide).
- Energy / cost savings (% or £ / kWh) since last assessment (second assessment onwards).
- Actions taken since last assessment (second assessment onwards).
- Cost / benefits.

Other respondents replicated the details they outlined in responding to Q31a regarding public disclosure, or made reference back to their response to that question.

Should the scheme administrator store information internally or publicly disclose some information (and if so, what)?

A total of 40 respondents provided a comment in response to this sub-question. The responses ranged from views that there should only be internal storage and use of the information by a scheme regulator through to views that there should be public disclosure of all information, with intermediate suggestions of some form of restricted public disclosure.

The 40 responses can be categorised into the following principle stand points (with the number in brackets representing the number of responses received):

1. Internal storage / usage only (7)
2. Internal storage / usage and restricted public disclosure (15)
3. Public disclosure (12)
4. Other (6)

The views expressed by those respondents favouring option (1) centred on the reasoning that the information contained within ESOS assessments and submitted to a regulator is commercially sensitive and should therefore not be disclosed as this could disadvantage UK businesses compared to their European competitors, where Member State governments didn't mandate public disclosure in transposing Article 8 of the EED into national law.

Those respondents in favour of option (2) expressed a view that information should be stored and used by a regulator. Some respondents also expressed a view that it is important for the information in ESOS assessments to be made available to the Government, its agencies and other academic institutions for further analysis and to inform future policy developments and research. However, respondents favouring option (2) also stated that any public disclosure should be restricted in some way. Cited restrictions included:

- Anonymised information only.
- Aggregated information only.
- Anonymised and aggregated information only.
- Disclosure only as part of an ESOS evaluation process.
- Disclosure only to relevant authorities.

The comments made by those respondents in favour of option (3) were split on the reasoning behind supporting public disclosure of ESOS assessment information by a regulator. Comments supported the following three respondent positions:

- 3a. Public disclosure is the most powerful driver to encourage the implementation of energy saving measures highlighted as part of an ESOS assessment.
- 3b. Providing information to a regulator makes the information subject to Freedom of Information Act requests and so the information should be made public to reduce the number of such requests.
- 3c. Align the public disclosure with the level of detailed information already publically disclosed under existing reporting initiatives – e.g. mandatory GHG reporting and the CRCEES.

A small number of respondents put forward other views and these have been collated under option (4). The views expressed did not always show a clear preference for the other three options but highlighted other factors the respondents felt the Government should consider when choosing a compliance and reporting regime. These considerations included:

- 4a. That the Government should make clear the intended uses of ESOS assessment information before organisations give consent to its use.
- 4b. If the information is to be made public, it needs to be presented in a useful and meaningful manner.
- 4c. ESOS assessment information should be made public only where that information is volunteered by the organisation.

Implications for DECC

The three most commonly cited pieces of information that respondents felt should be disclosed to a regulator were (1) the total energy usage of the organisation, (2) the total energy savings identified by the assessment and (3) the assessment's recommendation /

energy saving measures identified.

There would need to be a standardised definition of reporting units. For example, for options (1) and (2) in the previous paragraph the requirements would need to stipulate energy reporting on either a net calorific value (NCV) or gross calorific value (GCV) basis. Similarly, the requirements would need to stipulate a universally accepted unit of energy, such as joules (J), and magnitude (i.e. gigajoules, GJ) to be able to standardise the reporting of energy usage by qualifying organisations.

Standard unit conversions and standard 'fuel properties' tables are already published by the Government in the *UK Government conversion factors for Company Reporting*, on both a NCV and GCV basis. These could be adopted for the ESOS and used by organisations for energy reporting. However, the fuel property tables only cover the most common fuels and are not exhaustive.

ESOS organisations may wish to use their independently derived NCV/GCV, for particular fuels, from either laboratory analysis or from a gas chromatograph (GC). The independent derivation of fuel NCVs is common practice amongst large emitting installations under the EU ETS, where operators of such installations are required to independently determine the properties of fuels in meeting the strictest emissions monitoring tiers under the system. Energy measured in this way under EU ETS should be permitted for the ESOS.

The Government should firstly decide if it intends to prescribe defined unit and energy conversion factors. The upcoming simplification of the CRCEES for Phase 2 of the scheme will include a move from scheme-specific, fixed factors to annually updated, national GHG emission factors. Any prescription of unit and energy conversion factors under the ESOS should be consistent with this approach, to avoid organisations having to refer to varying sources in undertaking compliance / reporting activities under different legislative schemes.

The Government, in possibly prescribing a preferred source (or sources) of unit and energy conversion factors, should secondly assess the likelihood of ESOS organisations using fuels not listed in a given source. The requirements of the CRCEES' 2010-11 Footprint report included the identification of "other fuels", not listed in the CRC fuels table, being used by participants. Analysis of this information, presumably held by the Environment Agency, could give a steer on the proportion of CRCEES participants using other fuels and this could be extrapolated and applied to the ESOS, taking into account the difference in expected coverage of the ESOS compared to the CRCEES.

In reporting the assessment recommendation / energy saving measures identified as part of an ESOS assessment (3), it might be prudent to incorporate within the reporting requirements a need for respondents to categorise the recommendations / energy saving measures identified. This categorisation could form the only reporting requirement around energy saving measures identified, making reporting less burdensome. Or, the categorisation could sit alongside more specific details from the ESOS assessment, facilitating the prompt availability of scheme-wide information on the most common energy saving measures for UK businesses.

Q33. What is your preferred option or combination of options for meeting the UK’s reporting obligations to the European Commission and ensuring a cost-effective scheme, and are there any options that you think the Government should definitely not pursue?

65 respondents provided an answer to this question. Question 33 asked respondents to outline their preferred choice(s) from the options (1-6) listed in the Impact Assessment, those options they felt the Government should not pursue and also alternative suggestions – including combinations of options (a combination of different options 1-6) as well as alternatives not outlined in the Consultation and Impact Assessment.

Results Summary

Total Respondents	Written Responses	Not answered
147	66	81

In the comments received to Q33, respondents expressed a preference for the Government to pursue one or more of the following compliance and reporting options.

Table 19 Detailed breakdown of responses to Question 33

Consultation option	No. of responses
Option 1 (survey)	6
Option 2 (basic notification to a scheme regulator)	13
Option 3 (public disclosure)	12
Option 4 (notification to a scheme regulator + cost recovery)	1
Option 5 (central reporting to a scheme regulator)	11
Option 6 (site audits and DEC’s)	4
No preference / No comment	11
Response didn’t relate to the question posed	7

** Please note the total no. of responses outlined in the above table equals 64 but this includes responses where respondents indicated their preference for multiple options. These figures should only be viewed in conjunction with the other tables presented below.*

Incorporated within the figures in the table above are responses where the respondent indicated a preference for more than one option (7 responses). These responses were captured both within the figures above and separately, in the table below.

Table 20 Multiple responses within Question 33

Response	Op. 1	Op. 2	Op. 3	Op. 4	Op. 5	Op. 6
1			X		X	
2		X	X		X	
3	X	X				
4					X	X
5		X	X			
6		X			X	

7		X	X			
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Respondents also used the opportunity to state the option(s) they thought the Government should **not** pursue. Some respondents selected multiple options.

Table 21 Multiple options chosen

Consultation option	No. of responses
Option 1 (survey)	2
Option 2 (basic notification to a scheme regulator)	0
Option 3 (public disclosure)	2
Option 4 (notification to a scheme regulator + cost recovery)	0
Option 5 (central reporting to a scheme regulator)	2
Option 6 (Site audits and DECs)	5

In total 12 responses included a suggested alternative to the compliance and reporting options put forward by Government in the Consultation and accompanying Impact Assessment. The views expressed by the respondents were (the number in brackets represents the number of respondents expressing this view):

- ESOS scheme obligations should only cover the minimum requirements of the Energy Efficiency Directive. (4)
- Permit compliance via a recognised standard – e.g. ISO50001. (3)
- Amend one or more of the existing reporting schemes (both the CCA scheme and the CRCEES were cited in responses) to incorporate ESOS reporting (4)
- Permit the use of other voluntary reporting schemes to substantiate compliance with the ESOS regulations and the submission of ESOS audit reports for those not in a voluntary reporting schemes. (1)

Implications for DECC

The responses to Q33 are interesting in that many respondents selected a preference or a number of preferences and stated options they felt the Government should not pursue.

The most favoured options amongst respondents were option 2 (basic notification to a scheme regulator), option 3 (public disclosure) and option 5 (central reporting to a scheme regulator), or a combination of these three options. The combinations of options respondents choose are presented in Table 20.

Of the three most favoured options, Option 2 likely places the minimum compliance obligations on the ESOS organisations and therefore represents the least burdensome option. At the same time, option 2 also provides a scheme regulator and Government with the minimum information required by the European Commission on the number of organisations captured by the ESOS and the uptake of ESOS assessments in the UK. However, this option provides the least additional incentive to organisations to implement the recommendations outlined in an ESOS assessment, as the details would remain undisclosed within the organisation and the external pressure to implement them would be lower than in a disclosure case.

Option 3, alone, could require either an equal or greater level of compliance effort from ESOS organisations dependent on the amount and level of detail required to be outlined in a public disclosure. However, this option represents the most difficult option for a regulator to

enforce and determine the uptake of ESOS assessment for reporting to the European Commission. It would also not assist a scheme regulator with implementing a risk-based approach to assessing compliance. If option 3 were selected, then the ESOS would be most closely aligned with the requirements of mandatory GHG reporting. The ESOS regulations could align with these in reducing duplication of effort for UK businesses.

Option 5 presents the most comprehensive level of disclosure and therefore places the highest level of compliance effort on ESOS organisations. However, as option 5 builds on option 2, it would necessitate compliance amongst qualifying organisations by requiring a notification of qualification and the reporting of ESOS assessment results. This option would also allow a scheme regulator to efficiently enforce the scheme by adopting a risk-based approach. If option 5 were selected, then the ESOS would be most closely aligned to the requirements of the CRCEES (for which there is a degree of annual reporting data disaggregation). The ESOS regulations and timeline could align with the CRCEES and adopt a similar reporting platform (or an extension to CRCEES reporting for organisations captured by both schemes) in an effort to reduce the duplication of effort and minimising administrative burden.

Q34. Should the same compliance route be adopted for organisations complying via an approved EMS as for those undertaking ESOS assessments?

Results summary

Total Respondents	Responses to Q34	Those who answered		Not answered
		Yes	No	
147	97	82	15	50

The comments provided in response to Q34 mirror the Yes/No response split, with a large majority of respondents in favour of utilising the same compliance route for those organisations complying via an approved Environmental Management System (EMS) as via an ESOS assessment.

However, many respondents in favour of using the same compliance route did also include some additional context and/or suggestions on adopting the same compliance route. These were (in no particular order):

- Only brief details of an EMS audit should need to be provided to a regulator, to ensure a light touch approach.
- Only one EMS standard should be accepted as being equivalent to an ESOS assessment.
- ESOS compliance could be managed within the ISO14001 framework.
- Only ISO50001 would appear to meet the requirements of Article 8.
- There needs to be consistency between the requirements, scope and reporting of an ESOS assessment and an equivalent EMS audit.
- An organisation should be required to declare the compliance route (ESOS or EMS) in its reporting.

A smaller proportion of respondents did raise concerns regarding the consistency between, and equivalence of, ESOS assessments and EMS audits. Others included comments suggesting an alternative compliance route for EMS audits:

Concerns:

- An EMS often doesn't cover the full organisation and so is not comparable to an ESOS assessment covering the whole organisation.
- EMSs may only cover a proportion of an organisation's energy use. An Energy Management System (EnMS), such as one accredited to ISO50001, is likely to be more comparable to an ESOS assessment.
- The EMS compliance route under the ESOS should not be seen as a "soft option" for compliance.
- An EMS audit may not meet the minimum requirements of an ESOS audit as outlined in the Energy Efficiency Directive. There must, therefore, be a mechanism that can assess whether the EMS energy audit is ESOS compliant.
- The frequency of audit re-certification and monitoring by auditors under EMSs is not consistent with the proposed four-yearly assessment requirements under ESOS.

Alternative EMS compliance routes:

- Permit ESOS compliance via existing EMS compliance routes.
- EMS auditors could provide details to the Government, or a regulator, on the number of ESOS / Article 8 compliant audits undertaken within a given time period (e.g. annually)

Implications for DECC

A large proportion of the respondents to Q34 were keen to stress that if the Government permits ESOS compliance via an approved EMS that the two routes should be as close to equivalent as possible, both in terms of scope and compliance requirements, to ensure fairness.

Considerable differences between ESOS and an accepted equivalent EMS could encourage organisations towards the compliance route that is least burdensome and/or time consuming to adopt. The “easiest” option may not deliver the same energy saving benefits for businesses and Government. However, implementing an EMS is a significant undertaking for any organisation and so is likely to require significantly more effort to implement compared to undertaking an ESOS assessment. The business drivers in implementing an EMS go beyond just regulatory factors, but if ESOS compliance via an approved EMS is permitted then the scheme may encourage the adoption of EMSs by some businesses and therefore the ESOS would encourage the identification of energy saving measures (as well as good energy management) via another route.

Any alternative compliance route offered to ESOS mandated organisations via their EMS should be carefully constructed to ensure equivalency to an ESOS assessment.

4.9 Enforcement and administration

Q35. Who do you think should be appointed as the scheme administrator?

- a) The Environment Agency working alongside devolved agencies
- b) The National Measurement Office (NMO)
- c) Trading Standards
- d) Other (and if so, who)?

Results Summary

Total Respondents	Written Responses	Not answered
147	112	35

Table 22 Breakdown of responses to Question 35

Total responses received	111
Environment Agency	86
NMO	3
Trading Standards	1
Other	9
More than one option selected*	5
No selection (comments only)	8

*3 responses selected both EA and other, 1 response selected EA, NMO and other, 1 response selected NMO and other.

The majority of respondents (77%, 86 out of 112) stated that the Environment Agency (EA) should be appointed as the administrator for ESOS. The key themes amongst these responses include:

- The EA has appropriate enforcement powers to police such a scheme.
- The EA already administers a number of other relevant schemes such as EU ETS, CRC and CCAs. This provides the following advantages:
 - An existing skill set for scheme administration.
 - Streamlining of approach across a range of schemes, and facilitation of discussions where organisations participate in more than one scheme.
 - Optimisation of administration costs.
 - Application of lessons learned from other schemes.
- The EA is able to remain impartial.

A number of these responses were caveated by concerns that guidance documentation should be more straightforward and accessible than that which was developed for CRCEES, and that it must be ensured that the EA is allocated sufficient resource to administer the scheme.

A number of respondents (11 out of 86) who selected the 'EA as administrator' option commented that they see this as being the EA/other regional agencies. This would mean that SEPA etc. would act as ESOS administrator within their own regions. No regional bias was noted amongst the respondents providing this comment.

A small number of respondents (3%, 3 out of 112) were in favour of ESOS being administered by the National Measurement Office (NMO). Arguments in support of this were based upon the NMO having sufficient ‘teeth’ to police the scheme effectively, and on its credibility in terms of knowledge and understanding of industry.

Some respondents made alternative suggestions for a scheme administrator. These included:

- CIBSE
- The Energy Institute
- Ofgem
- UKAS
- Gemserv
- DECC
- The set-up of a UK Office of Energy Efficiency to administer all schemes relating to energy efficiency.
- A tendering process to select an appropriate ESOS administrator. For example, Gemserv commented:

“Whilst we do not disagree with the rationale for selecting an existing public body to administer ESOS, from a participant perspective and based on our experience of administering a number of national schemes similar to ESOS, Gemserv strongly believes that there should be a tender process for the selection of the ESOS scheme administrator. Each scheme of this nature is unique with its own set of requirements, participants and skills required to implement the requirements, therefore the scheme administrator needs to be experienced and possess the expertise required to implement these requirements. In addition, scheme costs are always of paramount importance to participants, and to Government, and tender exercises are the most effective way of ensuring value for money and strict delivery control. Whilst this approach can create a short-term resource requirement for Government to run the tender process, it will ultimately ensure the scheme is delivered in the most cost effective way, which is vital particularly when gaining support for a new scheme”.

In a number of cases, where alternative suggestions were made, the respondent felt that the administration of CRCEES by the EA has been overly complex, and that they would therefore prefer to see an alternative administrator.

Implications for DECC

There is clearly a strong argument and support for DECC to appoint the EA as ESOS administrator. The majority of respondents are in favour of this and believe it to be a logical approach due to the transferability of skills and experience from the other schemes administered by the EA, and the potential to minimise administration costs and improve consistency. This is a well-supported viewpoint and would facilitate the easy adoption of lessons learned from current schemes. The responses received show that there is also support for regional agencies playing a role in ESOS. It may be appropriate/necessary to follow a similar framework to that adopted for the CRC, whereby the EA acts as the administrator with the devolved agencies playing a role in audit and enforcement.

It is interesting to note that the suggestion of a competitive tender process to select an administrator has also been received. In considering this, DECC should take into account whether or not such an option could be effectively used to enforce a legal requirement. If this route were to be taken, it may be more appropriate to combine it with administration by the

EA/devolved agencies, by allowing the outsourcing of some administrative activities via a tender process, whilst still retaining the authority held by the Agencies.

Commentary on the other suggestions received for a scheme administrator is provided in the table below.

Table 23 Commentary on other suggested scheme administrators

Suggested administrator	Commentary
CIBSE	Could potentially play a role in the accreditation of assessors, which may conflict with administering the scheme.
The Energy Institute	Likely to lack sufficient resource and experience for administering such as scheme.
Ofgem	Acts as the regulator for participants in the energy supply/generation market. This may conflict with regulating consumers.
UKAS	Could potentially play a role in the accreditation of assessors, which may conflict with administering the scheme.
Gemserv	Already has roles as the Smart Energy Code administrator and Green Deal oversight and registration body. May lack the necessary 'teeth' to administer the ESOS scheme.
DECC	Focus is on policy and regulation development rather than administration.
Set-up of a UK Office of Energy Efficiency	Would require investment. Streamlining with other schemes would be possible, but further investment required to transfer these from the existing administrators.

DECC must ensure that ESOS is developed in such a way that the administrator will receive suitable funds to administer the scheme effectively. The administrator will also need to be given sufficient powers to run the scheme. This will improve compliance and provide stakeholders with confidence in the running of ESOS. DECC should also ensure that the administrator is given a clear remit to streamline ESOS with other relevant schemes, and to facilitate cross-scheme discussion as appropriate. This will improve efficiency and confidence amongst stakeholders who are impacted by a variety of schemes.

Q36. Do you agree there should be some form of penalty applicable in the following instances, and are civil sanctions sufficient to address these misdemeanours?

- a) Failure to notify the scheme administrator.
- b) Failure to carry out an audit to the required standard.
- c) Failure to provide information when requested by the scheme administrator.
- d) Deliberately misleading the scheme administrator in response to a formal information request.
- e) Refusing to allow the enforcement body access to premises, where access is reasonable (e.g. in order to ensure accuracy of audit findings)

Results summary

Total Respondents	Responses to Q36	Those who answered			Not answered
		Yes	No	Only comment	
147	110	84	11	15	37

76% of respondents (84 out of 110) supported the proposals to have penalties in place for misdemeanours. These responses generally supported the specific misdemeanours set out in the consultation document, but did not tend to give specific statements of support or otherwise against every individual option set out in the question. Respondents commonly stated that civil penalties would be the main driver for ensuring a high level of compliance with the scheme, and in one instance highlighted that they must be robust enough to ensure that it is not more advantageous to not comply. Respondents were also generally in favour of aligning penalties with other current schemes such as the CRCEES.

In many cases, respondents in favour of penalties commented that these should be discretionary and flexible in nature, and should be proportionate to the scale of the misdemeanour. Respondents did not suggest specific values for penalties. There was a general consensus that the regulator should work with participants to undertake corrective action in the first instance, with many respondents indicating that penalties should only be applied in cases of deliberate non-compliance. Several respondents stated that financial penalties should be recycled back to the scheme administrator. In these cases it was not made clear what the respondents anticipated that the administrator would do with these funds, although one possibility is that they would be used to run the scheme, thereby reducing any potential charges to participants.

In a number of cases, respondents were keen that the list of misdemeanours be defined in detail and several expressed concern about the appropriateness of giving the enforcement body a right to enter premises. In several cases the misdemeanour of ‘failure to carry out an audit to the required standard’ was considered to be too subjective. Some respondents expressed concern that the position of landlords must be better considered, as they do not generally have a right to enter their tenant’s premises to undertake energy audits.

A number of respondents commented that penalties should be applied not only to the businesses, but to the assessors undertaking the audits, where appropriate.

10% (11 out of 110) of respondents disagreed that penalties would be appropriate for ESOS. The issues raised in these cases included:

- The benefits of ESOS compliance have not been demonstrated to those organisations that are already implementing large energy efficiency audits. No further elaboration was given as to why this would justify that penalties would be inappropriate.
- Penalties would make ESOS a significant burden for businesses which is not needed as rising energy prices and existing schemes are already driving action in this area.

In its response the CBI suggested adopting the same 'comply or explain' policy that will be applied to mandatory greenhouse gas reporting, commenting:

"Existing energy efficiency schemes include penalties for non-compliance, but the CBI believes that Fixed Monetary Penalties or other Discretionary Requirements for failing to inform the scheme administrator about an ESOS audit, when companies are themselves the beneficiaries, would be overly-punitive. Allowing businesses the freedom to 'comply or explain' would reduce the additional reporting burden and increase support for the scheme as a useful energy management tool".⁷⁰

There were two instances in which respondents answering 'no' to this question went on to offer a different view point in their accompanying comments. These included agreement with issuing penalties as a last resort for deliberate non-compliance, and the introduction of penalties at a later date once the scheme is up and running and any teething problems are overcome.

Further comments received included a request that more guidance is issued on which elements of the scheme are mandatory (beyond the requirement to undertake an audit). There was an indication from many respondents that a clear and simple scheme with robust guidance would be essential in minimising the need for penalties.

Implications for DECC

There is significant support for civil penalties being applied for non-compliance with ESOS. However, it will be important that DECC issues clear guidance on these penalties and their associated misdemeanours in order that participants understand the meaning of non-compliance and the associated risks. In developing this guidance, DECC should give careful consideration to the way in which the penalties will be identified and applied, as well as ensuring sufficient flexibility to allow a penalty to be issued which is proportionate to the scale of the associated misdemeanour, and for the administrator to apply discretion when issuing penalties. This will require clear guidance for the administrator in order to ensure consistency across the scheme. DECC must also consider how to determine where the penalty should be applied i.e. are there cases in which it would be appropriate to penalise the assessor instead of, or in addition to, the business?

In the event that financial penalties are imposed, a decision must be taken on where the associated funds are directed. It may be appropriate to allow recycling to the scheme administrator to supplement funding of the running of ESOS.

⁷⁰ CBI response

Appendices

- Appendix 1 Full list of consultation respondents
- Appendix 2 Summary of response data Q1-Q37
- Appendix 3 Detailed analysis of Q37

Appendix 1 – Full list of respondents

No.	Organisation	Sector
1	CONFIDENTIAL	Universities and other bodies
2	Andrew Cooper	Property / land management
3	Durham University	Universities and other bodies
4	UCL Energy Institute	Universities and other bodies
5	Degree Days Direct Limited	Green Economy
6	Certsure LLP inc ELECSA and NICEIC	Other primarily office based companies
7	Complete Integrated Certification Services Ltd	Other primarily office based companies
8	Heineken UK	Retail
9	Lloyds Banking Group	Other primarily office based companies
10	iVEES (trading as Consortio Ltd)	Green Economy
11	Vale Europe Ltd	Energy intensive industries
12	Utility Partnership Ltd	Other primarily office based companies
13	Wolseley UK	Retail
14	Enerit	Retail
15	Calor Gas Limited	Retail
16	University of Cambridge	Universities and other bodies
17	Yorkshire Water Services	Utilities
18	UK Green Building Council	Charities, NGOs and agencies
19	Anglian Water	Utilities
20	Forth Ports Limited	Energy intensive industries
21	Heathrow Airport	Energy intensive industries
22	Freight Transport Association	Trade bodies
23	United Kingdom Accreditation Service (UKAS)	Green Economy
24	Energy International	Green Economy
25	Electrical Contractors' Association	Trade bodies
26	British Gas	Utilities
27	Sellafield Ltd	Energy intensive industries
28	British Printing Industries Federation	Trade bodies
29	Dairy UK	Trade bodies
30	Cardiff University	Universities and other bodies

No.	Organisation	Sector
31	Utilitywise PLC	Other primarily office based companies
32	National Grid	Energy intensive industries
33	Peel Holdings (Management) Limited	Other primarily office based companies
34	UK Contractors Group	Trade bodies
35	Oil & Gas UK	Trade bodies
36	Tata Steel UK Ltd	Retail
37	Wood Panel Industries Federation (WPIF)	Trade bodies
38	Thames Water Utilities Ltd	Utilities
39	Camfil Ltd	Light industry and manufacturing
40	UK Major Ports Group	Trade bodies
41	UK District Energy Association	Trade bodies
42	Gemserv Limited	Other primarily office based companies
43	Food and Drink Federation	Trade bodies
44	Cleveland Potash Limited	Retail
45	Energy Saving Trust	Green Economy
46	AC & F Hay	Green Economy
47	CONFIDENTIAL	Other primarily office based companies
48	United Kingdom chapter of the Association of Energy Engineers	Trade bodies
49	Telereal Trillium	Property / land management
50	Inteb Sustainability Ltd	Other primarily office based companies
51	Siemens plc, Industry Sector UK	Light industry and manufacturing
52	Economic Energy (UK) Ltd	Other primarily office based companies
53	Retail Energy Forum	Trade bodies
54	CONFIDENTIAL	Energy intensive industries
55	Energy + Efficiency Industrial Partnership	Trade bodies
56	Northern Powergrid Holdings Company	Utilities
57	BizDef Limited	Other primarily office based companies
58	Dwr Cymru Welsh Water	Utilities
59	InterContinental Hotels Group	Hotel chains / hospitality
60	Saint-Gobain	Light industry and manufacturing
61	Association of Train Operating Companies	Trade bodies
62	Energy Institute	Trade bodies
63	The Society of Motor Manufacturers and Traders (SMMT)	Trade bodies

No.	Organisation	Sector
64	British Glass Manufacturers' Confederation	Trade bodies
65	CONFIDENTIAL	Energy intensive industries
66	WWF UK	Charities, NGOs and agencies
67	CONFIDENTIAL	Energy intensive industries
68	Outokumpu Stainless Ltd	Energy intensive industries
69	EDF Energy	Utilities
70	DONG Energy Power (UK) Ltd	Green Economy
71	Hilson Moran	Green Economy
72	Confederation of Paper Industries	Trade bodies
73	British Pump Manufacturers Association Ltd	Trade bodies
74	AB Sugar	Energy intensive industries
75	E.ON UK	Utilities
76	British Beer & Pub Association	Trade bodies
77	FirstGroup Plc	Transport
78	CONFIDENTIAL	Green Economy
79	Environmental Strategies Ltd	Green Economy
80	JRP Solutions	Green Economy
81	Oxford Instruments Plc	Light industry and manufacturing
82	RWE Npower Ltd	Utilities
83	SSE	Utilities
84	British Telecommunications plc	Utilities
85	Carbon Trust	Charities, NGOs and agencies
86	Emerson Process Management	Light industry and manufacturing
87	Carbon Credentials	Green Economy
88	CONFIDENTIAL	Green Economy
89	Port of Dover	Transport
90	Manufacturing NI	Charities, NGOs and agencies
91	Willmott Dixon	Property / land management
92	CIBSE	Trade bodies
93	Cavity Insulation Guarantee Agency (CIGA)	Charities, NGOs and agencies
94	Camfil Ltd	Light industry and manufacturing
95	MEUC	Trade bodies
96	Verco	Charities, NGOs and agencies
97	Balfour Beatty Group	Other primarily office based companies
98	Lafarge Tarmac	Energy intensive industries

No.	Organisation	Sector
99	Combined Heat & Power Association	Light industry and manufacturing
100	Energy Management Alliance	Green Economy
101	UK Petroleum Industry Association	Trade bodies
102	Kier Group plc	Property / land management
103	Association for the Conservation of Energy	Green Economy
104	Mineral Products Association	Trade bodies
105	British Ceramic Confederation	Trade bodies
106	British Property Federation	Trade bodies
107	Chemical Business Association	Trade bodies
108	Sahaviriya Steel Industries UK Ltd	Light industry and manufacturing
109	Argyll Environmental Limited on behalf Landmark Information Group Ltd (LMIG)	Other primarily office based companies
110	CONFIDENTIAL	Trade bodies
111	Institute of Environmental Management & Assessment	Trade bodies
112	Hanson UK	Energy intensive industries
113	BCSC	Trade bodies
114	Scotch Whisky Association	Trade bodies
115	Greenpeace UK	Charities, NGOs and agencies
116	CBRE Limited	Property / land management
117	British Retail Consortium	Trade bodies
118	ScottishPower	Utilities
119	Phenolic Foam Manufacturers Association	Trade bodies
120	Quidos	Green Economy
121	WEMS International Ltd	Light industry and manufacturing
122	INEOS Group	Light industry and manufacturing
123	Enviro-Mark Solutions Limited & Achilles Information Ltd	Green Economy
124	Trinity Mirror	Energy intensive industries
125	EEF, the manufacturers' organisation	Trade bodies
126	Environmental Industries Commission	Trade bodies
127	Chemical Industries Association	Trade bodies
128	Associated British Ports	Energy intensive industries
129	John Lewis Partnership	Retail
130	Carbon Saver Ltd	Green Economy

No.	Organisation	Sector
131	CEMEX UK Operations Ltd	Energy intensive industries
132	National Energy Foundation	Charities, NGOs and agencies
133	Wessex Water Services Ltd	Utilities
134	BSI Group	Other primarily office based companies
135	B:SSEC	Other primarily office based companies
136	Peel Ports	Property / land management
137	Ibstock Brick	Light industry and manufacturing
138	Severn Trent	Utilities
139	ESTA	Trade bodies
140	Building & Engineering Services Association	Trade bodies
141	Rockwool	Light industry and manufacturing
142	Energy UK	Trade bodies
143	CONFIDENTIAL	Retail
144	CBI (Confederation of British Industry)	Trade bodies
145	Green Investment Bank	Other primarily office based companies
146	British Vehicle Rental and Leasing Association	Trade bodies
147	Costain PLC	Light industry and manufacturing

Note 1: There were 9 confidential responses to the consultation.

Appendix 2 – Summary of results

Question	Respondents	Written response	Yes	No	Prefer A	Prefer B	Prefer C	Prefer D	Propose alternative	2%	10%	No answer
Q1 Evidence to assist with the impact assessment	87	87										60
Q2 Geographical coverage	120		104	3					13			27
Q3 Definition of 'enterprise'	103		75	7					21			44
Q4 Qualification date	108	108										39
Q5 New entrants to ESOS	110				57	38			15			37
Q6 Are the minimum requirements for ESOS reasonable	104		61	15					28			43
Q7 Should good practice guidance be developed	121		115	6								26
Q8 Energy spend threshold	106		80	26								41
Q9 The approach to calculating energy usage	107		90	17								40
Q10 Inclusion of energy intensity ratio	111		79	32								36
Q11 Energy use responsibility	117		92	25								30
Q12 Site visit discretion for ESOS auditors	114		96	18								33
Q13 Exemptions for DEC's and Green Deal assessments	106		65	41								41
Q14 International aviation and/or shipping	87				56	3	15		13			60
Q15 Exemption of Green Fleet reviewed vehicle fleets	74		65	9								73
Q16 Employee travel on company business	90		65	25								57
Q17 ESOS assessment coverage for industrial processes	107		84	23								40
Q18 Issues for implementing ESOS assessments for industrial processes	97		68	29								50
Q19 Any additional exemption suggestions	90	90										73
Q20 Agreement with transitional arrangements	114		81	31					2			33
Q21 Capacity within the energy efficiency advice sector	90		37	28					25			57
Q22 Relevant existing qualifications /	91		63	15					13			56

Question	Respondents	Written response	Yes	No	Prefer A	Prefer B	Prefer C	Prefer D	Propose alternative	2%	10%	No answer
standards												
Q23 Proposals for lead ESOS assessors	115		92	22					1			32
Q24 Independence of in-house experts	101	101										46
Q25 Approach to accreditation	113				25	77			11			34
Q26 Quality assurance arrangements	115								35	38	42	32
Q27 Storage of ESOS assessment records	71		48	23								76
Q28 Survey based approach to collecting data on participants in ESOS?	97		35	62								50
Q29 Notification of inclusion in ESOS	106		94	12								41
Q30 Preferred approach for disclosure of ESOS assessments	112				24	27	32	29				35
Q31 If public disclosure – what information should be disclosed?	108	108										39
Q32 Reporting on key ESOS assessment findings to scheme administrator?	106		51	55								41
Q33 Options for meeting UK's reporting obligations to the EC	66	66										81
Q34 Compliance routes between EMS and ESOS	97		82	15								50
Q35 Who should be appointed as scheme administrator?	112				86	3	1	9	13			35
Q36 Should there be some form of penalty applicable, and are civil sanctions sufficient?	110		84	11					15			37
Q37 Are there any additional issues to be raised?	111	111										36

Appendix 3 – Detailed Question 37 responses

Please note that the quotes given in this section have been edited in some case to reduce their length.

Commentary

Many respondents were pleased to have had the opportunity to comment on ESOS and were supportive of energy efficiency.

A large number of responses said that they supported the scheme with provisos.

For example: 'in general, BT supports the proposed Government ESOS Scheme

- flexibility is needed for different businesses and operating environments
- the ESOS must be compatible with existing policies and is an opportunity to streamline the current policy landscape'

The majority of comments were around scheme flexibility and these are summarised in the section below:

Flexibility of the Scheme

Many respondents stressed the importance of flexibility and the importance of looking at all current regulations in this areas such as CRC, EU ETS, CCAs etc. to streamline reporting for companies.

A number of energy intensive industry, other companies and Trade Body respondents (such as Lloyds banking, FTA, Dairy UK, Tata Steel, Wood Panel Industries Federation, Dŵr Cymru, British Glass, Outokumpu Stainless Ltd, Beer and Pub Association, RWE npower, Keir Ceramics Federation, Chemical Business Association (CBA), CIA, SSI Steel, CEMEX, Ibstock, Oil and Gas UK, Forth Ports Limited, SMMT, SSE, Major Energy Users Council, Scotch Whisky Association, EEF and UK Steel, responded along similar lines to say essentially that companies with high energy use are already monitoring energy use and reducing this where possible. An additional high-level audit will not help with this and will divert resources from the activities which are being conducted which can actually reduce energy use.

Particular points from some of these companies are as follows:

A confidential respondent noted that 'Businesses who are exemplars of best practice, should be exempted from the requirement to comply with the ESOS scheme requirements so that they can better allocate their resources on improving their sustainability, the stated aim of the ESOS scheme. If this is not possible due to the requirements of the EU Energy Efficiency Directive, any additional legislation should add value to the business and lead to additional environmental improvements; and not simply constitute duplication and an extra burden of cost and bureaucracy.'

SMMT noted that 'The automotive sector has delivered significant improvement in energy efficiency, and many companies in the sector have ISO140001, are considering moves to ISO50001, and are also covered by climate change agreements (CCAs), the EU emissions trading scheme (EU ETS) and the carbon reduction commitment energy efficiency scheme (CRC), which help drive action. SMMT strongly supports maximising the usage of these schemes to demonstrate equivalency/compliance with ESOS. Industry is also concerned that given the complexity and speciality of the sites, external audits will prove very expensive and unlikely to identify energy savings potential beyond what the companies already know, therefore maximising use of internal compliance with ESOS should be sought.'

Oil and Gas UK noted that 'We would urge DECC to use this opportunity of implementing the Energy Efficiency Directive, 2012/27/EU, to simplify the UK's domestic policy landscape, rationalising the number of measures and instruments, to create a more coherent set of

mechanisms which would have a greater chance of achieving the desired end and at a lower cost to industry and commerce.'

The Confederation of Paper Industries noted 'Energy-intensive industries such as paper are already highly committed to efficient use of energy because of the amount we use (and its cost!) and because of our participation in schemes such as CCA, EU ETS and CRC. We doubt whether a mandatory £25,000 energy audit (DECC cost estimate, box 4) of a paper mill will deliver value for money for us (especially when one considers our experience of Carbon Trust assessments and energy assessors' lack of detailed knowledge of paper industry operations). We believe that in-house assessors are likely to be best-placed to deliver effective and relevant advice for our sector. This consultation seems to have been devised based on organisations that do not have large industrial manufacturing operations – witness the concentration on DECs for buildings and employee transport. Look at the example of JCB (box 1) and compare with a typical paper mill: HHMs (got them); lighting and heating controls (we do that); air compressor monitoring and leak detection (tick), staff awareness (yes) and integrating energy saving measures into standard shutdown procedures (yes). Whilst there is still potential for further energy efficiency improvements in large manufacturing industry there is undoubtedly more potential for improvements in organisations that fit the non-heavy industry profile. Given this, the ESOS scheme should be targeted at this type of organisation and the time and effort of the assessors used appropriately and effectively.'

UCL noted that 'Companies that have already been certified to standards such as ISO 50001 and ISO 140001, or undertaken assessments through the non-domestic Green Deal, Display Energy Certificates (DECs) and Enhanced Capital Allowances (ECAs), could automatically be certified to the proposed ESOS certification (as long as those assessments match the requirements of ESOS and the directive). The main issue with the current ESOS proposals is that they are not ambitious and simply undertake the minimal action for compliance with the directive. Presently, an organisation obligated to have an energy audit does not have to follow up any of the recommendations. Thus, there is the risk that the administrative costs of the scheme could result in no or little improvement in energy efficiency. Adding in a requirement to report an annual improvement in energy efficiency (or to state why an improvement did not occur in a given year) could overcome this. A similar, alternative idea is to make it compulsory for the company to give a report after four years to show how it acted on the audit's recommendations.'

British Glass noted: 'Unfortunately, the ESOS scheme is not expected to help energy intensive industries such as glass to achieve greater energy efficiency. We understand the requirement under the EED and government's logic that by measuring energy consumed within an organisation, it becomes easier to control and reduce it. This may be practical and helpful for other sectors who do not currently monitor their energy use, such as commercial organisations. Because energy is such a high expenditure for glass makers (one third of production costs) the companies already monitor their energy use in detail and have done so for many years. Great energy efficiency improvements have already been achieved in the glass sector even before the introduction of any environmental legislation.

Glass companies have already identified the energy saving opportunities relevant to them and are in the next phase of the process which is to remove barriers to implementation. Due to competition, it is not always possible to reveal these options outside of the organisation.

The ESOS audit therefore becomes simply a 'box ticking' exercise and a drain on resources. We cannot see how this exercise will be useful either to energy intensive companies or government.

The main barrier to the implementation of greater energy efficiency measures, is access to funding. Overcoming barriers to implementation will be thoroughly investigated through the decarbonisation roadmaps to be built with DECC in 2013/2014. We believe this will be a more useful exercise for promoting greater energy efficiency and long term decarbonisation.'

Forth Ports Ltd note that ‘Based our experience of consultant provided energy audits to date and the indicative costs we have received from consultants that have previously worked on our sites, we believe that DECC have significantly underestimated the costs. If we were to implement the likely recommendations, even if they could achieve the required IRR hurdle rate, we do not believe they would recover the cost of these assessments. Any energy efficiency actions must pay both for their own capital costs, but also pay for the initial surveys and therefore the cost of compliance with this scheme. We, as with many companies, have already tackled the easy actions, what is left needs to be very carefully considered to make sure that there are genuinely efficiencies capable of being achieved.’

The Combined Heat and Power Association (CHPA) noted: ‘the ESOS proposals will need to walk a fine line between implementing measures which do not result in a simple ‘tick box’ exercise for businesses, while also ensuring businesses and industrial sites, which already do extensive work to reduce energy use and costs, are not required to duplicate or redesign existing energy efficiency auditing practices.’

For companies that are ‘energy mature’ a high level audit is very unlikely to uncover new opportunities; they will generally only be achieved by detailed work programmes facilitated by expert teams working in close cooperation with the process plant. These companies should be exempt from further ESOS audits.

Some organisations were keen that the scheme remains as simple as possible and sticks as closely as possible to the ‘minimum requirements’ stipulated in the directive with additional features being reserved for best practice guidance. Others were keen to see flexibility for different businesses and different operating environments with an overly prescriptive approach being avoided for compliance and reporting.

Some organisations thought that ESOS would be most useful to businesses and less likely to create additional administrative burden, if eligible companies were allowed to make use of existing data and have the choice to use in-house auditors. Whereas others thought that higher savings would come from an independent auditor with cross-sector experience. Some suggested giving flexibility in the level of audits that are required.

One respondent noted that ‘the requirement on businesses to include an energy intensity ratio within their assessments, which can then be compared against earlier assessments over time to build up an ‘energy consumption profile’, is a challenge, as for many companies, the business that they audit in one year will be substantially different to the business audited four years previously. The ESOS should therefore take into account the realities of business growth and its effects on energy intensity and overall energy usage over time.’

Other respondents noted that the EC explanatory note allows organisations to internally phase different parts of its audits focusing on different parts of operations over a period of time rather than all at once and that this was not picked up in the consultation. They noted that this option could be very beneficial to organisations.

General

UK ACE noted that ‘at least one thousand organisations likely to be included in this scheme were never previously involved with any similar monitoring requirements. There will be a continuing need to ensure familiarity with obligations for such entities, especially in the non-profit and third sectors.’

Links to other legislative requirements/schemes

A common theme was that care must be taken to ensure the design of ESOS addresses the potential for overlap with the diverse range of regulatory instruments already in place to tackle carbon and climate-related issues. Some saw it as an opportunity to review the synergies and to remove remaining difficulties faced by businesses in their implementation.

The Energy Institute noted that ‘By complementing and enhancing the current policy landscape, ESOS will create opportunities for businesses and will lead to new good practice guidance being developed.’

The CBI noted that ‘The Energy Efficiency Deployment Office (EEDO) should commission a comprehensive evaluation of the entire business energy efficiency policy framework, in order to understand its effectiveness in driving efficiency, and ensure that new policies add value to the landscape. Of particular importance is the need to streamline reporting requirements for the various instruments and create a universal approach that allows businesses to collect and report the data in the same way, thus minimising administrative burden and ensuring that these policies are useful investment tools.’

The Green Deal ‘eligible measures’ list for non-domestic buildings details product types that are capable of paying for themselves over time. While the actual cost effectiveness of any product type depends on the building in question and how it is used, using this list as the basis for selecting recommended energy saving actions would more closely align ESOS with the Green Deal as an optional funding source for energy efficiency improvements.

UKGBC noted ‘We welcome the recognition that is given to Display Energy Certificates and their role as a key tool for owners and occupiers of commercial buildings to measure and manage their operational energy use. We fully support the intention to make them part of the compliance “toolbox” for ESOS. However, while we agree it may not be proportionate to require organisations to undertake DEC’s for all their buildings as part of their ESOS compliance strategy, we believe there are considerable benefits that can arise from more widespread use of DEC’s which the Government should consider further.’

NEF noted that ‘There is no place to comment on Option 6 (paras 6.31-6.32) on requiring DEC’s for all buildings as the Government sees this as “gold-plating”. Our view is contrary to this. We believe that in certain circumstances using DEC’s may be an acceptable alternative to a more conventional ESOS audit. However we would expect DECC to explore this more in Best Practice guidance, and not to mandate 100% DEC’s as either a preferred or prohibited approach.’

IEMA said that they ‘support the positive use of ISO14001 for energy management and carbon reduction. We acknowledge that certification to ISO14001 will not automatically address the ‘audit’ requirements for large enterprises in Article 8 of the EU Energy Efficiency Directive. We recognise however that ISO14001 is used effectively by many organisations for energy efficiency, especially if supported by additional energy reviews and assessments. We see ISO 14001 with accredited certification and energy auditing as an effective option for supporting ESOS compliance and effectively the market choice standard (significantly higher up take than ISO50001). In this context we believe DECC should prioritise its use as a potentially effective ‘lighter touch’ response option for thousands of businesses.’

SMEs

More than one respondent thought that the scheme should be extended to SMEs or a similar scheme set up.

For example, Carbon Saver noted that they ‘do not agree with paragraph 3.7 that the UK is committed to sufficient activities with respect to SMEs to comply with this aspect of the directive. With millions of SMEs in the UK, more needs to be done to actively promote this and urge the government to consider tax breaks, grants and the development of cost effective programmes specifically targeted at the SME sector. They do not think that the Green Deal will be enough for SMEs.’

Transport

There were some specific comments on transport which are given below:

MEUC noted that ‘On the question of transport, your consultation contains the following relevant extracts from Energy Efficiency Directive – “annex VI (b) comprise a detailed review of the energy consumption profile of buildings or groups of buildings, industrial operations or installations, including transportation;” this appears to be the only reference to transportation. DECC have chosen to use the following in the consultation “The Directive does not exclude energy usage from international aviation or shipping from the scope of energy audits”

however from what I can see neither does it specifically include international aviation or shipping. This is what I mean by pet topics that is typical of DECC's approach to EU Regulation in that the UK look to expand the scheme rather than just implement it. All your transport proposals are extensions of the EU directive, the UK should not, once again, be trying to "lead the World" by controlling international aviation and shipping, which are topics International Governments have failed to address. This audit regulation also should not be used to promote electric vehicles in order to meet our 2050 energy targets. Company travel, including employee use of their own vehicles, is already well controlled in most organisations.'

FTA is concerned about the lack of current detail on how a transport operation could be audited satisfactorily. They believe that the Logistics Carbon Reduction Scheme (LCRS) offers a compliance route for freight operators to comply with ESOS for transport.

Marketing ESOS

One respondent commented that in order to demonstrate success, it is important that the government defines what success will look like. It would be good to set out the vision for ESOS, such as indicating how the ESOS-identified energy efficiency savings would contribute to the UK's long-term ambition to reduce emissions by 80% on 1990 levels by 2050.

Other respondents noted the importance of marketing the scheme.

Timescales

Concern was expressed regarding the timescales for implementing the regulations and publishing the best practice guidance, accreditation standards and accreditation methodologies.

One respondent suggested that DECC should consider delaying the in scope and start dates as was done with CRC. If this is not done then organisations should be allowed to use existing audits/surveys they have had within 4 years to the energy audit deadline.

EDF noted that 'The ESOS directive is not cost effective for process industries where equipment may have a working life of 20 years. Therefore, auditing on a four year cycle is unlikely to deliver any benefit.'

Concerns

There was concern over whether the ESOS audits would be of sufficient quality to help companies improve energy efficiency.

Questions raised

A number of questions were raised which are included here for consideration:

How will opportunities identified through ESOS be implemented?

What is the timetable from 3 October onwards?

How will the audit process be reviewed during the scheme?

There is no reference in the consultation of transfer of findings, as required by the Directive. The Directive prohibits clauses preventing the findings from the audit from being transferred to any qualified/accredited energy service provider and there is a lack of clarity as to how this will be enacted. (EDF)

How will the actual scheme performance be measured?

There is also a question of how the Air Conditioning Inspections, which are also mandatory under the EPBD regulations, will be integrated with the implementation of ESOS. BCSC would like clarification.

Wessex water:

Wouldn't it just be easier to mandate the implementation of the ISO150001?

The consultation hasn't been very clear about what 'energy' actually includes, i.e. fuel oil, biomass boilers, other forms of self-generation fuels.

The consultation hasn't been very clear about how self-generation will be dealt with, some issues we have identified with other schemes are listed below.

Will monitoring be on input fuel or output power (i.e. for diesel)?

If input fuel are you interested at time of purchase or time of use (standby generation use can be very intermittent)

How will you deal with the export proportion of power used in the case of distributed generation?

How will you deal with used power use on site, and does it matter if it comes from a green source (renewables) or a brown source (diesel generation) or another source (energy reclamation from other source i.e. turbine from pre-pumped water).

Is it going to matter to you how green the green energy is? Some returns don't regard generation as fully renewable unless it is eligible to be awarded ROCs/FITs and they are retired without being used. For others this energy is effectively green as it has zero emissions associated with it.

How are you going to deal with third party generators attached to our site, i.e. if we sold our roofspace to a third solar party, and got free electricity in exchange for rental.

Further consultation

One respondent noted that there was detail missing from this consultation, such as the precise scope of the audits, which will have a considerable impact on the cost/benefits of the scheme, and asked that this guidance be subject to further consultation.

Guidance

The use of non-statutory good practice guidance to help inform ESOS assessors, alongside the minimum requirements of legislation, will provide businesses within the scope to take a tailored approach to their audits. It is important that the government does not write the guidelines to be set in stone, but leaves space for updates and alterations as the energy management needs of businesses change over time.

Governance

There needs to be clear lines of accountability and responsibility, with sufficiently transparent escalation routes and independent decision-making provisions. A robust governance structure is vital for the reputation, and hence success, of a scheme and essential for ensuring it can be delivered in the most cost effective and efficient way.

Adoption of Energy Efficiency Directive in other EU Member States

The CBI understands that the government will seek to work together with other EU Member States to ensure a comparable transposition of the Energy Efficiency Directive requirements, which is vital to ensure that UK businesses operating across Europe are not subject to vastly different measuring and reporting requirements in each Member State. Other respondents echoed this point.

Ideas for Scheme improvement

Ideas for scheme improvement which were presented for consideration are given below:

New surveys should only be required if the building use or systems change. A requirement for continual improvement would be better than surveys every 4 years.

The ESOS regulations do not deal with meter failure and the implications for participants or the licensed energy provider. Meters do fail, and will continue to do so and this needs to be considered in relation to the requirement hold records (EDF).

The UK Green Building Council (UK-GBC) noted that 'The scheme has developed in such a way that it will potentially lead to participants to do the minimum required in order to comply, rather than driving ambitious action. An audit scheme that required a greater level of resolution in both the measurement of energy use and in the provision of energy-saving recommendations, as well as an element of benchmarking, would have far greater potential to help realise the estimated £17.6bn of cost-effective energy efficiency opportunity still available across the commercial sector. As such, we propose that consideration should be given to mandating – rather than leaving to the discretion of the individual auditor – the gathering and reporting of energy use at the “facility” level. Once in hand, this information should allow for facilities to be easily and cheaply benchmarked and for those with the worst performance to be targeted for more detailed analysis. In taking such an approach it is likely that the Government would better meet the requirements of the Directive, and respond more appropriately to the evidence it cites, which states that a common complaint from organisations is that recommendations they receive are often not sufficiently specific for them to take meaningful action.'

It is important that once the scheme is up and running, there is consistency and any reviews are clearly planned, so that people have confidence in its longevity.

Reporting should be kept to a minimum, through the use of de minimis provisions and excluding energy use not paid for directly by the organisation - such as tenanted/leased operations and 'grey fleet'.

An arbitration process may be required to ensure an agreed interpretation of the standard is applied. This is particularly important for large, complex, unique industrial processes.

The main barrier to the implementation of greater energy efficiency measures is access to funding. Overcoming barriers to implementation will be thoroughly investigated through the decarbonisation roadmaps to be built with DECC in 2013/2014. We believe this will be a more useful exercise for promoting greater energy efficiency and long term decarbonisation.

We must not accept the substitution of EMS for compliance with ESOS without more thought and without setting out some clear rules especially in respect of scope and boundaries.

It was suggested that the scheme name should be Energy Audit Scheme or similar to make it clear what the scheme covers.

E.ON believe that it would be right to exclude energy generation, where this is a primary source.

District Heating

There were differing views on district heating as follows:

ESOS should not consider or bring in options to consider district heating schemes for power stations or nuclear power plants. These issues are dealt with under existing regulatory frameworks. There may also be over-riding security, safety or economic reasons why district heating schemes are not viable in the UK for our power stations. (EDF)

Although the Energy Efficiency Directive clearly encourages the consideration of potential heat network development and connection, it appears this has been omitted from DECC's proposals for ESOS. (UKDEA).

Decentralised generation, connection to a local heat network, demand side response and energy storage must be adequately accommodated in ESOS energy audits and as possible energy efficiency recommendations. (EMA)

Buildings and Construction

UK Contractors Group (UKCG) ‘We believe there should be a greater focus on buildings, as there is currently a gap in this area, yet it is the one area where there is commonality across the board i.e. measuring, disclosing and improving the efficiency of commercial buildings can be tackled through one approach whereas industrial processes and transport will differ with every organisation. We therefore support the UK-GBCs proposal, for a benchmarking approach for buildings. We do not feel that a single indicator or metric (as currently proposed) would be sufficient and believe that ESOS assessments should require assessment of energy use and emissions across separate indicators for buildings, transport and industrial processes.

The key focus areas of buildings, transport and industrial processes do not fit entirely with the construction sector. As we have already seen happen with CRC EES, there is a risk that construction falls into a ‘grey area’. Construction projects can use large amounts of electricity and gas oil but it is not obvious within the consultation how this would fit into the scheme and which processes or activities would be included. We believe further consultation needs to take place to work on these and other points of detail.

As such, we support the view held by the UK-GBC, that the scheme should mandate – rather than leaving to the discretion of the individual auditor – the gathering and reporting of energy use at the “facility” level. Once in hand, this information would allow for facilities to be easily and cheaply bench marked, and for those with the worst performance to be targeted for more detailed analysis.’

Landlord/Tenant Issues

Given that an organisation can only implement energy savings measures where they actually control the equipment or process we would strongly urge that an “end use” and “operational control” test be applied by the ESOS auditor as to what consumption or equipment should be in the scope of an audit. This will ensure that there is not an unenforceable obligation on a landlord or a private network operator to give assessors access to tenants equipment or demise.

AB Ports ‘The scheme needs to be aligned with the CRC scheme as much as possible and there are opportunities to reduce the burdens to business and the administrators by doing this. The use of energy of tenants of private networks needs very careful consideration and it is our view that it is wholly inappropriate to make the provider of private networks responsible for the consumption of everyone on that network. In our ports many of the tenants to which we supply electricity are significant enough to be required to comply with this directive and as they are in operational control of the facility and are recharged for their consumption it would be inappropriate for this responsibility to lie with us as the counterparty to the bill from the supplier.’

UKMPG ‘The landlord/tenant aspect represents a significant issue for us. It is wholly inappropriate for us as landlord to be conducting audits of the energy performance of our tenants. Many of our tenants have complex industrial processes across wide areas in multiple buildings and open areas across our sites. As noted in your guidance (para 4.26) the directive requires that it is the organisation’s *own* (DECC emphasis) energy usage that is to be audited. *As landlord we have no control over the efficiency of the equipment within a tenanted facility.* Furthermore, by following this approach, there are a number of (presumably) unintended consequences and issues we wish to raise:

- The majority of port leases require the tenant to maintain the building fabric, fixtures and fittings
- A significant number of organisations that are not of a size and scale to participate in this in their own right will be captured
- The competitiveness of those small companies will be harmed relative to their similarly sized competitors – clearly we would have to recover the costs of auditing their business

- A market is created where those who want to hide their energy performance (if there is a public reporting element) can do so by moving to premises where the landlord is required to undertake and report the energy audit
- There is significant scope for mis-understanding from audit findings, where the performance of tenants can significantly distort the landlord's own position
- There is limited incentive for the tenant to take control of energy performance
- In many cases tenants build and maintain their own buildings within their leased areas
- It will be significantly more costly to create individual audits for each tenant, rather than have more general site based audits. Given tenants will have to pay for these, they will not want general audits, rather (and rightly so) bespoke audits for their premises. This increases the required time resource and therefore the cost, significantly. We could be coordinating, quite literally hundreds of tenant audits, quite possibly a full time administrative task.
- If the landlord supplies the electricity would the landlord audit the electricity and then tenant audit the gas (and other fuels) and their transport emissions – or would the landlord audit all aspects of their tenant's business? If the latter, would electrically powered transport fall to the landlord (as counterparty to the electricity) or the tenant and would that be all the transport or just the electrically powered transport?
- Does the fact that the tenant (if an SME and therefore not otherwise part of the scheme) is captured due to landlord inclusion in the scheme, mean that aspects that the landlord is not counterparty to fall into scope? Or are energy sources not purchased from the landlord exempt?
- If the tenant is of a scale to be sufficient to qualify in the scheme in their own right, does the fact that the landlord is conducting the audit for the electricity only (or all of the energy at a tenanted site, depending on the answer to the above) exempt the tenant at that site or across all sites from these regulations?
- The costs of the landlord/tenant aspect does not appear to have been factored into the impact assessment
- The issues and mistakes that have arisen in relation to the CRC scheme on the landlord/tenant relationship are being repeated

Several of our members are responding to the consultation and commenting in detail. In UKMPG we have one overall observation which is that the ESOS audit coverage and process should be as consistent as possible with the relevant requirements of the Carbon Reduction Commitment scheme. This will help to minimise additional burdens for ports and we suspect for other in scope businesses as well.'

UK Major Ports also noted 'We have one major specific concern about the ESOS proposals and this relates to Para 4.26 and associated Q11. We understand that it is the intention that landlords will be required to undertake a full energy audit for each tenant (including their industrial processes etc.).

The landlord/tenant issue represents a significant issue for ports as major industrial landlords as it has throughout the development of the Carbon Reduction Commitment mechanisms where there is still not a satisfactory outcome. It is wholly inappropriate for ports as landlord to be conducting audits of the energy performance of our tenants. Many of our tenants have complex industrial processes across wide areas in multiple buildings and open area across port estates. As noted in the consultation document (para 4.26) the directive requires that it is the organisation's own energy usage that is to be audited. As landlords ports have no control over the efficiency of the equipment within a tenanted facility.

Furthermore, by following this approach, there are a number of unintended consequences:

- Many port leases require the tenant to maintain the building fabric, fixtures and fittings
- A significant number of organisations that are not of a size and scale to participate in this in their own right will be captured
- The competitiveness of those small companies will be harmed relative to their similarly sized competitors – clearly our member ports would have to recover the costs of auditing their tenants business
- A market is created where those who want to hide their energy performance (if there is a public reporting element) can do so by moving to premises where the landlord is required to undertake and report the energy audit
- There is significant scope for misunderstanding from audit findings, where the performance of tenants can significantly distort the landlord's own position
- There is limited incentive for the tenant to take control of energy performance
- In many cases tenants build and maintain their own buildings – this means that even the building fabric aspects are outside the control of the landlord
- It will be significantly more costly to create individual audits for each tenant, rather than have more general site based audits. Given tenants will have to pay for these, they will not want general audits, rather (and rightly so) bespoke audits for their premises. This increases the required time resource and the cost, significantly. Each of our member ports could be coordinating, quite literally hundreds of tenant audits.

Our overall concern is that the issues and mistakes that have arisen in relation to the CRC scheme on the landlord/tenant relationship are being repeated. We hope that DECC will now re-examine this aspect of the ESOS proposals in the light of the comments above.'

Public Bodies

A few respondents noted that although public bodies are covered by other aspects of the European directive it would be good if the public sector were included in ESOS as they could then demonstrate leadership in this area.

Other comments

Heathrow noted 'It shouldn't be extended to cover other business processes, for example we already have a condition in our Environmental Permit for regular energy reviews of our boiler plant – or this should be replaced.'

National Grid would like to highlight the importance of peak consumption as well as total annual consumption and the impact that this has on their network investments. They would also welcome visibility of energy efficiency opportunities by an administrator in order to prepare and respond to market changes.

Camfil noted: 'So far there has been little attempt in the building HVAC sector to encourage short payback low cost to implement savings on energy. This opportunity has been overlooked and undervalued while previous schemes that have allowed large use of taxpayers money on 'feelgood' technology that does not deliver value for money benefits.'

Balfour Beatty "We believe that a universal carbon tax could be used to replace both CRC and ESOS and significantly reduce the amount of red tape for business.

For the tax to be successful it would have a clear trajectory similar to landfill tax and increase year on year. This would drive energy improvements across all sectors.

The carbon tax should be applicable to all businesses including SMEs. The revenues of the tax could be used to fund renewable technologies.

This is still a potentially pointless scheme. There is no incentive or requirement to implement any of the ECMs identified, as is still the case with EPCs and DECs. Therefore this will become a compliance based exercise, which is unlikely to deliver savings. The financial burden of the whole scheme would be better used for the implementation of measures."

EPFA ‘There is a clear need to emphasise the value of deep refurbishment in the scope of the audit, since UK Government is already identifying that it needs to do “everything, everywhere” to achieve the UK’s Climate Change targets. The bounds of apparent cost-effectiveness must not therefore be a limitation of thinking from the enterprises and auditors alike. There is a risk that auditors will think that enterprises will only be interested in the ‘minimum steps’ and thatr continuous improvement means an intervention every four year. This will prove less cost effective over a series of cycles.’ (2 respondents have said this).

Whilst this Government may not like “gold plating”, if it is done at no cost to the public purse, and only benefits the economy in terms of reduced carbon, and energy dependency – then it should be considered and not ruled out automatically. (2 respondents have said this).

Online monitoring – we see this as one of the best ways we can monitor and control energy use in the future, and there is no mention of this at all in the document. For example on a small sewage pumping station, it is better for us from an energy monitoring point of view to continually review the power use to flag up anomalies, rather than go to site once a year and review data. The requirements of the scheme could divert attention away from a much better method of controlling any power rises at site.’ Wessex Water.

We consider the measures for energy efficiency that are being developed in the Large Combustion Plant (LCP) Best Available Techniques Reference document (BREF) to be sufficient to ensure that energy efficiency is achieved in the power generation process. We also note that policies such as the EU ETS and the Carbon Price Floor (CPF) already act as strong drivers to reduce Green House Gas (GHG) emissions from power generation. Therefore we would not expect operations related to electricity production to be captured by ESOS.

BT’s Proposal for Streamline Reporting:

1. The introduction of an A-to-G colour-coded label on all electricity would provide consumers and companies with an easy and visible way to identify the CO₂e content of the electricity they purchase. Transparency of this information would result in some consumers requesting the option to purchase from a low-carbon source of electricity, thus stimulating a demand-pull for generators and suppliers to generate more low-carbon electricity.
2. An electricity carbon label could also improve transparency in reporting. Consumers would report on CO₂ emissions using the emission factor backed by their electricity carbon label. This could result in the retiring of grid averages in reporting and the double counting that occurs through these mechanisms.
3. Electricity carbon labels could also remove confusion surrounding green tariffs by creating an opportunity to combine the Climate Change Levy (CCL) and CRC into a more visible and easily understood A-to-G carbon levy. All consumers would still be incentivised to reduce their total consumption due to the associated levy framework, but less carbon-efficient energy (ie bands C-G) would carry heftier levies and therefore encourage greater consumption reduction as well as a switch to cleaner energy.
4. In order to stimulate both demand-pull and demand reduction we recommend the following changes within the Electricity Market Reform:
 - the CRC and CCL are merged with the Carbon Floor Price, with the CRC allowance cost paid to the energy suppliers in the same way as the current CCL
 - the price of carbon in the simplified scheme would be designed to ensure that there is no reduction in revenue to the Exchequer
 - the levy on electricity would be banded according to its carbon content. Tracking systems such as those used elsewhere in Europe would be used to track the generation of electricity and its associated carbon content, ensuring a straightforward scheme that avoids the risk of double counting of CO₂e emissions.

Verco Global

Option 6 – Mandatory site audits with DEC's for buildings

Even where an organisation's energy use is all from its use of buildings (except de minimis), "the Government considers that DEC's are incompatible with the principle of achieving increased energy efficiency in the most cost-effective way and is strongly inclined not to take forward this option". As a minor point, when assessing this option, one questions why 250m² is used as the threshold floor area (paras 31 and 6.31). A de minimis requirement for compliance via DEC's could be that the DEC's cover 1) all buildings over 1000m² (cited in para 2.7 because they are renewed annually) AND 2) 95% of the CO₂ resulting from the use of all their buildings (hereditaments). For many organisations, these two criteria will coincide and smaller buildings will not need to be included.

In general, the consultation seems to underplay the potential of DEC's as a tool to support either energy management activities or the reduction of emissions arising from the use of non-domestic buildings. The market research cites their relative ineffectiveness for public buildings. However, with a little nurturing after their launch in 2008, DEC's could and probably would have been a game changer. The research finds that most people (both members of the organisation with a DEC and members of the public seeing a DEC in a building) do not understand a DEC and/or do not view it as a significant motivator for action. The reader is given the impression that this is an inherent fault with the DEC instrument.

RICARDO-AEA

The Gemini Building
Fermi Avenue
Harwell
Didcot
Oxfordshire
OX11 0QR

Tel: 01235 75 3000
Web: www.ricardo-aea.com