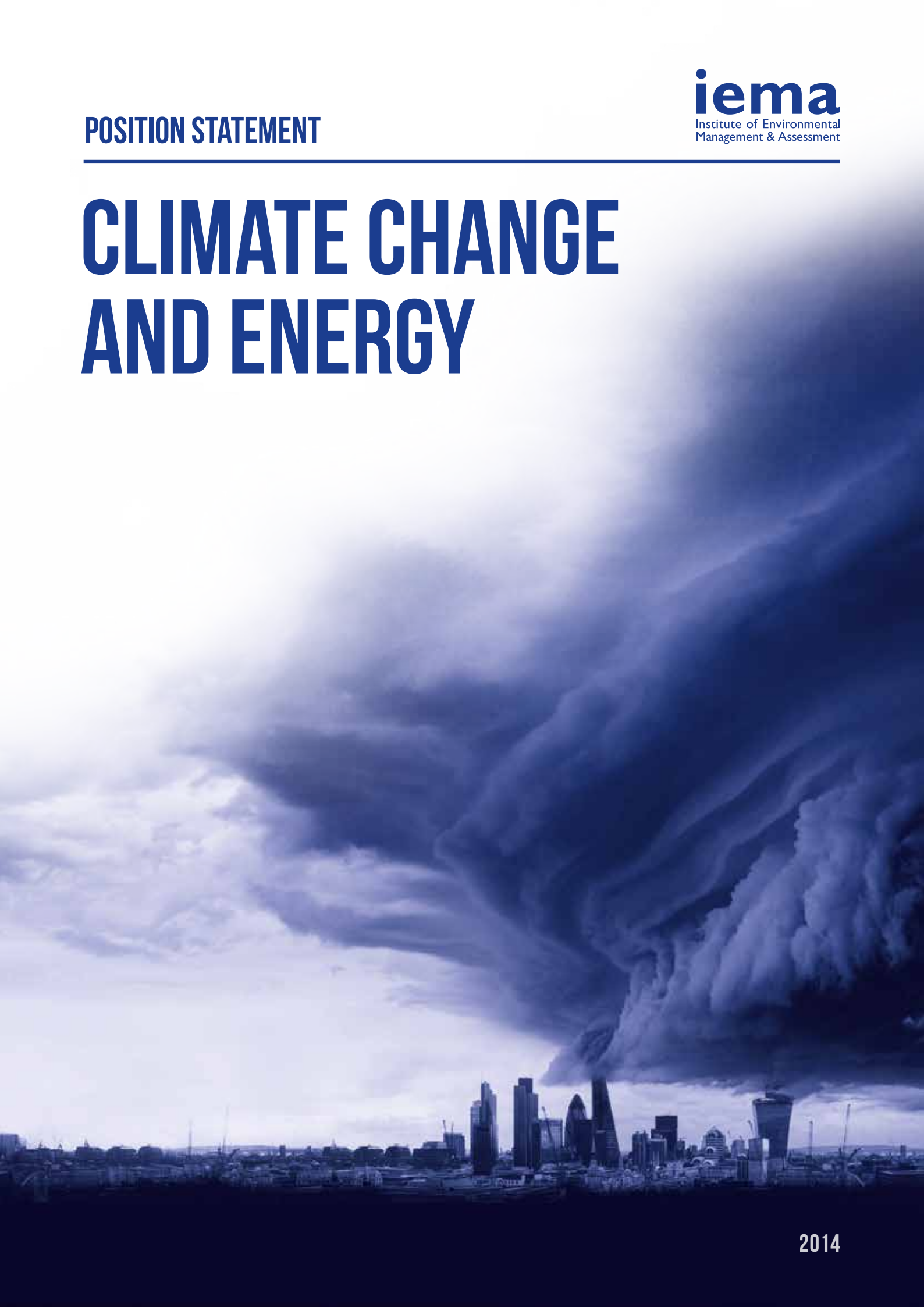


CLIMATE CHANGE AND ENERGY



FOREWORD

A step change is needed if we are to meet carbon reduction targets for avoiding dangerous climate change. Scientific consensus and projections are overwhelming and are starting to be matched by consensus from business leaders. However a critical component will be the skills agenda and increasing the demand for confident and active environment and sustainability professionals.

A 'perfect storm' of mega trends from ongoing decline in ecosystems and natural capital to increasing extreme weather events and climate change commitments are starting to impact on economies and forcing some companies to rethink business models. Within this maelstrom, Climate Change stands as an urgent priority - A rallying point for those seeking transformational change and working to bring 'long term' thinking into decision making here and now.



Tim Balcon
CEO, IEMA

This position statement brings together critical policy calls from our members to help them pursue this transformational change. Environment and sustainability professionals are making a vital contribution within businesses, organisations and communities. Fundamental will be 'climate leadership' and at all levels from Government through to the individual. IEMA is committed to working with these professionals (our members) supporting their work on the urgency, strategic need and on the business case for action.

Please read this IEMA statement and the policy calls from our members. Share your experiences, work with us to influence Government and decision makers, help us build our on-line resources for action and new partnerships on this most critical issue of our times.



IEMA POSITION STATEMENT

CLIMATE CHANGE AND ENERGY (2014)

Climate change requires leadership at all levels, from Government through to the individual. Environment and Sustainability Professionals are making a vital contribution within businesses, organisations and communities. IEMA is committed to working with these professionals (our Members), supporting their work on the urgency, strategic need and business case for action.

These policy calls¹ are recognised by IEMA and our Members as critical supportive developments in addressing energy and climate change challenges.

They have been developed through a Member engagement process³, comprised of ten workshops across England, Wales, Scotland and Ireland, and consolidated through an outcomes webinar and survey (totalling contributions from around 500 Environment & Sustainability Professionals). IEMA Members are professionals who are active in this field and are well placed to understand the Climate Change 'transformation agenda' through their work with organisations across all sectors of the economy and across a similarly wide range of projects and developments.

WE SUPPORT OUR MEMBERS AND CALL FOR:

1. CLIMATE LEADERSHIP AT ALL LEVELS AS WE APPROACH AND EXCEED ENVIRONMENTAL LIMITS.

As we head (current path) towards 4 degree or greater warming¹, professional urgency from our Members is a justified and objective response. The scientific consensus and projections are overwhelming and a step change is required if we are to meet necessary reduction targets for avoiding dangerous climate change. We encourage and acknowledge individuals, businesses, organisations and governments in showing climate leadership. IEMA will make its own contribution and will work with Members on this critical challenge.

2. POLICY FRAMEWORKS AND STRATEGIC APPROACHES NEED TO SUPPORT CERTAINTY AND GIVE CONFIDENCE FOR ORGANISATIONS TO INVEST IN AND ADDRESS ENERGY AND CLIMATE CHALLENGES.

Policy confidence is important for practitioners who are working to transform organisations. This is needed at national and international level and across a range of well known organisational drivers (regulation, fiscal measures, trading schemes, guidance, standards, procurement and supply chains, etc).

3. RECOGNITION, INTEGRATION AND EMBEDDING OF CLIMATE CHANGE AS A MAINSTREAM 'BUSINESS' ISSUE.

Approaches are required to embed climate change action and energy reduction into mainstream business and across the value chain. There is increased focus on business realities such as: reducing energy costs and carbon, complying with climate legislation, increasing resilience, building reputation, adding value and meeting contractual and stakeholder expectations. IEMA will work with Members to secure action on these drivers and help to build 'demand side' consensus on the relevance of climate change and business case for transformational change.

4. REPORTING AND DISCLOSURE WITH INCREASING TRANSPARENCY ON CLIMATE CHANGE PERFORMANCE.

Reporting and disclosure have a unique role to play in building Board level commitment and in embedding climate change into mainstream business. Lifecycle thinking is important to help ensure the true impact and full costs of climate change are reflected across decision making.

1. IPCC (2013) - indicates that increase of global mean surface temperatures for 2081–2100 relative to 1986–2005 is projected to likely be in the ranges derived from the concentration-driven CMIP5 model simulations, that is 0.3°C to 1.7°C (RCP2.6), 1.1°C to 2.6°C (RCP4.5), 1.4°C to 3.1°C (RCP6.0), 2.6°C to 4.8°C (RCP8.5). RCP 8.5 represents an unchecked trajectory (non stabilisation scenario).

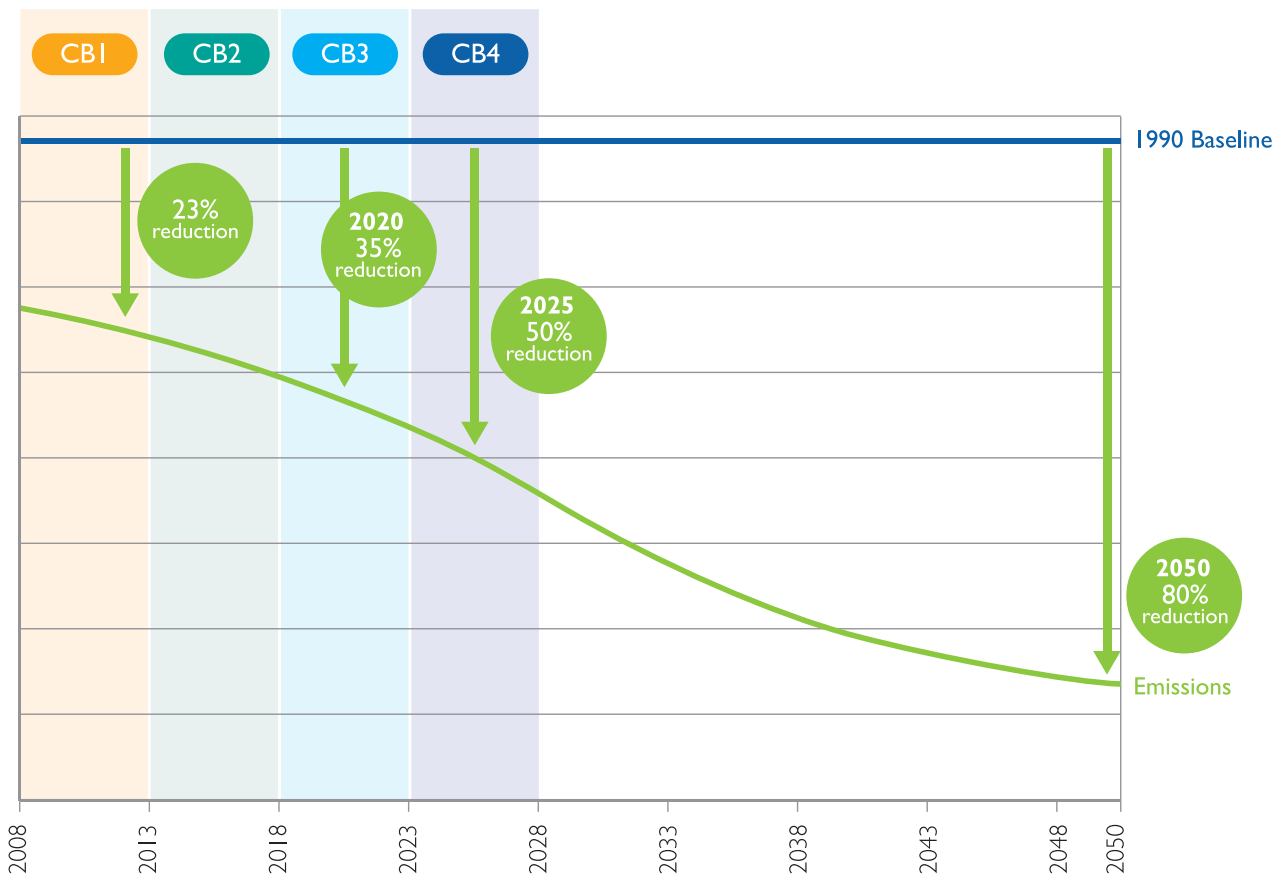
2. Earlier policy calls by IEMA in our 2012 Climate Change Position Statement continue to be supported and are integrated within the four strategic policy calls now set out in this revised statement.

1. CLIMATE LEADERSHIP - ACROSS SOCIETY FROM INDIVIDUALS, BUSINESSES, ORGANISATIONS AND GOVERNMENTS.

- Leadership on climate change mitigation and adaptation is required across society and at all levels.
- Urgent action is needed to address our (unsustainable) trajectory towards 4 degrees of warming, to minimise costs longer term, and to help organisations and communities make effective transitions.
- IEMA advocates a professional urgency on climate change and encourages individuals, businesses, organisations and governments to all show climate leadership. Some examples are outlined below.

GOVERNMENT LEVEL

In the UK the 2008 Climate Change Act⁴ was passed with a wide political consensus and is regarded by many as an example of government level climate leadership. The Act helped to establish the first legally binding national carbon budgets and placed a duty on the Secretary of State to ensure the net UK carbon account for the year 2050 is at least 80% lower than the 1990 baseline (diagram below). In addition to a number of carbon and GHG mitigation provisions, other critical elements included a series of requirements on climate change adaptation and the establishment of the independent Committee on Climate Change (CCC).



3. This paper also reflects outcomes from IEMA's Vision 2020 consultation which informed and led to IEMA's new strategic vision of 'Transforming the world to sustainability'. That consultation established significant Member support for IEMA to engage with and to seek to influence critical policy developments and also to develop a strong and active voice on behalf of practitioners. Vision 2020 was a consultation and engagement process held in 2013. Following Vision 2020 IEMA set a new mission of Supporting individuals and organisations to set, recognise and achieve global sustainability standards, leadership and transformational sustainability practice.'

4. UK Climate Change Act (2008) - [click here](#)

5. UK Government report in preparation for Paris 2015 negotiations – 'Securing our prosperity through a global climate change agreement' - [click here](#)
News item - UN Secretary General's Climate Summit - [click here](#)

National level carbon targets however need underpinning through wider international agreement. Political and other leaders must show leadership in the build up towards the December 2015 UNFCCC Paris Conference of the Parties (COP 21) as a critical opportunity to seek international agreement – essential if global Greenhouse Gas (GHG) emissions are to peak at the earliest possible opportunity. Senior Government Members should be actively involved in preparatory work as their early commitment can be particularly important in encouraging other world leaders to engage. The UN Secretary General's Climate Summit in September 2014 was an additional climate leadership initiative supportive of this process and important in seeking to build necessary political and individual leadership commitments (to help build momentum towards an agreement)⁵.

COMPANIES, CITIES AND OTHERS

Increasingly organisations and civic society representatives are demonstrating their own climate leadership. Many companies⁶ are developing leading initiatives in climate change and more broadly on corporate sustainability and these developing programmes have potential to drive change through suppliers and into the wider value chain. The C40 Cities Climate Leadership group is sharing practice and promoting action⁷. At the leaders Climate Summit in September 2014⁸ - a range of sectors from major investors through to a network of over 2,000 cities made further commitments.

IEMA MEMBERS AND INDIVIDUALS

Our Members are actively working within organisations and with clients on transformational change towards low carbon and climate resilient business models. IEMA will work with Members to enable sharing of good practice and mutual learning around effective change processes on climate change and energy. We will do this by building and maintaining an online resource (Climate Change & Energy web-hub). We will increasingly work with Members to scrutinise and inform new policy developments in climate change, to respond to formal consultations and develop networks, ambassadors and new engagement initiatives.

Specific IEMA leadership will focus on this statements headline policy calls and on related opportunities to support Members in their work on climate change and energy. We will support understanding of climate change and energy as 'real' business issues. We will do this in several ways including:

- Working with our Members on policy issues and on new energy and climate change developments.
- Policy and media engagement work on focused concerns (for example on the benefits of carbon reporting⁹).
- Challenging Government and other strategic level policy where required - for example, if important longer term policy directions become compromised by short term decisions¹⁰.
- Engaging networks and organisations in our policy work and contributing with partners on issues of shared concern¹¹.

Whilst recognising the need to increase focus on resilience and climate risks, some concern exists that climate change adaptation can, in some situations, be used to 'trade off' against the urgent priority for mitigation and GHG reduction. We view this as a short term trade off that will fail to address the full scale of the climate challenges most organisations face (i.e. longer term and in wider context of mega trends and critical dependencies¹²). IEMA will work with Members on both mitigation and adaptation measures. We will support a more complete understanding of the range of impacts on organisations and draw connections between these two critical agendas (recognising the objective urgency for action on both).

6. Carbon Disclosure Project - CDP Climate Leadership Index - [click here](#)

7. C40 Cities Climate Leadership Group - [click here](#)

8. Summit 2014 - [click here](#)

9. IEMA engaged Members in developmental work on GHG (carbon) reporting over the period 2010 through to introduction of mandatory GHG reporting in 2013. IEMA evidence on environment and business benefits of GHG reporting (sourced through Members) contributed to the Defra 2012 Regulatory Impact Assessment and implementation of the mandatory requirement on around 1,100 UK (quoted) companies.

10. Example of 'threat to policy' - [view here](#) and [here](#)

11. In February 2014 IEMA and 15 other professional bodies signed an open letter to the Prime Minister David Cameron, calling for a more strategic and integrated planning approach to help avoid and reduce flooding impacts.

12. At the World Economic Forum Annual Meeting 2013 in Davos-Klosters, the presidents of the International Monetary Fund and the World Bank and the Secretary-General of the Organisation for Economic Co-operation and Development – delivered the message that it will not be possible to emerge from the current global economic crisis without addressing resource scarcity and climate change. The Forum's Global Risks 2013 report echoed these views, with climate change emerging as one of the top global risks faced by mankind - [click here](#)



2. POLICY FRAMEWORKS AND STRATEGIC DEVELOPMENTS THAT SUPPORT CERTAINTY AND CONFIDENCE

Robust policy is essential for those seeking change and investment in new approaches to address energy and climate change challenges. Short and medium term policy confidence is critical for practitioners transforming their organisations or advising clients. IEMA calls for effective and durable policy frameworks that will support action on climate change and energy.

- Climate change and energy policy frameworks must not be subject to short term political change - they need to support confidence for investment and effective action.
- Greater integration and a 'joined up' approach to policy are needed (for example between Government departments).
- At international level an effective agreement and framework is sought to help global GHG emissions peak at the earliest possible opportunity.
- Policy frameworks should support (and not hinder) innovation and progressive transformation.

As outlined, the UK Government has been recognised for long term commitments (i.e. statutory carbon budgets and 2050 carbon target) to transition the UK to a low carbon economy. This important long term commitment needs to be underpinned by a clear, consistent and targeted policy landscape over the short and medium term. This is essential to ensure that organisations can respond and make low carbon, energy and climate change investments with greater confidence.

One regularly cited example of policy uncertainty has been the 'simplification' of the CRC Energy Efficiency Scheme in the UK.

Within a three year period the Carbon Reduction Commitment (CRC) went from its launch as a tailored reward based scheme combining well researched organisational drivers (reputational to fiscal) and transformed to a scheme that many view as a direct carbon tax based on mandatory reporting¹³. It has also been identified as a candidate for future review and potential withdrawal¹⁴. Some practitioners responsible for communicating CRC to their Boards and for making related business cases on energy improvements have referenced this 'constant policy journey' as an example that has impacted on decision making (and as a consequence some energy reduction and low carbon investments have been delayed).

UNCERTAINTY IN FUTURE CARBON VALUES IS A FURTHER CONCERN (E.G. ACROSS SUBSIDIES, CARBON PRICE AND TAXATION).

- Within the EU ETS recent over supply of allowances has significantly suppressed the carbon price. Uncertainty about the future of the market has fuelled volatility, while delay in tackling over supply has been undermining the aim to use the market to drive low carbon investment.
- The UK carbon price floor is a top-up tax that bolsters the existing EU price of carbon¹⁵. In the March 2014 Budget the Chancellor announced the freezing of its price from 2016/17.
- Within the simplified CRC Energy Efficiency Scheme the allowance price was initially too short term and did not provide investment certainty. This improved following the 2013 Autumn Statement which effectively set the value through to 2016 (although at the same time introduced uncertainty by indicating a potential review and removal of the tax in 2016).

¹³. IEMA response to DECC's 2012 consultation on simplification of the CRC - View here

¹⁴. UK – Chancellor of the Exchequers 2012 Autumn Statement - View here

¹⁵. Energy companies already pay to pollute under the EU emissions trading scheme (ETS), buying permits to emit greenhouse gases when they generate electricity. But the price of the permits crashed to a record low in 2013, meaning there's much less of a financial incentive for companies to cut their emissions. The (UK) carbon price floor is meant to solve this by putting a minimum price on how much power generators pay to pollute. If the ETS price drops below this level, companies pay the difference to the UK Treasury. The carbon price floor was (initially) set to increase each year, from around £16 per tonne of carbon dioxide in 2013, to around £70 by 2030.

¹⁶. Committee on Climate Change - Blog 31 March 2014 - View here.

¹⁷. IEMA is participating in a current ISO initiative undertaking a review into standards needs / opportunities for both climate change mitigation and adaptation (ISO Climate Change Coordinating Committee 2014-2015).

THE COMMITTEE ON CLIMATE CHANGE COMMENTED ON THE 2014 CHANGES TO THE UK CARBON PRICE FLOOR AS FOLLOWS:

“Introducing a policy and then fundamentally changing it a short time later is not conducive to providing the clear and consistent signals that investors require. This is in a context where the Government has already given mixed messages, and where there is a high degree of uncertainty about its commitment to support investment in low-carbon technologies coming on the system in the 2020s. Given this uncertainty, incentives for project development and supply chain investment are weak.

As we have previously recommended, the way to address this is through setting a power sector decarbonisation target for 2030, and to commit to funding this. This would put us on the economically sensible path to building a low-carbon economy. The debate about the decarbonisation target is likely to be lively going into the election, and early in the term of a new government, given the provision in the Energy Act to set a target in 2016.¹⁶”

A contrast here exists with the “success” of the landfill tax where the UK Government made clear the tax would rise by £8 per tonne each Budget until it reached a target level of £80 per tonne. Although the tax and related policy is

criticised in some quarters (e.g. for not fully following the waste hierarchy / not reducing total waste) the well signalled escalator did deliver long-term investor certainty and has transformed the industry.

Further recent concern exists around the so called ‘crowded policy landscape’ for some organisations on carbon and energy reporting. Some UK organisations are now required to comply with the CRC Energy Efficiency Scheme, Mandatory Carbon Reporting and also now the Energy Savings Opportunity Scheme (ESOS). Further requirements include EU ETS, CCAs and Climate Change Levy. Although schemes can (and should) be complimentary, for some the staggered implementation has led to duplication of effort. IEMA is keen to work with Government departments, Members and affected organisations to horizon scan future policy developments and to consider such duplication issues and streamlining possibilities at an early stage.

Similar concerns exist in relation to newly developing standards and guidance with some practitioners concerned about a growing and confusing landscape. IEMA will continue to engage with and directly involve Members with critical developments in climate change and energy related standards and guidance¹⁷. We are supportive of new guidance and standards where these have a valuable contribution to make.

A range of examples have been provided by IEMA Members indicating recent policy changes and developments which have generated a lack of confidence and uncertainty (the box sets out examples - many relate to the UK and to changes over the last three years).

- Significant concern continues for the carbon price difficulties and future of the European Emissions Trading Scheme (EU – ETS) and also for other important carbon trading initiatives such as UNFCCC Clean Development Mechanism (CDM) and the developing REDD+ international forestry scheme.
- UK examples of disruptive (and on occasions commercially damaging) short term change include simplification of the CRC Energy Efficiency Scheme, changes to the (ECO) Energy Companies Obligation, and financial changes concerning solar Feed in Tariff and on-shore renewables.
- Policy delays include Renewable Heat Incentive, Zero Carbon Homes and mandatory carbon (GHG) reporting.

- Inconsistency concerns have been raised – for example between UK Government Department initiatives such as the CRC Energy Efficiency scheme (DECC responsibility) and GHG reporting and guidance (Defra responsibility).
- Further legislation concerns - Maintain timescale commitments and review GHG reporting early in next parliament (i.e. implement the intention to extend mandatory reporting to all large companies).
- Concerns over removal of the climate change adaptation reporting requirement after only one reporting cycle.
- More integration in supply chains and procurement - Many IEMA Members reference the importance of maintaining commitments on public procurement as a key driver for performance improvement on climate change and energy.
- Increasing concern over energy security for organisations (and reference to CBI Energy Poll - published in July 2014).

3. RECOGNITION, INTEGRATION AND EMBEDDING CLIMATE CHANGE AND ENERGY AS CENTRAL AND MAINSTREAM BUSINESS ISSUES

Approaches are required to embed energy, climate change mitigation and adaptation into mainstream business operations. Although 'stand-alone' climate and energy programmes can be valuable especially in the early stages of building support for action, integration and mainstreaming into broader business practice will be essential in securing longer term action.

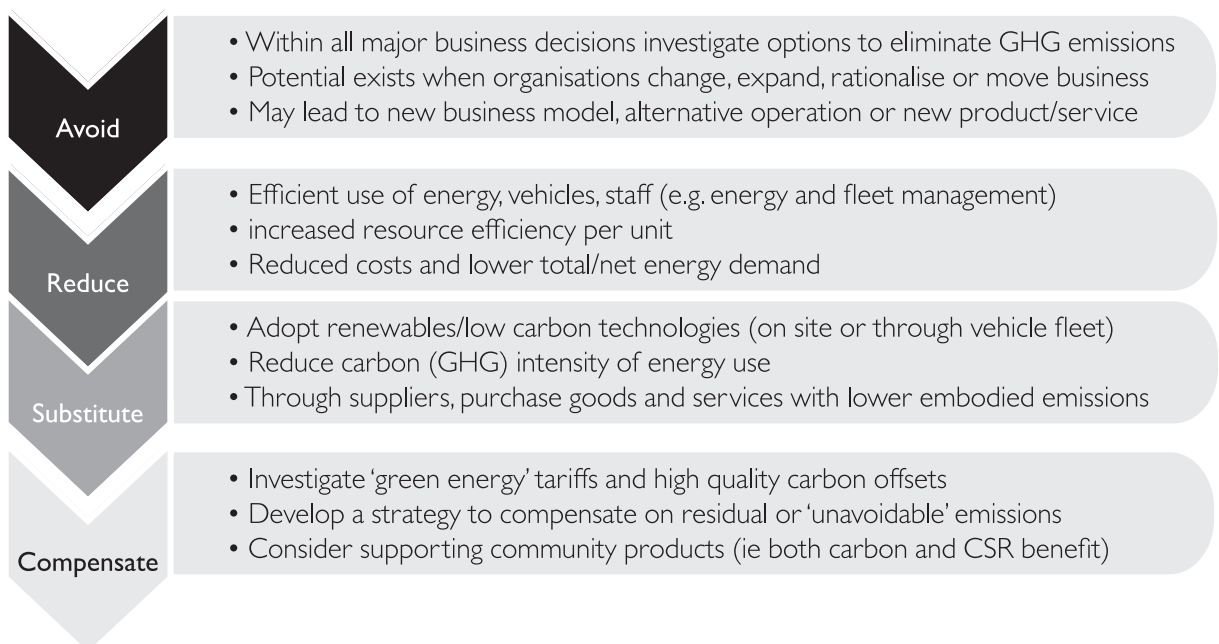
Climate change and energy are increasingly becoming material and mainstream business concerns and this is starting to be reflected in company vision statements and in annual reports¹⁸. Leading businesses are recognising and addressing climate impacts and some management systems are starting to incorporate resilience measures and adaptation to climate risks. Progressive examples have been highlighted by IEMA Members such as integrated procurement or supply chain programmes where a mix of concerns are addressed together (e.g. ethical sourcing, energy and resource efficiency, low carbon design, climate adaptation / resilience and security / continuity of supply). IEMA supports the need to integrate and embed action on climate change and energy into mainstream sustainable business practice.

IN RELATION TO ENERGY AND CLIMATE CHANGE MITIGATION

IEMA Members are active in advancing renewable based, low carbon and energy efficient solutions across a wide range of business situations. These have often been advanced as 'stand alone' business case initiatives, but increasingly there are opportunities to embed and advance improvements in wider strategic and organisational approaches. These can extend from specific procurement clauses through to mainstream business planning, corporate targets, supply chain initiatives, investments, new product development and communicated vision statements

IEMA developed a GHG management hierarchy approach as a framework to scope and address energy and carbon reduction. Working through the hierarchy, priority is placed on 'at source' GHG avoidance, followed by energy reduction and then supported by substitution measures such as on site renewable energy. After reviewing these opportunities, compensation measures are considered. This hierarchy approach can be useful in informing more effective decisions within mainstream business approaches.

THE GREENHOUSE GAS MANAGEMENT HIERARCHY



18. In its 2013 annual report, Shell indicated that future tougher rules on greenhouse gas emissions may lead to higher operating costs, delayed projects and reduced demand for its product.

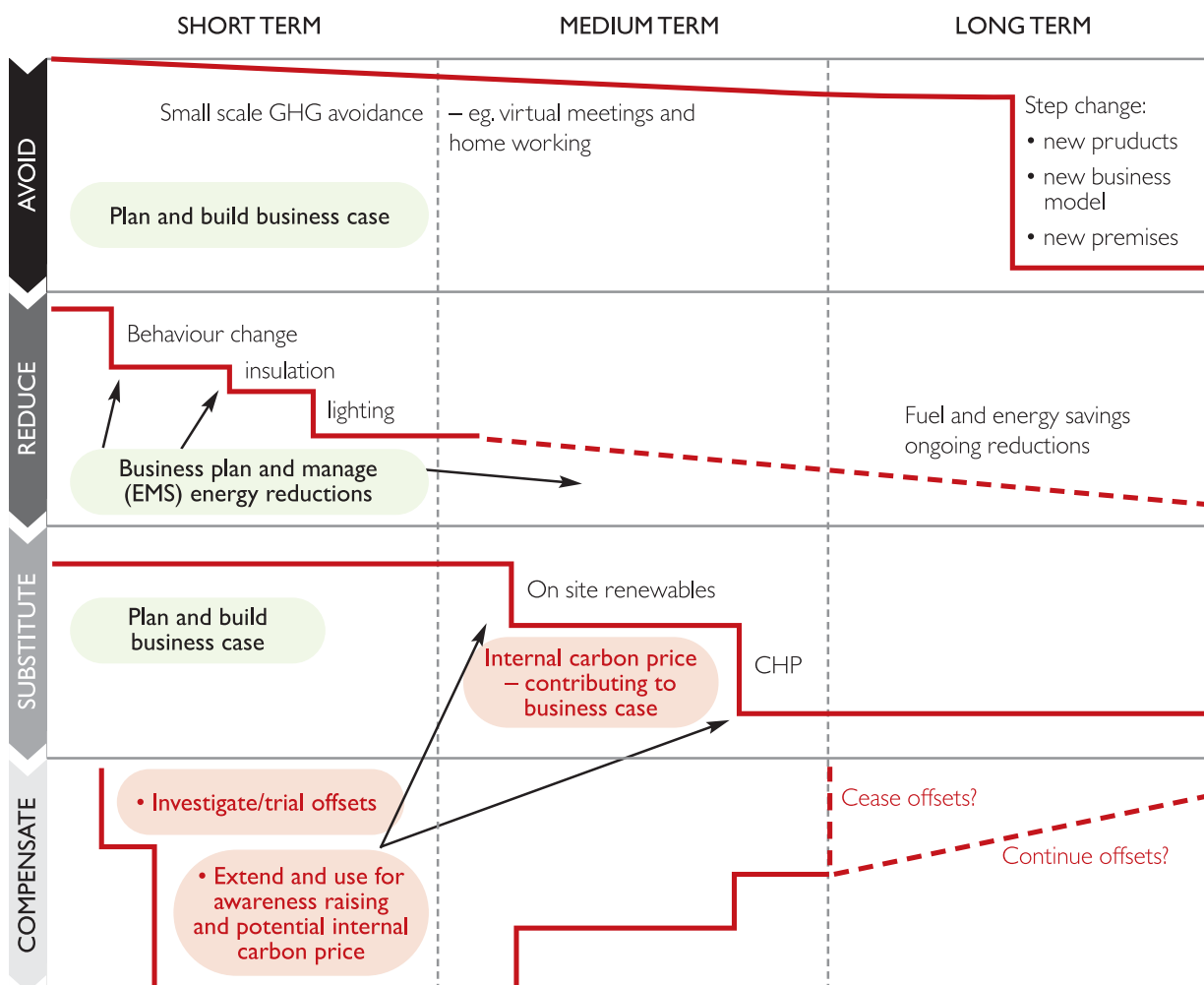
19. A number of developments have been made in recent years - improving standards in relation to 'carbon offsetting' and related claims. These include BSi PAS2060 Specification for Declarations of Carbon Neutrality and the Forestry Commissions development of the Woodland Carbon Code - [click here](#).

The GHG management hierarchy is a policy guide to help organisations focus on and consider their priority direct and indirect effects when making decisions on approaches to reduce energy and GHG emissions. It is not intended as a strict sequential hierarchy for every situation. In some cases an organisation may find measures lower down the hierarchy offer useful contributions whilst waiting for and planning in longer term avoidance measures.

Note - as a change to 2009 version the compensate level is no longer in red colour (reflects improvements in standards around compensation / offsetting and creative use by some Members). Some point out there could be a further level at the base of 'emissions to atmosphere'

The diagram below illustrates how the GHG management hierarchy can be used in association with longer term strategic planning. This is conceptual and only one of a number of scenarios organisations may follow in their transition. Bold red lines indicate the organisations planned 'carbon improvement' paths for each level of the hierarchy. Within this example the organisation is only able to achieve reductions and compensation in the short term through relatively easy energy savings (**REDUCE**) and early carbon offsetting (**COMPENSATE**). Planning and future business case development is scoped and scheduled in at an early stage (**SUBSTITUTE** and **AVOID**). This helps to ensure medium term progress through installation of onsite renewables and longer term via new premises and business models. An internal price for carbon is set early on linked to either purchased carbon offsets or other compensation such as woodland creation¹⁹. At a later stage savings against this internal cost are made as a (small) part of the business case on future energy improvements.

LOW CARBON TRANSITION PLANNING USING THE IEMA GREENHOUSE GAS MANAGEMENT HIERARCHY



IN RELATION TO CLIMATE CHANGE ADAPTATION

Corporate approaches to the environment are changing with increased realisation of business critical dependencies. The imperative need to reduce business environmental impact continues, but is accompanied by growing appreciation of the direct economic value of the natural environment and our need for resilience to the changing climate. Business concerns are growing over supplies of economically critical resources such as rare metals, water scarcity and continuity and affordability of energy supplies. Awareness of vulnerabilities to climate and extreme weather further overlay these concerns. Climate risks and dependencies are starting to feature within corporate risk assessments and a range of reports identify this increasing critical interdependence between business and environment.

“Tackling climate change means using energy more efficiently, future-proofing businesses against climate threats and moving business operations towards carbon neutrality”
- CBI Web Page 2013.

IEMA supports the integration of climate resilience and adaptation within longer term and mainstream business approaches. Potential changes to the ISO 14001 environmental management systems standard offer one opportunity²⁰ to embed and incorporate resilience and adaptation approaches within and through this widely used standard. In recent years a range of climate change adaptation information, guidance and supporting tools have been developed, tested and made widely available. However outside of some key sectors such as food, energy and infrastructure, awareness continues to be low. IEMA Members are well placed to raise and progress adaptation and resilience as an increasingly important climate change agenda for all organisations and sectors.

20. At the time of writing ISO 14001 is being revised and is at stage of draft international standard. The draft includes reference to climate change and to managing the impacts of external environmental changes affecting the organisation (such as changes to the climate).



4. REPORTING, DISCLOSURE AND INCREASING TRANSPARENCY ON CLIMATE CHANGE AND ENERGY PERFORMANCE

Reporting and disclosure have an important role to play in growing board level commitment and 'building in' energy and climate change as mainstream business concerns. Reporting can work synergistically with development of the business case, helping build interest and demand for solutions. Energy savings are essential as early (and ongoing) wins. Lifecycle thinking is important to help ensure that wider impacts and costs of climate change are reflected across decision making

- Organisations should be transparent on performance and report / publicly disclose their GHG emissions. Resilience and adaptation to climate impacts will also benefit from disclosure
- IEMA supports potential extension of mandatory GHG reporting as a requirement on all large organisations (UK)
- Lifecycle approaches are required across supply chains and into the full value chain. Ultimately this can identify all significant opportunities for energy and emission reduction and include opportunities for improving resilience and adaptation to climate risks.

Reporting and disclosure have an important role in strengthening interest and support for energy and climate change action (within organisations and with wider

stakeholders). The introduction of mandatory carbon (GHG) reporting as a requirement on 1,100 UK listed companies is an important development called for by IEMA and others. Those new to GHG reporting now have to regularly and publicly disclose performance and this is an opportunity for winning Board level commitment. Working with our Members we have developed a good understanding around the value of reporting as a tool to help launch corporate commitment and also to build, ensure and maintain interest into the medium term.

This value²¹ of reporting and disclosure also extends into direct energy management through both public disclosure within the CRC Energy Efficiency Scheme²² (a UK example) and also across the EU with audit and internal report requirements arising from the Energy Efficiency Directive (EED). This Directive introduces an obligation for large enterprises to carry out an energy audit at least once every four years, with a first audit by 5 December 2015²³. The internal approach of regular audit and associated report is a positive development and will extend into specific proposals (direct recommendations) to achieve energy savings. Although no requirement is made to implement audit findings, the required process will provide a new opportunity for organisations to realise and pursue energy savings. In the UK this Directive is implemented via the Energy Savings Opportunity Scheme (ESOS).

A NUMBER OF REPORTING AND DISCLOSURE CALLS / ISSUES HAVE BEEN PROVIDED BY IEMA MEMBERS INCLUDING:

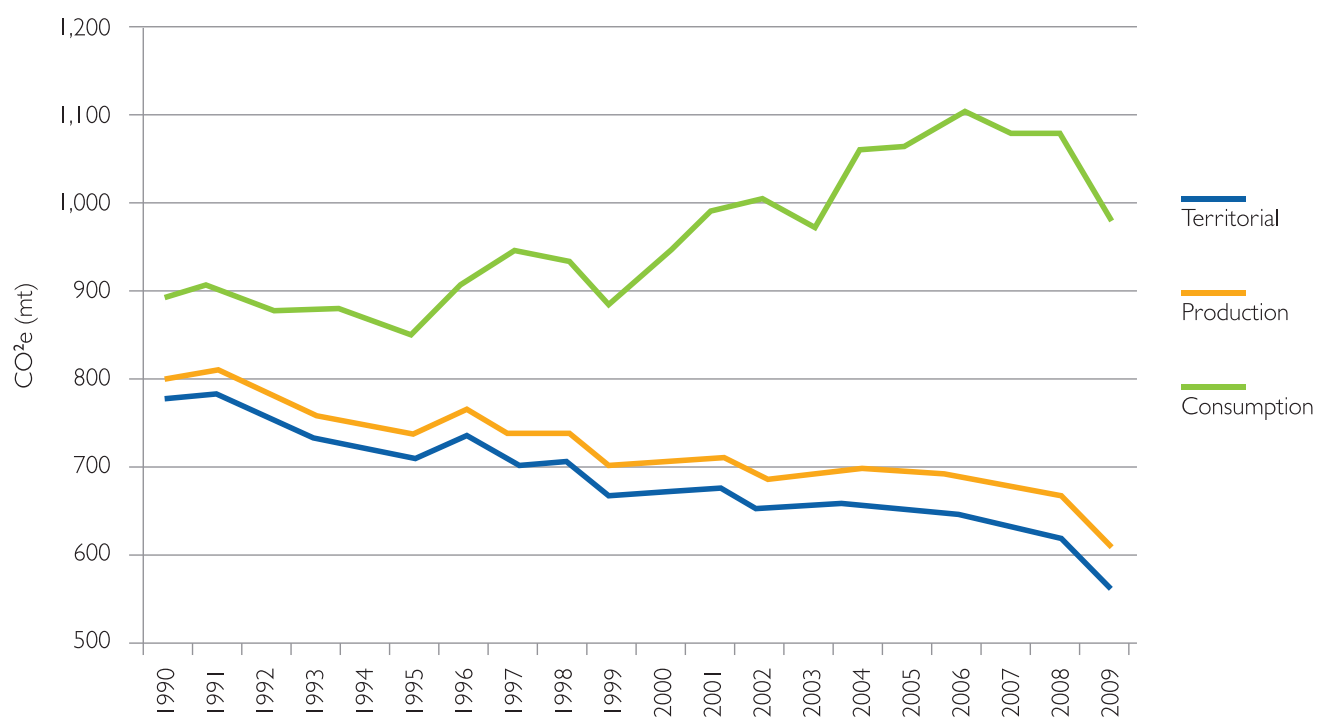
- Mandatory GHG reporting within the UK should be extended to all large companies.
- Transparent and credible 'green claims' need continued scrutiny and vigilance.
- A stronger National Adaptation Programme is needed (i.e. not just limited to a co-creation process).
- Recent changes and removal of Climate Change Adaptation reporting requirements have been disruptive - this has had a negative impact within some organisations (implicit lowering of priority).
- More consistency is needed between the main reporting and standards initiatives – where appropriate more joined up approach and in some cases integration / harmonisation.
- Total energy reduction should be a focus with reports disclosing consumption (e.g. kWh) as well as GHG statistics.
- Embodied carbon (embodied energy) requires more focus to ensure that energy and carbon 'hot spots' are not missed within supply chains or in the wider value chain (and into the 'use phase').

Away from mandatory schemes, a number of important voluntary reporting initiatives exist - prominent examples being the Carbon Disclosure Project (CDP) Global Reporting Initiative (GRI) and also now work via the developing International Integrated Reporting Council (IIRC)²⁴. A large number of standards and guidance publications also now exist from ISO, WRI, WBCSD amongst others (internationally) and in UK from DECC, Defra, BSi, IEMA and many others.

Although differing reporting frameworks, standards and guidance are required across specific situations, a need exists for consistency in terminology (between approaches) and for avoiding duplication and discrepancy. IEMA will work with Members and can help standards / guidance organisations to promote harmonisation between and across leading standards and guidance. A further reporting concern exists around difficulties in getting accurate and reliable emission factors in some countries and regions internationally (initiatives to address specific gaps will be welcome).

Carbon leakage can occur if businesses transfer production to other countries which have laxer constraints on GHG emissions. This can lead to an increase in total (overall) emissions and the European Commission identifies that the risk of leakage may be higher in certain energy intensive industries. The diagram below illustrates the importance of considering (consumed) embodied carbon and issues of leakage. Here the UK GHG emissions reported to UNFCCC (i.e. 'territorial emissions') show a 27% reduction between 1990 and 2009, an annual decline of around 1.4% per annum. GHG emissions are 212 million tonnes lower in 2009 than in 1990, and the UK achieved its target under the Kyoto Protocol. However, from a consumption perspective emissions rose at over 1% per annum between 1990 and 2008.

ALL ENERGY REQUIRED TO DELIVER UK CONSUMPTION 1990 - 2009²⁵



21. 2012 - IEMA survey work with Members identified that over a medium term period (within ten years) GHG reporting will deliver significant business benefits. 70% indicating GHG reporting will deliver cost savings, 77% that it will lead to environmental improvements.

22. The Environment Agency published the final edition of the CRC Performance League Table in February 2013. This ranked organisations on their performance for 2011/12. Participants achieved a total reduction of 7.63 per cent (4.64MtCO₂) in reported carbon emissions, compared to 2010/11. However while average reported emissions and energy use improved, only 500 out of the 2,000 companies actually reduced emissions in real terms. The scheme is expected to deliver non-traded carbon reductions of around 17MtCO₂ by 2027.

23. In the UK the Directive is addressed by the Energy Savings Opportunity Scheme (ESOS). DECC figures indicate that the ESOS scheme is estimated to lead to £1.6bn net benefits to the UK, with the majority of these directly felt by businesses as a result of energy savings.

24. Selected corporate reporting initiatives - 1) CDP - click here 2) GRI - click here 3) IIRC - click here

25. Reproduced from - John Barrett , Glen Peters , Thomas Wiedmann , Kate Scott , Manfred Lenzen , Katy Roelich & Corinne Le Queré (2013): Consumption-based GHG emission accounting: a UK case study - click here

Within a project, development or a supply chain, embodied carbon can be defined as the amount of carbon used and released from material extraction, transport, manufacturing, and related activities. This may be calculated from cradle to (factory) gate, from cradle to grave, or from cradle to cradle (given growing interest in circular economy models). A similar principle relates to embodied energy. With regard to carbon leakage and embodied carbon it is increasingly important to consider indirect (scope 3) emissions and life cycle approaches (e.g. product carbon footprinting). This can ensure hot spots are identified across the full value chain. A similar principle applies in adaptation where climate related risks and dependencies can benefit from being widely scoped and identified across supply chains.

Extending 'life cycle thinking' a fuller picture can be established by also considering natural cycles (e.g. soil and vegetation related emissions and removals) especially when land and land-use are critical aspects to the business or the project. Although for pragmatic reasons, boundaries will often be drawn quite tightly in carbon footprint reports, wider scoping into natural cycles can be important²⁶. An increasing area of interest and development exists around payments for ecosystem services where natural capital is valued (sometimes for its carbon value)²⁷.

Some leading organisations have progressed with innovative target based disclosure and linked this to marketing and communication campaigns. This is developmental, but a common factor is often the use of a future target - such as 'all of our operations will be carbon neutral by 2013'. Some recent examples include organisations looking at the potential for their business to be transformative and to make a positive contribution (e.g. 'net positive')²⁸ such leadership initiatives have grown in ambition and also (importantly) in their credibility with some underpinned by significant coalitions and engagement of NGOs. The level of ambition fits with the need and urgency for action. Some approaches hold the prospect of integrating to include climate resilience and adaptation and other broader corporate sustainability risks and dependencies²⁹. IEMA will look to engage and involve Members in such leading edge developments. In doing this we recognise the importance of robust and credible green claims and disclosure and will support measures to improve and build transparency on related communications from green product marketing through to organisational reporting. Reported carbon (GHG) footprints need to be fair, credible, robust and transparent³⁰.

In relation to climate change adaptation, reporting and disclosure is again valuable in helping to generate and maintain commitment. CDP information requests now include questions to reporting organisations about their response on climate risks and opportunities. In the UK the Adaptation reporting power grants the Secretary of State power to require public service organisations to produce reports on what they are doing to adapt to climate change. Nearly 90 organisations reported under the first round. The UK Government published an updated strategy for the second round in July 2013³¹. Under the new strategy, authorities now only report on a voluntary basis and those that reported in the first round should provide an update on their progress of implementation. Further relevant requirements are progressing via the EU with the amendments to Annual Financial Statements Directive 2013/34/EU³². For some this will operate as a further disclosure requirement on energy and climate change mitigation and also on their resilience and adaptation response to climate change risks, opportunities and dependencies.

NEXT STEPS

IEMA will work with our Members to support action on climate change and engagement on our four policy calls³³. This transformation requires a growing community of Environment and Sustainability Professionals.

Visit the IEMA Climate Change and Energy Portal to find out more and get involved.

www.iema.net/iema-policy-position-statement-climate-change-and-energy

²⁶. As an example see - Calculating Potential Carbon Losses & Savings from Wind Farms on Scottish Peat lands: a total life cycle perspective (2008) - [click here](#)

²⁷. The Forestry Commission have developed the woodland carbon code (WCC) as a voluntary standard for woodland creation projects in the UK which will make claims about the carbon dioxide they sequester. Independent certification to this standard provides assurance and clarity about the carbon savings of these sustainably managed woodlands. Defra GHG reporting guidance recognises woodland creation under the WCC as legitimate carbon removals for use in GHG reporting - [click here](#)

²⁸. Net Positive - [click here](#)

²⁹. IEMA / GACSO Corporate Sustainability white paper - [view here](#)

³⁰. Green power thought piece - 2012 - [click here](#) Green power update 2014 - [click here](#)

³¹. The Climate Change Committee (ASC) provided advice ahead of the Government's publication of the second round of reporting's strategy - [view here](#) In addition to moving to a voluntary approach, the reporting requirement N1188 on Local Authorities 'planning to adapt to climate change' has also been removed.

³². [View here](#) - Certain large undertakings (€6,000) required to include a non-financial statement in their annual management report, to the extent necessary for an understanding of the undertaking's development, performance and position and of the impact of its activity.

³³. See page 1.



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ABOUT IEMA

The Institute of Environmental Management & Assessment (IEMA) is the professional home of over 15,000 Environment and Sustainability professionals from around the globe. We support individuals and organisations to set, recognise and achieve global sustainability standards and practice.

Our members are equipped to collaborate, lead and deliver sustainability in their organisations, using IEMA standards as their foundation. They improve environmental performance and drive competitiveness, productivity, resilience and growth.

As an organisation we are independent and international, enabling us to deliver evidence to Governments, information to business and inspiration to employers that demonstrate how to transform the world to sustainability.

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