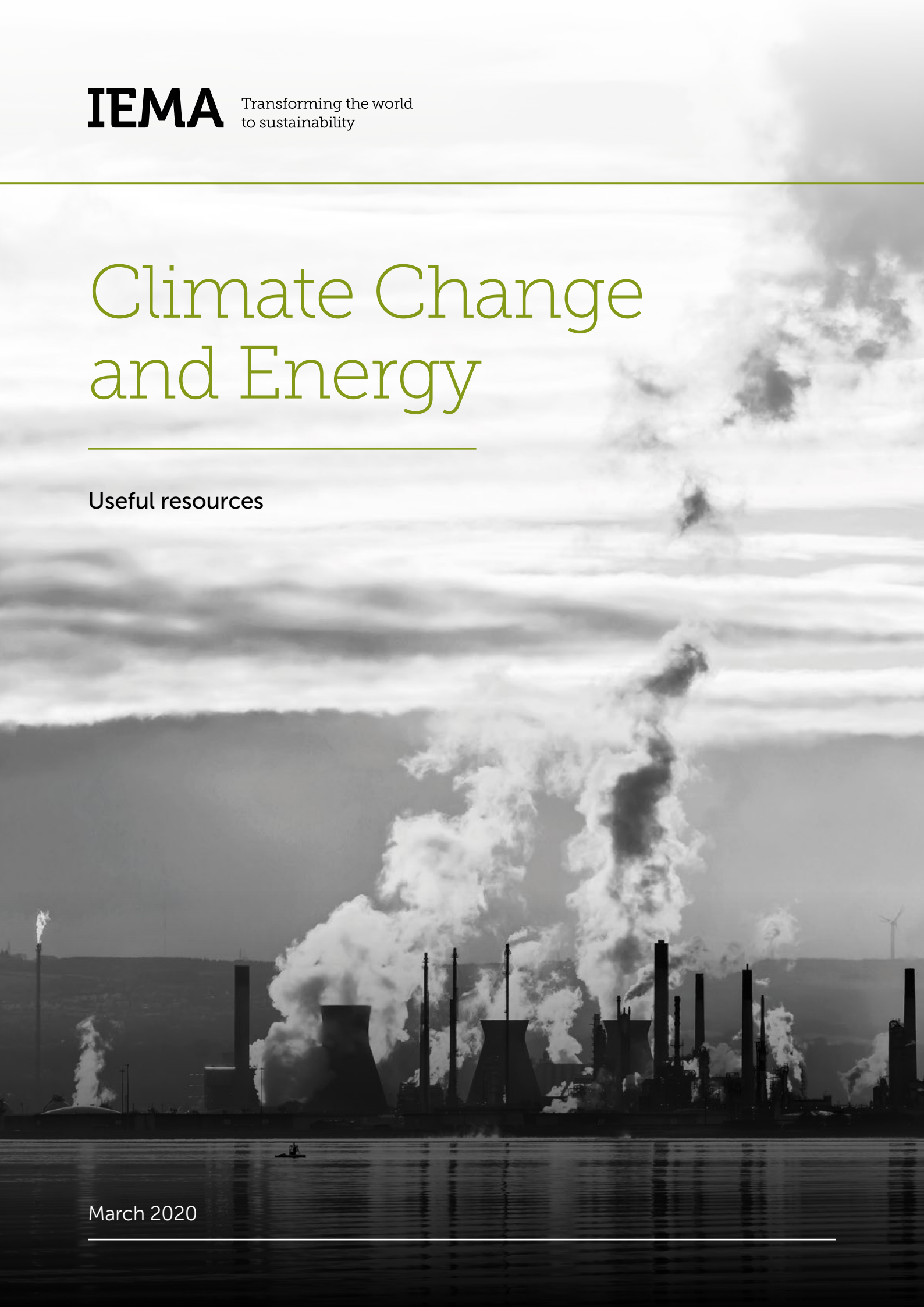**IEMA** Transforming the world
to sustainability

Climate Change and Energy

Useful resources

March 2020

Introduction

To support members, we want to refresh and develop our climate change and energy resources available on iema.net. This consolidated Toolbox has been developed by members of the IEMA Climate Change and Energy Network, sharing tools, guidance, standards and web pages (resources that have been useful in addressing climate change). It will be annually updated and feedback is welcome and valuable in this process.

About the Climate Change and Energy Network

This network of IEMA members has a focus on climate action and transformative change. A small steering group has surveyed members and is embarking on a range of member led initiatives, such as this toolbox. Other activities include newsletters, a developing webinar programme and new guidance. The network has helped IEMA to deliver a number of leading-edge national events at EMEX and in association with partners (presentations available on the network web page). It also supports and helps inform IEMA responses to Government and wider consultations.

The network is formative with real opportunities for members to influence and engage

For more information visit: www.iema.net/engage/networks

Link to resources

When you see this icon, remember to click on the section heading to access the resources.

Note: This is a compilation of resources supplied by IEMA members in the Climate Change and Energy network. We are sharing content that our members find useful and IEMA is not responsible for use of the information contained in or linked from this document.

Contents

Climate Change Adaptation

The climate and weather we experience is changing and direct and indirect effects are becoming more discernible. It is imperative that organisations adapt, build resilience and start to address the impacts on their activities strategically and operationally.

Climate Change Adaptation – adjusting natural or human systems (including organisations) in response to actual or expected climatic stimuli or their effects, and in doing so, to moderate harm or exploit beneficial opportunities.

The following useful tools are identified by members of IEMA's climate change network.

UK Climate Projections 2018

Produced by: *Met Office*

This resource can be used to determine key future climate and weather variables for use in climate change risk assessment. It's particularly useful for IEMA members working at Full and Chartered Environmentalist or above.

UK Climate Change Risk Assessment 2017 Evidence Report

Produced by: *Committee on Climate Change*

Use this report to understand key challenges facing the UK in terms of climate change risks and opportunities. This will be great for IEMA members working at Full and Chartered Environmentalist or above.

Adapt Now: A Global Call for Leadership on Climate Resilience

Produced by: *Global Commission on Adaptation*

This is particularly useful if you need to make the business case to leadership to invest in adaptation projects and strategies. This is useful for any IEMA member working as the sole practitioner in your organisation who needs to influence leadership to adapt.

Benefits of SUDS tool

Produced by: *CIRIA*

Assess the potential benefits of green infrastructure installations, in terms of run-off reduction and temperatures.

EIA Guide to Climate Change Resilience and adaptation

Produced by: *IEMA*

Guidance for EIA professionals developed in 2015 and revised guidance due in 2020

Climate-KIC Cost Benefit Analysis Training

Produced by: *Climate-KIC*

Learn how to assess the costs and benefits of adaptation measures and a tool to assess them.

Non-paper guidelines on making projects climate resilient

Produced by: *European Commission*

Guidelines on how to assess the climate risks to major projects.

Adaptation Capability Framework for a Climate Ready Public Sector

Produced by: *Sniffer*

Assess the maturity of your organisation's approach to adaptation and understand activities you can take to build your resilience to climate change.

Connecting Climate Risk and Strategic Priorities - Guide to strategic climate change risk assessments

Produced by: *Sniffer*

Understand how to undertake strategic climate change risk assessments for an area or organisation.

A changing climate for development - a toolkit or assesing climate risks for built environment and infrastructure projects

Produced by: *Sniffer*

A full toolkit to assess the climate risks in built environment and infrastructure projects.

Climate Change Policy

IEMA has worked to support and influence the development of effective policy frameworks, which in turn are essential in supporting action on climate change and energy.

A range of policy related information is available for IEMA members both in the UK and internationally.

The following useful information sources have been identified by members of IEMA's climate change network.

Committee on Climate Change SITE

Produced by: *Committee on Climate Change*

Independent, statutory body established under the Climate Change Act 2008.

Purpose is to advise the UK Government and Devolved Administrations on emissions targets and report to Parliament on progress made in reducing greenhouse gas emissions and preparing for climate change.

The Committee's webpage hosts a range of useful reports, publications and condensed policy insights. These are often especially useful for professionals active in the UK.

UK Green Building Council

Produced by: *UKGBC*

Various free publications mitigating and adapting to climate change alongside other sustainability resources.

The UK's contribution to stopping global warming

Produced by: *Committee on Climate Change*

Report on what actions the UK has to take to stopping global warming from the UK's activities.

Reducing emissions from road transport: Road to Zero Strategy

Produced by: *Department for Transport*

Lays out the UK's strategy for cleaner transport.

Carbon Brief Website

Carbon Brief cover climate science and climate & energy policy, specializing in clear, data-driven articles to improve the understanding of climate change.

UNFCCC Website

UNFCCC secretariat (UN Climate Change) provides technical expertise and assists in the analysis and review of climate change information reported by Parties and in the implementation of the Kyoto mechanisms. It also maintains the registry for Nationally Determined Contributions (NDC) established under the Paris Agreement, a key aspect of implementation of the Paris Agreement.

IRENA

Intergovernmental organisation that supports countries in their transition to a sustainable energy future, and serves as the principal platform for international cooperation, a centre of excellence, and a repository of policy, technology, resource and financial knowledge on renewable energy.

World Economic Forum

International Energy Agency

The Tyndall Centre

The Grantham Centre

The Scottish Government

Communicating Climate Change

Effective communication around climate impacts and transitions requires planning and careful consideration. This is especially important in the context of the escalating 'Climate Emergency'.

A growing range of related research and information is available in the UK and internationally.

The following initial information sources have been identified by members of IEMA's climate change network.

Climate Visuals

Produced by: *Climate Outreach*

A website containing a library of images, many of them free to use, showing various aspects of climate change. The images are chosen on the basis of research that shows the positive impact they have in communicating.

Focus on the framing, not just the facts.

Produced by: *The Climate Reality Project*

An article highlighting the need to focus on the audience's core values when discussing climate change, as opposed to just stating facts.

Carbon literacy

Produced by: *The Carbon Literacy Project*

"Carbon Literacy" is a not-for-profit with the aim of everyone receiving a days' worth of learning on climate change. The website contains the "standard" (curriculum) for what should be covered to enable training delegates to be certified as carbon literate, and shows the pathways to certification.

Planet Placement

Produced by: *BAFTA Albert Consortium*

A website containing guidance on how sustainability-related themes can be incorporated into TV programmes, films and other content. Its findings can be transferred to other forms of communication

The Climate Communication Project

Produced by: *Climate Outreach*

A study of existing climate change communication in the UK, with recommendations for improvement. Contains user-friendly infographics.

Global Weirding

Produced by: *Katharine Hayhoe, climate scientist*

A series of videos which explain climate change in engaging, user-friendly ways.

Sustainability Explored by Jae Mather

Produced by: *Jae Mather*

A 10 minute summary of how every macro trend relates to sustainability and climate change in one way or another.

Could sustainability learn from the civil rights movement?

The civil rights movement forced radical change to the status quo; the sustainability movement is failing to do the same

Guardian and Observer Style Guide

A short glossary of the changes made to the Guardian's style guide, for use by their journalists and editors when writing about the environment

Advertising Standards Authority (ASA)

Includes information concerning green and climate related claims / communications.

Carbon GHGs and Energy

Often referenced under Climate Change Mitigation, actions to limit the magnitude or rate of long-term global warming and its related effects, an extensive range of tools and resources are available for quantifying and reducing GHG emissions and for energy management.

The following initial information sources have been identified by members of IEMA's climate change network.

Climate Neutral Now

Produced by: *UNFCCC*

Webpages encouraging commitments to go 'Climate Neutral Now' – also including guidance on the responsible use of carbon offsetting and how to become Climate (carbon) neutral. IEMA signed up to this international commitment scheme in 2019

Pledge to Net Zero

Produced by: *Society for the Environment and supported by key partners (including IEMA)*

Webpages encouraging commitments to seek science based GHG reductions and the setting of targets for net-zero emissions. Includes guidance, references to wider GHG standards and examples. IEMA is also signing up to this initiative.

ISO Standards supporting climate change mitigation

Produced by: *International Organisation for Standardisation (ISO*

ISO standards play a pivotal international role in reducing greenhouse gas emissions. This brochure describes the standards in the ISO 1406x series and how these contribute to the transition to a zero-carbon economy.

Greenhouse gas reporting: Conversion Factors

Produced by: *BEIS (UK Government Department)*

Basic and advanced conversion factors for the UK. These emission conversion factors can be used to help report on 2019 greenhouse gas emissions by UK based organisations of all sizes, and for international organisations reporting on UK operations.

UK Energy Savings Opportunity Scheme – ESOS

Produced by: *BEIS*

Webpage describing ESOS and including some guidance.

ESOS is a mandatory energy assessment scheme for organisations in the UK that meet the qualification criteria. The Environment Agency is the UK scheme administrator.

CDP disclosure services

Produced by: *CDP*

Range of resources and services available.
CDP is a widely used (foremost) international disclosure platform.

UK Energy and carbon reporting guidance

Produced by: *BEIS (UK Government Department).*

Guidance for energy and carbon reporting. To help companies and limited liability partnerships in complying with the Streamlined Energy and Carbon Reporting (SECR) regulations. Can also help all organisations with voluntary reporting on a range of environmental matters, including greenhouse gas (GHG) reporting and the use of key performance indicators (KPIs).

This guidance includes changes which take effect from 1 April 2019.

These changes require all UK quoted companies to report on their global energy use in addition to greenhouse gas emissions in their annual Directors' Report. There are also requirements for large unquoted companies and limited liability partnerships to disclose their annual energy use and greenhouse gas emissions and related information.

Science Based Targets

Produced by: *Science Based Targets Partners*

Webpage for the Science Based Targets Initiative, setting GHG reduction targets in support of transition.

The Science Based Targets initiative champions science-based target setting as a powerful way of boosting companies' competitive advantage in the transition to the low-carbon economy. It is a collaboration between CDP, the United Nations Global Compact (UNGC), World Resources Institute (WRI), and the World Wide Fund for Nature (WWF) and one of the We Mean Business Coalition commitments.

World Resources Institute

Produced by: *WRI*

Range of established resources that include briefings and reports, as well as widely used / freely available GHG standards and guidance (see also below).

GHG Protocol standards & tools

Produced by: *World Resources Institute (WRI) and the World Business Council for Sustainable Development*

Basic outline for establishing emissions accounts; supplementary standards and tools for different sectors.

IEA – Energy and emissions data / models

Produced by: *IEA*

Evidence and data useful to inform strategy and plans.

IEA work spans a variety of programmes and initiatives, helping ensure energy security, tracking clean energy transitions, collecting data, providing training around the world.

ISO14064 (parts 1 & 2)

Produced by: *ISO (published in each country by its National Standards Body)*

International standards for good practice in establishing emissions inventories.

ISO14064-1 specifies principles and requirements at the organization level for the quantification and reporting of greenhouse gas (GHG) emissions and removals. It includes requirements for the design, development, management, reporting and verification of an organization's GHG inventory.

See also the wider ISO series including ISO14067 (Carbon footprints) and ISO.

Bsi PAS2050 - free standard on product footprint

Produced by: *BSI*

Free specification for the assessment of the life cycle greenhouse gas emissions of goods and services. Revised and published in 2011. May be particularly useful when:

- A carbon footprint estimate or hot spot analysis is required (see The Guide to PAS 2050:2011 for additional information)

- When GHG accounting is required for estimates of materials with longer lasting biogenic storage potential

- When using PAS 2050-1:2012, Assessment of life cycle greenhouse gas emissions from horticultural products or PAS 2050-2:2012, Assessment of life cycle greenhouse gas emissions - Supplementary requirements for the application of PAS 2050:2011 to seafood and other aquatic food products.

An International Standard is also now available for product carbon footprinting – ISO 14067

Woodland carbon code

Produced by: *The Forestry Commission*

The Woodland Carbon Code is the voluntary standard for UK woodland creation projects where claims are made about the carbon dioxide they sequester. Independent validation and verification to this standard provides assurance and clarity about the carbon savings of these sustainably managed woodlands.

Peatland Code

Produced by: *IUCN*

Voluntary certification standard for UK peatland projects wishing to market the climate benefits of peatland restoration.

Calculating carbon savings from windfarms on peatland

Produced by: *Scottish Government*

The 'carbon calculator' is the Scottish Government's tool provided to support the process of determining wind farm developments in Scotland. The purpose of the tool is to assess, in a comprehensive and consistent way, the carbon impact of wind farm developments.

Embodied energy and carbon - The ICE database

Produced by: *Circular ecology*

Embodied energy is the amount of energy consumed to extract, refine, process, transport and fabricate a material or product (including buildings). It is often measured from cradle to (factory) gate, cradle to site (of use), or cradle to grave (end of life). Likewise, embodied carbon footprint is the amount of carbon (CO_2 or CO_2e emission) to produce a material.

The Inventory of Carbon and Energy (also know as the ICE database) is a leading embodied energy and carbon database for building materials which is available for free on this page. It contains data for over 200 materials, broken down into over 30 main material categories.

Guidance document for PAS 2080

Produced by: *The Green Construction Board & Construction Leadership Council*

Guidance on PAS 2080. World's first specification for managing whole life carbon in infrastructure

RSSB Rail Carbon Tool

Produced by: *RSSB*

Software for carbon accounting available to support consistent quantification - to assist the UK rail industry with understanding what its carbon footprint is so it can go on and reduce it throughout its supply chain.

Carbon Infrastructure Transformation Tool (about to go live)

Produced by: *i3P and Carbon Trust*

New software for carbon accounting for infrastructure.

ZapMap

Produced by: *ZapMap*

Free resource on the latest charging points, vehicles and developments for PHEV and BEVs.

Energy Savings Trust

Non profit organisation established by UK Government (1992). Devoted to promoting energy efficiency, energy conservation, and the sustainable use of energy.

RE 100

RE100 is a global corporate leadership initiative bringing together influential businesses committed to 100% renewable electricity. RE100's purpose is to accelerate change towards zero carbon grids, at global scale.

The initiative seeks to increase corporate demand for – and in turn supply of – renewable energy.

Renewable Energy Purchasing and the Market-based (Scope 2) Method -

Collated articles and research including considerations / critique of market-based GHG accounting.

ICROA

The International Carbon Reduction and Offset Alliance (ICROA) is a non-profit organisation made up of leading carbon reduction and offset providers in the voluntary carbon market.

Mitigation with Adaptation

In addition to topic specific resources, guidance and tools are also developing to address the twin agendas of mitigation and adaptation (i.e. together).

The following have been initially identified by members of IEMA's climate change network

Driving Climate Action through EMS

Produced by: *IEMA*

Guidance on addressing climate change through use of an EMS (for example as developed using ISO14001). This guidance works through the main EMS clauses and outlines how the EMS can identify and address adaptation and mitigation opportunities.

Compiled in response to members requesting a 'how to' guide on achieving climate change action (includes examples and list of wider information).

Task Force on Climate-Related Financial Disclosures - Knowledge Hub

Provides information and guidance for organisations to enhance their disclosures of climate-related information. Important focus on Transition Risk (mitigation related), Physical Risk (adaptation) and on scenario analysis. Reports and technical supplements are available **HERE**

New TCFD guidance will be published in 2020 by IEMA in collaboration with the Institute and Faculty of Actuaries.

Natural Capital protocol

Produced by: *The Natural Capital Coalition*

The Natural Capital Protocol is a decision making framework that enables organizations to identify, measure and value their direct and indirect impacts and dependencies.

Supply Chain Sustainability School

Produced by: *Supply chain Sustainability School*

Provides over 90 e-learning courses on different sustainability topics including energy efficiency and carbon.

SHIFT

Produced by: *SHIFT*

Aimed at social landlords, this tool results in a gap analysis of environmental impacts for housing against science-based targets to allow good strategy development. Includes carbon emissions as well as flooding and overheating risk. Mainly a "paid-for" tool but are trialling a free version.

ICAEW Knowledge Hub

Useful resources for businesses and professionals, made available via Institute of Chartered Accountants in England and Wales

The Environment Agency

Vision / Strategy

Resources are developing to support the process of setting a vision and developing strategies. The following webpages include thought pieces and information.

See also the GHG section for information concerning the use of vision statements such as net-zero and carbon neutral.

The following have been initially identified by members of IEMA's climate change network.

We Mean Business resources

Produced by: *We Mean Business*

Setting vision / strategy.

Biz declares

Produced by: *Biz Declares / B Corp*

Short film by Biz Declares with guidance on declaring a Climate Emergency. Also see web site for case studies and latest resources.

The Climate Group - various initiatives

Produced by: *The Climate Group*

To set GHG targets and plan how to meet them.

Climate Strategies

Produced by: *Supply chain Sustainability School*

Provides over 90 e-learning courses on different sustainability topics including energy efficiency and carbon.

ClimateWorks Global View

Produced by: *ClimateWorks Foundation*

Setting strategy.

UN Environment climate change program

Produced by: *Un Environment*

Setting strategy.

BSR resources

Produced by: *BSR*

Vision / strategy.

Ceres resources

Produced by: *Ceres*

Setting vision / strategy.

Future Fit

Translating 30+ years of research into practical and free tools that guide real progress toward a flourishing future.

One Planet Living

One Planet Living is a vision of a world where we can live happily within the Earth's resources, and a straightforward framework to achieve this.

IEMA's Climate and Environmental Emergency

Information from IEMA on their strategic approach and declaration. Also some wider resources and IEMA guidance updates available **HERE**

Why not contribute?

Let us know -

- what tools or resources have really proved valuable?
- importantly how have they helped you?

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