EMA Carbon Reporting Working Group Report on

MANDATORY GREEN HOUSE GAS REPORTING

& CRC ENERGY EFFICIENCY SCHEME

April 2013

The Energy Managers Association (EMA) was established by Lord Redesdale at the beginning of 2012 and currently represents Energy Managers from companies with a collective energy spend of around £3 billion.

The EMA is a membership organisation that represents Energy Management professionals on an individual (non-corporate) basis. It aims to serve the needs of its membership and improve the standing of the Energy Management profession.

More information on the Energy Managers Association can be found at www.theema.org.uk

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Abstract

The review of CRC Energy Efficiency Scheme ("CRC") and the UK Government's announcement that it intends to introduce the mandatory reporting of Green House Gas ("GHG") Emissions for quoted companies represents a significant opportunity to review the current and long term landscape of carbon emissions reporting and taxation within the UK.

This report has been compiled by a Working Group within the Energy Managers Association (EMA) consisting of experienced practitioners in the field of Energy and Carbon Management from a diverse range of sectors, and is based on a consultation questionnaire that incorporates approximately £1.6bn of energy spend.

The benefits and limitations of the CRC are discussed, and the experience of voluntary Carbon Reporting is used to look at how best to achieve the long term objective of reducing the UK's Carbon and GHG Emissions.

The report was initially completed in November 2012, but prior to publication, the Government announced the simplification of CRC. It has therefore been updated in response to this.

The main conclusions of the report are:

- CRC has delivered some benefits in motivating organisations on the need to reduce carbon emissions which would not have been done in its absence.

- CRC is now regarded as a "Carbon Tax", and on that basis it should be collected by another method that does not involve significant amounts of 'red tape' and drain on resources that would otherwise be deployed to reduce, rather than account for, carbon emissions.

- There is significant support for the reporting of Carbon & GHG Emissions, and this has a central role to play in reducing emissions. However, there is widespread frustration at the complexity of the landscape of carbon reporting and the resources expended on compliance activities rather than carbon reduction. This could easily be addressed by requiring that organisations are only required to submit one report of their emissions based on their financial year.

- The separation of 'Carbon Taxes' from 'Carbon Reporting' would simplify the landscape and allow a common method and standard of reporting on GHG emissions to be extended to cover all organisations over the longer term. This would provide consistency of reporting for valid cross sector comparisons, and bring the UK into line with international

standards that are used by investors to assess the environmental credentials of organisations globally.

- Carbon taxes and reporting have a role to play in managing the security of supply of electricity generation by using true grid emission factors to incentivise load management.
- Clarity of future carbon taxes and pricing will give organisations more confidence in making investment decisions for reducing carbon emissions.
- Carbon labelling of electricity supplier invoices does have a role to play in promoting further investment in renewable energy generation.

1. Introduction

The objectives of this report are to put forward the views of industry practitioners in Energy and Carbon Management of workable solutions for reporting on Carbon and GHG emissions that will most benefit the UK in achieving a reduction in emissions.

It is widely recognised that the reporting of information has a central role to play in reducing GHG Emissions. Many organisations have undertaken the voluntary reporting of Carbon Emissions and/or GHG Emissions as part of their CSR and Annual Reporting, and there are established schemes in the Higher Education Sector. Currently 64% of UK quoted companies already participate in the Carbon Disclosure Project ("CDP") for reporting their GHG emissions.

The motivation for most organisations to reduce energy consumption and hence carbon emissions is primarily the result of a combination of both fiscal and reputational drivers, and CRC sought to introduce both of these to a wider range of energy users. The changes to the scheme that removed the recycling payment severely damaged the financial incentives of the scheme and it is now widely regarded as a tax, with the additional administrative burden of reporting requirements. For organisations that were already reporting on their emissions prior to the introduction of CRC, this resulted in additional work for no additional benefit.

It is worth noting that the charges passed on to energy users in the UK relating to carbon emissions is anything but simple, and one criticism is that the question often asked by senior management "How much do we pay in Carbon Taxes?" requires a somewhat complex calculation to work out when each of the following is involved:

- EU ETS – paid by generator or as direct participants for larger organisations.
- Renewable Obligation - electricity only.
- Climate Change Levy - including CCA and CHPQA.
- CRC EES.
- Carbon Price Floor - paid by generator from April 2013.
- Renewable Obligation, which funds Renewable Obligation Certificates (ROC's)
- Feed in Tariffs (FiT's).

With the exception of CRC (and is some cases EU ETS), all of these are passed on to the end user in their energy suppliers' invoices, in one form or another with varying degrees of transparency. EU ETS is paid by the generator, but will be passed on to the end user in their invoices.

One anomaly that was introduced by CRC is where a Combined Heat & Power scheme is within EU ETS it is liable for both the carbon from the combustion of gas, and the carbon from the electricity generated, thus double counting. This may be addressed within the CRC Simplifications Proposal 17, but until the guidance notes are published it is not possible to say for sure, and not until 1st April 2014. In addition, the CHP will also be subject to Carbon Floor Price from 1st April 2013, which would mean that for a period of one year CHP would be charged on both inputs (EU ETS and Carbon Floor Price) and outputs (CRC).

Within this landscape of "Carbon Taxes" and reporting schemes, the objectives of the group were therefore to:

1. Review how Carbon and GHG Reporting can be best utilised to achieve reduction in emissions.

2. How to reduce red tape and focus more resources on carbon reduction and energy management and less on carbon accounting.

3. Produce a consistent and understandable approach to carbon pricing that sends long term price signals.

4. Mitigate the impact of the decreasing electrical capacity margin.

The report is split into four sections that discuss:

1. The CRC Energy Efficiency Scheme

2. Mandatory GHG Emission reporting

3. Simplification of Carbon Taxes

4. Recommendations for the future

2 The CRC Energy Efficiency Scheme

2.1 Background to CRC EES

The CRC Energy Efficiency Scheme (CRC), formerly known as the Carbon Reduction Commitment, is a mandatory scheme aimed at improving energy efficiency and cutting emissions in large public and private sector organisations. These organisations are responsible for around 10% of the UK's emissions.

The scheme includes both reputational and financial drivers, which aim to encourage organisations to develop energy management strategies that promote a better understanding of energy usage.

The consultation on simplifying CRC was published on 10 December 2012. Of the respondents to the EMA survey for this report, 96% were involved in CRC.

2.2 Benefits of CRC

2.2.1 Increased Profile of Carbon Taxation

The implementation of CRC currently requires the sign off of the Emissions Report to be made by a Director and the payment for emissions to be made as a single annual payment, which, due to its value is also likely to require a senior signatory.

It was the view of members of the Group that this has raised the profile of carbon emissions amongst senior management, and was successful in creating a focus for reducing costs and increasing Energy Management activity, hence delivering on one of the policy objectives.

2.2.2 Consistency and Rigour to Energy & Carbon Reporting

CRC has established a consistent set of rules for reporting and taxing the carbon footprint with high levels of compliance and Director sign-off, much of which could be retained with a new/revised scheme.

CRC has brought benefits for organisations where information systems relating to energy data were previously non-existent or insufficiently robust. For many of these organisations, the compliance requirements of CRC have led to an expansion of energy management capability and the identification of mitigation options.

2.3 Problems and Issues with CRC

2.3.1 Administrative Burden

For many organisations CRC has placed a significant additional burden on resources. This is especially true in organisations that have already developed mature energy management capabilities and have had to devote resources to compliance that would otherwise be involved in practical emissions reduction. The burden is particularly onerous on organisations that have a large number of sites, and those that

already voluntarily report their carbon footprint and/or are included in other schemes e.g. EU ETS. This problem is exacerbated when the reporting periods do not coincide and therefore require more than one set of numbers to be calculated for carbon emissions.

2.3.2 League Tables

There is scepticism over the use of league tables as a reputational driver as by themselves they often give an incomplete and misleading picture, even if they are combined with KPIs. The removal of League tables from CRC as part of the simplification is therefore welcomed.

2.3.3 CRC as a Tax

98% of the respondents essentially view CRS as a tax

Following the changes to the CRC announced in October 2010 the EMA group and 98% of respondents to the survey, now view the CRC as a tax in all but name. This ties in directly with point 2.3.1, in that whilst there is a general acceptance that CRC is now a tax and is not going to be rescinded by Treasury, there are much easier and more cost effective ways to collect a tax than placing such a large administrative burden on the payers.

One analogy to consider is that CRC in its current form is the equivalent of collecting VAT from customers via their Self-Assessment Tax Returns instead of collecting it via the retailers.

2.3.4 Simplification of CRC

The Governments published simplification of CRC 11 was published on 10th December 2012, and the main points were as follows:

- Domestic electricity supplies and domestic gas supplies are excluded.
- The number of fuels included is reduced from 29 to 2, electricity and gas, and the latter only when used for heating purposes.
- Qualification will be based on Half Hourly Settled Electricity Meters.
- The 90% percentage application rule will be removed, but a 2% de minimis rule for gas (heating) will be introduced.
- Restriction of the circumstances in which Electricity Generating Credits can be used.
- The Performance League Tables will be abolished.
- Emission factors which aligned with those used for greenhouse gas reporting purposes.

- Exclude ETS installations and CCA Facilities and remove the three CCA exemptions.
- Footprint Reports are no longer required.
- Energy supplier statements will be allowed to provide an annual statement using 12 months of billed supply that is within 31, not 30, calendar days of the compliance year.

A number of these simplifications are certainly welcome, in particular the use of common GHG emission factors, the removal of the 90% applicable limit, the abolition of the performance league tables, dis-applying CRC rules from to CCA and EU ETS facilities and the removal of EGC's.

2.5 Options for Reforming CRC

Whilst there was much consensus on some of issues surrounding CRC, and the comments of many respondents to the survey were that it should be "scrapped", the group recognises that it must be retained, or at least its fiscal contribution to Treasury, in one form or another.

One of the options most often put forward is the simplification of the tax collection process by replacing CRC with an enhanced Climate Change Levy scheme, whereby the payments would be collected by Energy Suppliers, the advantages and disadvantages for which are discussed below.

Whilst this was supported by 72% of the EMA survey respondents (fig 2.5.1), a greater number, 85%, expressed the concern that if CRC were to be replaced by an enhanced CCL (fig 2.5.2), there would be a negative impact due to the lack of visibility at a senior level within organisations once the payments were merged in with the supplier invoices. Members of the working group felt strongly that this had been a key benefit in motivating energy efficiency in organisations that had not previously given it a high priority.

"If the CRC carbon allowance purchase mechanism were to be phased out would an enhanced CCL with the payments collected by Suppliers be a workable alternative?"

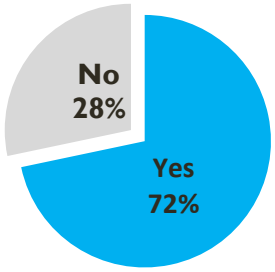

Figure 2.5.1

"If CRC were to be replaced with an enhanced CCL, do you think that this would have a negative impact due to the lack of visibility at a senior of the payments when merged into the supplier invoices?"

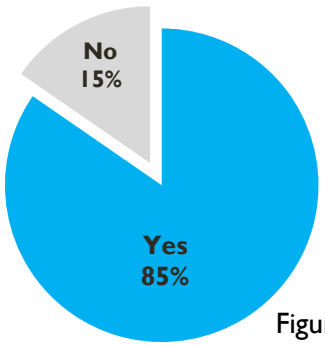

Figure 2.5.2

"If yes, then do you think this could be addressed by requiring all CRC liable businesses to report their carbon emissions through their annual financial reporting?"

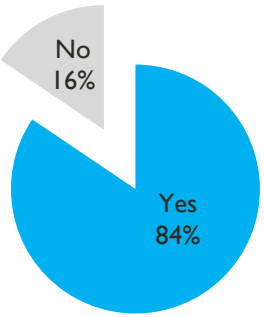

Figure 2.5.3

However, the survey showed that 84% of respondents (fig 2.5.3) believed that this could be addressed by requiring all CRC liable businesses to report their carbon emissions through their annual financial reporting.

91% of respondents (fig 2.5.4) agreed that more reliance should be placed on energy suppliers to produce more accurate billing and statements for reporting on carbon emissions, whether for CRC or other schemes.

"Do you think that more reliance should be placed on energy suppliers in the future to produce more accurate billing and statements for reporting on carbon emissions, whether for CRC or other schemes?"

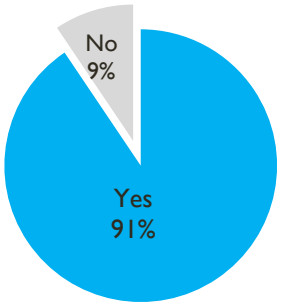

Figure 2.5.4

The consensus of the EMA group is that whilst the requirement to report on carbon emissions and to make a single payment for those emissions has resulted in some benefits, the overall view of the scheme is that it is now a carbon tax that requires too much resource for compliance that could be better deployed in other areas of activities to reduce carbon emissions.

	CCL Type Tax	Tax on footprint
Advantages	-Reduced administration. -Ease of collection. -Reliance on energy suppliers to collect. -Increased incentive to avoid emissions	-High profile and awareness from a single payment. -Robust audit process required -Taxation on fiscal year.
Disadvantages	-Lower profile if collected via invoices. -Reliance on energy suppliers to calculate correct consumptions.	-Duplication of other reporting schemes. -Excessive administration. -Redeployment of resources from carbon savings to carbon accounting

The collection of the revenue from CRC could be more efficiently achieved via energy suppliers based on invoiced consumptions, without the requirement for the users to produce resource intensive reports.

The payment could still be taken as a one off single payment each year, based on supplier invoices. A six month period from the end of the Government financial year would allow for any reconciliation of billing errors which is a function that all efficient businesses would carry out as a matter of course. By collecting the revenue for all of an organisations energy supplies this would remove the administrative task of needing to maintain what can be, for some, an extensive database of qualifying and non-qualifying supplies.

If this is not practical to implement by the energy suppliers, then the next best option would be to merge the revenue collection from CRC with an enhanced CCL scheme using supplier invoices.

The benefits of the requirement to report on carbon emissions overlap with the wider aspects of GHG emission reporting and are discussed in the following sections.

3 Mandatory Reporting of GHG Emissions

Following the DEFRA public consultation in 2011 on GHG emission reporting, the UK Government announced at the Rio+20 United Nations Conference on Sustainable Development that a regulation will be introduced requiring all UK quoted companies to report on their GHG emissions. The draft regulations were published on 25 July 2012, together with a consultation document requesting further feedback.

This section of the report considers the options for GHG emission reporting in light of this and the consultation document issued by DEFRA in July 2012.

For simplicity of terminology, the reporting of carbon emissions and green-house gas emissions is described herein as 'Mandatory Carbon Reporting' or 'MCR'.

3.1 The Case for Mandatory Carbon Reporting

The measurement and analysis of energy consumption data is well established as one of the primary tools that organisations use in managing energy to achieve savings and reduce costs. The mantra that 'in order to manage, you must first measure' still holds true today as the relevance of managing and reporting on GHG emissions becomes ever more relevant.

External reporting of GHG emissions is now recognised as an essential element of good governance, allowing external stakeholders and investors to evaluate, compare and contrast the steps taken by the organisation relating to compliance, performance and the quality of management.

Around 62% of UK quoted companies already report their carbon emissions through existing voluntary reporting schemes such as the Carbon Disclosure Project (CDP), Dow Jones Sustainability Index, EPRA-European Property & Real Estate, GRESB-Global Real Estate Sector Benchmark FTSE for Good and CR-Corporate Reporting. The results from CDP are now entering the mainstream of investor related information, and are displayed on trading screens such as Bloomberg and Google Finance as a sustainability index.

The latest report from CDP states that 69% of the FTSE 350 companies responded, along with 96% of FTSE 100. This is comparable with our survey respondents, of which 64% already report their carbon emissions through a voluntary scheme.

"Does the proposal for MCR go far enough in only including quoted companies?"

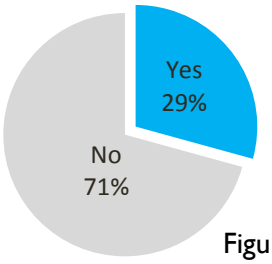

Figure 3.1.1

"Would you support the reporting of Carbon Emissions for all CRC EES liable businesses through their annual financial reporting?"

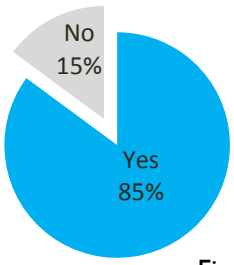

Figure 3.1.2

All of these mechanisms attempt to give a measure of businesses sustainability or the risks they face but often these reports fail as with Corporate Reporting/Corporate Social Reporting (CR/CSR) by trying to cover all social impacts of business activities.

Most large to medium business in UK report through CR/CSR voluntary reporting as shown above but these are all different and can defer the reader to seeing what the real picture of carbon emissions related to business is.

"A major driver of the CRC EES was reputational – do you believe the MCR could or should be able to replace this driver by establishing visibility within the Annual Reports?"

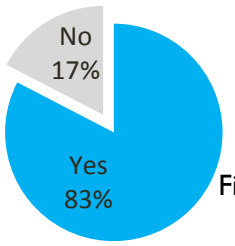

Figure 3.1.3

"Would you like to see one Reporting Scheme for all Carbon Reporting and GHG, so that organisations only have to publish one set of numbers each year?"

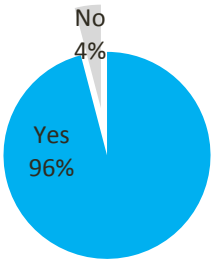

Figure 3.1.4

"Do you think that MCR is a positive requirement for UK business so that businesses use one simple methodology and a single set of numbers?"

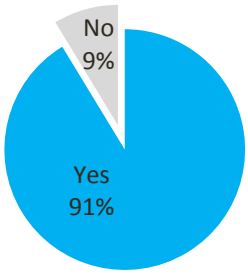

Figure 3.1.5

3.2 Methodology used to Calculate Emissions

The GHG reporting regulation only specifies that the directors' report must state the methodology used for calculating the carbon emissions, rather than specifying a specific method.

According to the Price Waterhouse Cooper/Carbon Disclosure Project (PWC/CDP) Report 11, the CBI argued that while the UK is leading the world on reporting, with 90% of the FTSE100 and 58% of the FTSE250 responding to the CDP survey, there is a lack of comparability and consistency between companies' GHG emissions data (2009). The report also quotes from a report from the EA/ICAEW on environmental issues in annual financial reporting, which identified the need for consistency, comparability, relevance and reliability of information within annual reports. This could be due to: the lack of an agreed common method for emissions measurement and public disclosure; inconsistencies in how companies set the scope of their reporting (e.g. on vehicle emissions) and a lack of clarity on what is actually included or excluded from the scope of businesses' reporting.

The Carbon Disclosure Standards Board is a consortium of business and environmental organisations that are jointly promoting the Climate Change Reporting Framework (CCRF). The CCRF is not published as a new standard but is intended to work as a forum for collaboration to improve existing

standards. The CCRF defines a number of international and national standards, the most relevant to the UK are:

- DEFRA/DECC guidelines – "Guidance on how to measure and report your greenhouse gas emissions".

- The Greenhouse Gas Protocol: A corporate accounting and reporting standard (Revised Edition) ("the GHG Protocol") developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD)

- The International Organization for Standardisation's BS EB ISO 14064-1:2012 "Specification with guidance at the organizational level for quantification and reporting of Greenhouse Gas Emissions & Removals" – available at: http://shop.bsigroup.com/ProductDetail/?pid=000000000030245033

All of the published standards are based around the GHG Protocol, and if applied correctly the results should be comparable.

There is concern that if the regulation allows companies to use different standards, that this might lead to inconsistency in the reporting of emissions, as well as uncertainty for some organisations as to which methodology or standard to adopt.

Ideally, one standard would be made mandatory, but there needs to be recognition that companies may already be using one standard, and will not want to incur costs by changing to another. The biggest influence to the overall figures reported are likely to be due the emission factors used, and the methods for setting the boundaries for Scope 3 emissions.

At the very least, DEFRA should specify the UK specific emissions factors that are to be used. Given that these are subject to change, and company reporting periods will not necessarily align to the date of published figures, these figures should be published monthly, either as figures for that month or for the rolling year to that month.

3.3 Boundaries for Reporting

The forthcoming UK Governments regulation on the mandatory reporting of GHG emissions for quoted companies includes Scope 1 and 2 emissions in their annual reports.

Scope 3 emissions are omitted because by definition they are beyond the control of a company, and the added complexity involved in assessing some types of Scope 3 emissions make this more challenging and subject to greater uncertainty, though it should be noted that HEFCE (Higher Education Funding Council for England) is introducing Scope 3 reporting for 2012/13.

According to the most recent CDP report, Business travel emissions are often reported, but few reported their upstream (19%) and downstream goods (25%) emissions.

Regardless of whether one or more standards are allowed, the definition of boundaries is the area that is most open to interpretation and will lead to potentially misleading comparison of results being made.

Companies that operate their own freight transport will include these within their Scope 1 emissions, but companies that outsource this see them classified as Scope 3 emissions which are optional and voluntary within the regulation.

The DEFRA Impact Assessment3, section 8.13, indicates that a large proportion of the benefits of reduced GHG emissions will be derived from transport emissions (see Table 1). The IA also states that:

"DfT road freight transport statistics 2009 estimate there are approximately 94,900 freight operators in the UK, which represents approximately 6% of companies. This suggests that relatively few companies will have their own freight transport operations which provide reassurance that the assumed £4000 (2011 prices) average cost per firm estimate used in the IA is reasonable (see paragraph 8.5), and that freight transport company costs may be relatively high on a per company basis, but should still fit within cost estimates applied in this IA (see paragraph 8.5)."

There is a therefore a concern that a large proportion of transport emissions will fall within Scope 3 emissions that are not mandatory within the regulation, and unless reporting on a voluntary basis, the benefits would not be achieved.

It is therefore recommended that the regulation take account of this anomaly to ensure that the benefits identified in the Impact Assessment are achieved.

The ISO 14064-1 standard contains a clear definition of organisational activities that might result in other indirect emissions, Annex B, and their definition of transportation emissions is quite clear.

"Examples of an organization's activities that might result in indirect GHG emissions, other than GHG emissions from the generation of imported electricity, heat or steam consumed by the organization, can include, but are not limited to, the following: transportation of an organization's products, materials, people or waste by another organization"

Costs & Benefits	Mandate GHG for Quoted Companies	Mandate GHG Reporting for Large Companies	Mandate GHG Reporting for Energy > 6GWh
No of Companies Covered	1,101	24,000	2,017
One off Costs	-5,600,000	-180,000,000	-29,000,000
- Cost per Company	-5,086	-7,500	
Reporting On-Site Emissions Administrative Costs	-1,700,000	-301,000,000	
Reporting Transport Emissions Administrative Costs	-21,000,000	-423,000,000	-116,000,000
Value of CO2 Emission Reductions (high)	228,000,000	550,000,000	202,000,000
Value of Financial Savings			
- Electricity	7,300,000	539,000,000	0
- Gas	2,400,000	174,000,000	0
- Diesel	671,000,000	1,130,000,000	563,000,000
Air Quality Benefits	53,000,000	107,000,000	47,000,000
Less Abatement Costs	-221,000,000	-826,000,000	-180,000,000
Total Benefits	740,700,000	1,674,000,000	632,000,000
Total Cost (Present Value) – High	-28,300,000	-904,000,000	-145,000,000
Net Benefit	712,400,000	770,000,000	487,000,000

Table 1: Figures from DEFRA Impact Assessment 3.

All figures in GBP expect where stated.

3.4 Auditing and Assurance

Many businesses already report emissions through the various sector reports such as the European Public Real-estate Association (EPRA) and Global Real Estate Sector Benchmark (GRESB) in property sector. The value of carbon reporting is in the level of assurance of the data, methodology and strategies for the future.

Assurance by accredited bodies depending on the level can be costly due to the time involved and complexity. This expense should not force businesses to be excluded due to cost and should be offset by CRC payments. Where businesses are not mandated to report through mandatory carbon reporting because they are not in the FTSE 100 but are large enough to be in CRC, voluntary carbon reporting should be allowed to remove the need to report in CRC. Where this occurs, a less rigorous level of reporting and lower cost should be applied.

The DEFRA Consultation Document does not propose to introduce external assurance as a requirement, stating that the Companies Act requires all companies' annual accounts to be audited in accordance with the Act, and there is currently no requirement to have environmental information audited. The role of the financial auditor is to assess all financial and non-financial information in the report, and to identify any material inconsistencies or inaccuracies, and to inform the directors. DEFRA do go on to say that whilst the risk of not carrying out assurance of verification is considered to be low, as it is expected that many Directors will want to have confidence in the information and data that is being published to minimise the risk of reputational damage.

The EMA survey was split by approximately 65%/35% favouring external verification to internal audits (fig 3.4). The main reason put forward for favouring external verification was the reputational impact of being wrong, and compared to the cost of preparing the information and cost of energy carbon this cost is small, at least for scope 1&2 energy emissions.

However, it is recognised that a sufficient number of organisations would be in favour of carrying out their own internal audits. Providing training and professional accreditation for verification and assurance would therefore be a step forward for both external and internal options.

3.5 DEFRA Consultation Questions

In response to the DEFRA Consultation on greenhouse gas emissions reporting draft regulations for quoted companies:

3.5.1 Commencement Date

We would welcome views on whether the regulations should come into effect for reporting years ending after 6 April 2013, or be timed to come into effect at the same time as the BIS regulations, which is likely to be for reporting years ending after 1 October 2013

Most respondents felt that it should be applied after 1st October 2013 to coincide with BIS Regulations.

3.5.2 Regulation 3: Disclosure of greenhouse gas emissions in a directors' report

Directors may wish to refer to the Government's Guidance 6 for further information on how to measure and report GHG emissions: part 4 provides an explanation on the type of activities which produce direct and indirect emissions, and part 6 explains the information needed to calculate GHG emissions. Your views on how this Guidance could be developed to aid support of companies are welcome.

The regulations include the reporting of direct emissions, including fugitive emissions, and indirect emissions that are in their scope 1 and 2 emissions. The exclusion of scope 3 emissions may lead to the situation where organisations that outsource for example the transport of goods reporting lower emissions than organisations that operate their own transport fleet and penalise those that insource.

3.5.3 Regulation 4: Methodology used to calculate emissions

Defra and the Department of Energy and Climate Change (DECC) produce guidance for companies wishing to measure and report on their emissions and publish annual emissions factors to calculate the relevant data 7 ; this is one method which can be used. However, there are other methodologies and standards that companies may already be using, such as the World Resource Institute/World Business Council for Sustainable Development GHG Protocol 8, the International Organisation for Standardisation (ISO) 14064-1 9, the Climate Standards Disclosure Board's Climate Change Reporting Framework 10 . There are also some sectors which have their own guidance on measuring and reporting on greenhouse gas emissions.

The recognition that companies might already be using a different methodology or standard to the DEFRA and DECC guidance for calculating greenhouse gas emissions will avoid the need for companies that do so to change standards. However, there is a risk of a lack of consistency if multiple standards are used. As a minimum, only one set of published emission factors should be used for all companies in the UK.

3.5.4 Regulation 5: Reporting of emissions from activities subject to other reporting obligations.

In order to reduce regulatory burden this regulation permits the use of data from the schemes listed in regulation 5, namely the Climate Change Agreements, EU ETS and the CRC Energy Efficiency Scheme. If a company takes advantage of this provision it must declare that it has used data from these schemes.

Most organisations expressed the view that reporting should be for the company financial year, in which case including relevant information in the report obtained as a result of compliance with another scheme such as CRC is dependent on the these periods being aligned, which is not guaranteed to be the case.

It is the view that, with the exception of EU ETS, there should be an alignment of reporting schemes so that only one calculation of emissions is required, to reduce the administrative burden on organisations.

3.5.5 Regulation 6: Carbon Intensity Ratio

The majority of respondents to last year's consultation stated that companies should be required to include an intensity ratio of their choice. The regulation requires that directors include an intensity ratio when reporting on their emissions. You will wish to note that what intensity ratio is used – whether financial or activity – is not specified and this is left to each company to conclude which is of most interest to its stakeholders. Government guidance on how to measure and report emissions provides advice on intensity ratios in part 8 and annex H.

The calculation of intensity ratios, both financial and activity based, is seen as an important benefit in driving cross sector performance and providing relevant information to third party investors. However, for this to be meaningful, the boundaries set for calculating the emissions need to be consistent, otherwise the comparisons are meaningless.

3.5.6 Regulation 7: First Reporting Year

The Government are proposing that the first reporting year will be for the company's first financial year ending after 6 April 2013 (but see question under regulation 1). The information from this first reporting year will need to be included in subsequent directors' reports to allow progress in emissions management to be visible. There is provision in regulation 7(3) made for a company to amend its base year data. Part 9, and annex J, of the government guidance on measuring and reporting provides further details about base years and when base year recalculation might be necessary. Recalculation of a base year can be done to aid appropriate comparisons to be made between different years despite changes in company structure. Regulation 7 requires directors to report emissions for the company's financial year but also allows flexibility to report company emissions on a different reporting year providing the directors makes this clear as set out in regulation 7(4).

In addition to including the first reporting year, it would be useful to show other more recent years to show performance and progress.

3.6 Recommendations

The view of the EMA is that it is the responsibility of organisations to play their part in mitigating climate change and whilst voluntary reporting schemes have raised awareness and delivered benefits to those participants, Mandatory Carbon Reporting ('MCR') is the only way to engage with those organisations that have until now not seen the need to do so.

MCR is therefore long overdue and should replace all other schemes over a phased period. This will then address the issues of consistency and hence confidence in publicly reported figures, as well as reducing the administrative burden on organisations that are currently reporting to multiple schemes.

The consistency of boundaries and emission factors, and scopes to report on is seen as a key issue in arriving at one set of numbers for a carbon footprint that is rigorous enough to allow peer-to-peer comparisons.

Initially, the EMA would like to see all Scope 1 and 2 emissions within the boundary, plus any Scope 3 emissions that could be considered to be Scope 1 were the activities not outsourced or sub-

contracted. The reporting of further Scope 3 emissions should be encouraged but left voluntary. External verification and auditing should remain optional, but should be specified when publishing the figures.

4. Simplification of Carbon Taxes

The lack of information relating to the future cost of carbon creates uncertainty and risk, impairing the ability of business to make investment decisions in the medium and long term and thus hindering the infrastructure change required.

Within the survey, 93% (fig 4.1) said that if the cost of carbon were set and fixed over the long term, this would be beneficial to making business cases for projects that reduce carbon emissions.

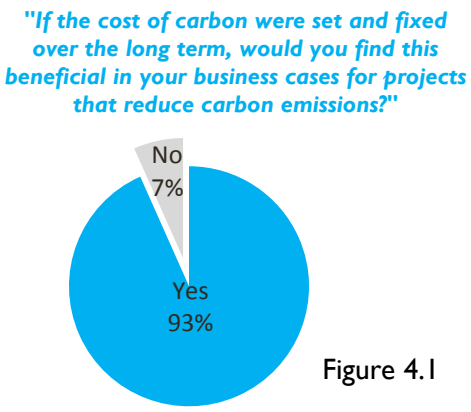

Figure 4.1

It is the opinion of the group that carbon taxation should be simplified and consolidated to improve transparency and a timeline for future taxation should be made available to facilitate investment appraisal. In simplifying and consolidating taxes carbon leakage needs to be prevented, low/zero carbon technology and demand management incentivised and double taxation[1] avoided

This raises a number of concerns about the complexity of the carbon taxation landscape and the lack of transparency this creates.

It is important for business to understand what is currently being paid in carbon taxation and what the future cost of carbon emissions will be.

If we are to reduce emissions in the UK then relative targets could allow business to emit more carbon as it grows. Absolute carbon reductions can be made but will cost due to significant capital investment.

[1] For example of CHP schemes that that are covered by the EU ETS for their gas input and CRC for electrical output. This may be addressed in the CRC Simplification Proposal 17.

5. Future Options for CRC EES & Mandatory Carbon Reporting

Having discussed the current position and future options for CRC and MCR, this section contains the EMA recommendations going forward. The earlier work carried out by DEFRA and DECC is acknowledged as providing the foundations for the charging of and reporting on Carbon Emissions as a recognised component in incentivising organisations to reduce the UK's overall emissions.

5.1 Separate Carbon Reporting from Collection of Carbon Tax

The following quotations are taken from DEFRA publications from November 20101 and May 2012, and summarise our views on CRC EES.

"Although these various schemes require that the organisations covered measure and report on certain parts of their emissions footprints, reporting is not the main aim of any of these schemes but rather a means to the achievement of emissions reductions."

"We would particularly welcome your views on how emissions reporting policy can help avoid imposing unnecessary burdens on companies."

The overwhelming view of the group, which is backed up by the survey, is that the removal of the recycling payments effectively turned CRC into a tax.

There is widespread acceptance that the income derived from CRC is important to Treasury and needs to be retained in one form or another. Most organisations are now budgeting for the payment of the CRC 'tax', but the main criticism is the amount of time required to compile the data for the reports. This is particularly expensive for organisations where the opportunity cost of human resources employed on 'carbon accounting' instead of 'carbon saving' is counterproductive, and is the source of a great deal of frustration amongst Energy Managers. This is further exacerbated where the financial year is different to the CRC year.

The simplifications to CRC which are to be introduced from 1st June 2013, are welcomed, but will not significantly impact the reporting burden imposed by CRC.

In comparison to CCL, the cost of collecting the CRC as a tax is significant. The benefits are recognised as increasing awareness and enforcing rigour in the recording and reporting on energy and carbon emissions for those organisations that were not previously active in managing their energy and carbon emissions.

There is a need to maintain the impact of CRC in less motivated organisations, and the group recommends that the way to achieve this is to retain a CRC or equivalent payment that requires sign off by senior management.

The ideal scenario is therefore to initially simplify the reporting requirements of CRC, with a view to replacing it at a later date, thereby saving significant human resources that can be deployed elsewhere for 'carbon saving', and maintain visibility of the value of the payment by senior management through a simplified collection scheme.

If the annual CRC Payment were linked to Invoices issued by energy suppliers, and collected by suppliers via an annual invoice based on the government fiscal year (to be issued within six months of the end of the government's fiscal year to allow organisations to resolve any queries), then the link between CRC Reporting and the collection of the CRC 'tax' would be broken, and the opportunity to consider alternative reporting would be available.

One of the main requests highlighted from the survey was to reduce the number of reporting schemes that organisations were required to comply with. Most organisations are prepared to compile a report on their Carbon Emissions, but to be expected to submit separate reports for different schemes, often covering different reporting periods, is counterproductive and is generating statistics for statistics sake.

By allowing organisations to opt into one reporting scheme for all of their Carbon Reporting, there will be a significant saving in resources that will result in more active carbon savings.

"What energy/carbon schemes are you involved in?"

Response	Chart	Percentage
CRC EES		92%
EUETS		29%
CHPQA		24%
Display Energy Certificates		59%
IPPC		8%
ISO 14001		39%
ISO 500001 (BS16001)		14%
Carbon Trust Standard (or similar)		47%
Voluntary Reporting of Emissions (eg: Carbon Disclosure Project)		27%
Other		22%

(Figure 5.1)

5.2 Transition towards Mandatory Carbon Reporting:

The majority view within the EMA group was that the future of UK carbon reporting lies with mandatory reporting as part of the annual business reports. Not only would this approach integrate carbon considerations into the mainstream core business of organisations, but it would also de-clutter compliance activity by aligning carbon reporting with the company financial year.

Mandatory Carbon Reporting should replace CRC reporting, providing that the process introduced is suitably rigorous and appropriately audited.

Some concern within the group has been expressed that the timeline for any transition should be carefully managed so that compliance driven organisations that already undertake carbon footprinting do not pause this activity over this interim period.

Evidence from DEFRA (Impact Assessment of Options for Company GHG Reporting), suggests that the resources required for GHG Reporting are far less than for CRC: "…that corporate reporting is a much simpler activity than CRC scheme. This results in an estimate that the average time taken to report under mandatory GHG reporting would be 72% lower than that which would be required under CRC." This further supports the EMA proposal of MCR as a replacement for CRC.

5.3 The Importance of Defining Strict GHG Reporting Rules

In order for Mandatory Carbon Reporting to be a meaningful driver of carbon reduction, it will be necessary to strictly define the rules under which participants must report emissions.

Of particular importance is to ensure consistency in the boundary of emissions reported, the Key Performance Indicators and the treatment of renewable energy and carbon offsets. Since international guidelines already exist for carbon reporting, the MCR regulation should follow these guidelines as closely as possible and create a level playing field whereby the treatment of Scope 3 emissions for activities that can be outsourced or insourced, particularly freight, should not be allowed to unfairly impact the results.

The published standards are all based around the GHG Protocol, and provided that strict guidance is applied to the use of emission factors used, and the definition of boundaries, then results should be comparable for different methods.

The EMA recommends that KPI's are defined for specific sectors to show both progress in reducing emissions, and comparison of performance against sector peer organisations.

5.4 Assurance and Auditing of Carbon Reporting

The Group felt that external verification was important to endorse the accuracy of the data, and compared to the reputational impact of being wrong, the cost of energy and carbon and the cost for recording and preparing the data and Assurance are small, at least for scope 1 & scope 2 emissions.

The transition to MCR and company annual reports, from carbon foot-printing schemes like CRC, will move compliance and auditing responsibility from existing Senior Officer Contacts and the Environment Agency to Financial Directors and the auditors of company accounts.

There is a concern that a capability gap exists here that would need to be addressed if reporting quality and consistency is to be maintained. The auditing of carbon footprints fits into the energy and utilities management skill-set and it is recommended that a carbon auditing accreditation be established. This would allow in-house energy teams and external specialist service providers to maintain credibility and consistency in the statements produced. This would introduce competition and reduce costs for assurance, which are substantial when provided by the traditional 'big four' Accounting/Auditing firms.

5.5 Synergy between Carbon Management and Security of Supply

The Group recognises that there is an emerging synergy between the risks stemming from climate change and meeting future energy demand. Whilst climate change for many is an intangible and diffuse risk, the potential shortfall in peak supply is perceived as an immediate tangible risk.

Both of these risks can be mitigated through a policy solution that will drive increased energy efficiency through both taxes on emissions and incentives for demand side management solutions.

Taxing and reporting of carbon should reward and incentivise organisations for their contribution to reducing the UK's carbon footprint. This can be improved by calculating the carbon intensity of electricity based on a time of use, basis rather than the grid average which would support the work on smart grids, energy storage, demand management the increasing renewable generation[2], and avoid perverse incentives[3].

If carbon emissions were published based on the grid average on a thirty minute basis, energy consumers could adjust their load profile to lower carbon density periods and hence report lower emissions from electricity. The calculation of Balancing System Use of System (BSUoS) charging is already carried out based on the half hourly charging, and the calculation and charging of accurate carbon emissions on this basis would not present a significant technical challenge.

The actual carbon intensity of the grid can be viewed in real time at http://www.realtimecarbon.org/

A means of incentivising load management is potentially quite complex, and is beyond the scope of this report, but does warrant further consideration.

[2] With the increasing prevalence of renewables on the grid it is conceivable that there could be periods in the summer when fossil fuelled plant is pushed off the grid and thus the carbon intensity of electricity is close to zero. It is also conceivable that for periods in the winter coal will be the marginal fuel (especially with high carbon prices) resulting in high marginal carbon intensity.

[3] E.g. increasing reported carbon and taxes for sites with storage or who are able to manage their demand to times of lower carbon intensity.

5.6 Certainty of Future Cost of Carbon

This area is becoming increasingly complex with the various taxes and levies being built into the price of energy and levied with or resulting from the consumption of energy. Consolidating taxes would make the landscape easier to understand and reduce the need for specialists in environmental tax.

5.7 Energy Labelling

The EMA survey was very supportive (88%) of the initiative of Carbon labelling of electricity invoices. This was originally championed by BT, but is now under review by the Aldersgate Group, a coalition of environment agencies, NGO's think tanks and industry representatives.

The limited supply of renewable energy in the UK means that consumers pay a premium for renewable energy. The objectives behind Energy Labelling are that this situation could be addressed if the energy sold to businesses and homes was more accurately classified or labelled according to its actual carbon emissions at the point of production. Currently there is a largely crude categorisation of energy as either 'brown energy' (from fossil fuels) or green energy (from zero or low carbon sources) with no specification as to the 'grade' of green energy. The certification of electricity at point of generation would provide consumers with the power and incentive to influence investments by suppliers using the usual market mechanism of exercising consumer choice through purchasing decisions. A coding system similar to energy labels for white goods or buildings, where a rating of A to G (high to low performance), would be easily understood by the businesses and consumers.

This forms part of a wider debate as to the treatment of grid emissions factors, and whether or not purchasing 'green' electricity should allow a user to declare that they have zero CO2 emissions.

The GHG protocol on which the various reporting standards are based states that Gross Emissions must be reported which do not allow energy from renewable sources to be treated as zero emissions. However, there is still a reputational benefit to be achieved by reporting Net Emissions which will have the benefit of reduced emissions of any renewable energy purchased.

Whether or not 'green energy' purchased should allow the consumer to avoid paying a reduced Carbon Tax is a more contentious issue.

Subsidies are paid to help fund renewable generation in the form of Renewable Obligation Certificates (ROC's). According to the type of generation a variable number of ROC's are payable, ranging from 0.25 for landfill gas to 2 for tidal, anaerobic digestion, off shore wind. The full list is available at http://chp.decc.gov.uk/cms/roc-banding. This subsidy is paid for by the Renewable Obligation charges that are included in the invoices for all consumers of electricity.

If 'green electricity' is purchased at the same or similar market rate as 'brown' electricity, this is only possible because of the ROC subsidy that is paid for by all other electricity consumers, and it would therefore be unfair to allow the purchaser of that 'green electricity' to avoid any payment of carbon taxes on the basis that their CO2 emissions were zero.

The only way to resolve this absolutely would be for the consumer to pay the ROC value, effectively paying the full generation price of the green energy, and then 'shred' the ROC so that it could be recycled into providing further support for additional generation.

The view of the EMA is that Energy Labelling will increase the visibility of renewable generation for consumers and does have a role to play in stimulating further investment by suppliers to increase the overall availability of green energy.

6. Overview of Survey Respondees

The EMA survey was designed from the discussions held in the first working group meeting and was then sent out to wider industry, as well as the EMA Membership. The survey had a total of 54 responses which covered most sectors of the economy.

The questionnaire did ask for the energy spend of each company as an optional question. The total energy spend of those who gave this information was £1.3bn.

The three sectors of the economy which were most widely represented were universities; retail and heavy industry though it was not possible to draw any trends relating to their responses and these industries. The only trend which was observable, and adjusted for, was the responses of consultants, who made up 6% of respondees. Consultants were generally more favourable in their responses to the administrative burden of the CRC EES.

7. Members of Working Group

Steve Wright (Chairman)	Managing Director	Optima Energy Management
Paul Boreham	Group Energy Manager	Land Securities
Sean Keating	Consultant	UPL
Ian Gregory	Head of Utilities	University of Birmingham
Adam Garbutt	Energy Performance Manager	Morrisons Supermarkets
Ben Rouncefield-Swales	Carbon Solutions Manager	EIC
Jean Waring-Thomas	Energy Manager	Alliance Boots
Jennifer Dove	Senior Policy and Compliance Manager	British Telecom
Guy Lee-Potter	Group Estates Energy Manager	Co-operative Group
Alec Falconer (EMA PoC)	Membership Services Manager	EMA