Carbon Accounting Programme

CATAPULT Energy Systems

Operationalising a Carbon Regulator

Report 2

Review of Existing Regulatory Landscape

July 2024

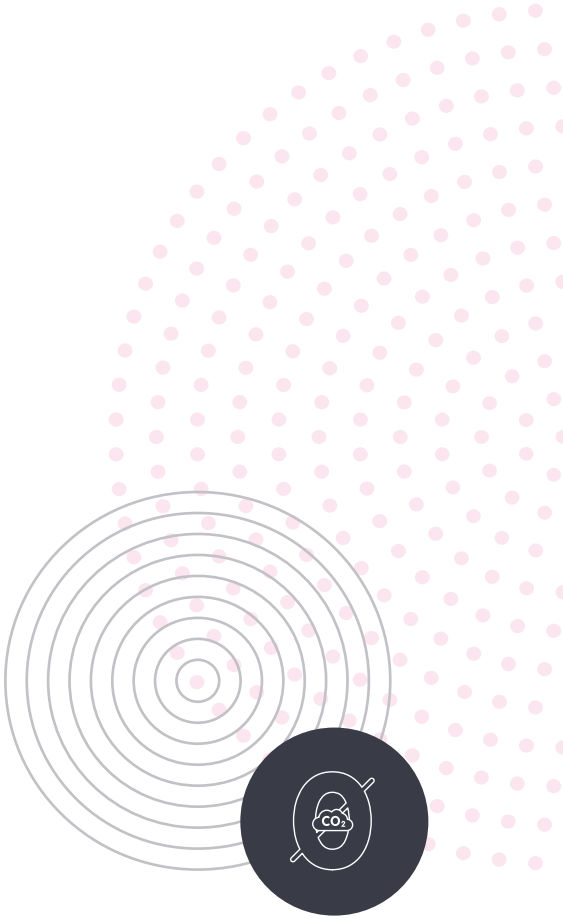


Part of the Carbon Accounting programme, funded by Innovate UK:

UKRI Innovate UK | CATAPULT Connected Places | CATAPULT Digital | CATAPULT Energy Systems | CATAPULT High Value Manufacturing | CATAPULT Satellite Applications

About Energy Systems Catapult

Energy Systems Catapult was set up to accelerate the transformation of the UK's energy system and ensure UK businesses and consumers capture the opportunities of clean growth. The Catapult is an independent, not-for-profit centre of excellence that bridges the gap between industry, government, academia, and research. We take a whole systems view of the energy sector, helping us to identify and address innovation priorities and market barriers in order to decarbonise the energy system at the lowest cost.



Author

Elle Butterworth,
Energy Policy Advisor, Energy Systems Catapult

Research Support:

Dr. Danial Sturge,
Carbon Policy Practice Manager, Energy Systems Catapult

© Energy Systems Catapult 2024

Contents

	Acronyms	**4**
	Executive Summary	**5**
1.	**Operationalising a Carbon Regulator - Project Context**	**9**
1.1.	Our Proposal for a Carbon Regulator	11
1.2.	Research Approach to Operationalising a Carbon Regulator	12
2.	**Carbon Accounting – Key Regulatory Functions**	**14**
2.1.	Carbon Intensity Claims	16
2.2.	Carbon Disclosures	17
2.3.	Procurement Requirements	19
2.4.	Transition Plans	19
2.5.	Carbon Markets	20
2.6.	Emissions Data Sharing	20
2.7.	The Carbon Accounting Services Sector	23
2.8.	Summary	24
3.	**Existing Regulators with Oversight of Carbon Accounting Activities**	**26**
3.1.	Sector Specific Regulators	27
3.2.	Economy-Wide Regulators	28
3.3.	Supporting Arm's Length Bodies and Regulators	31
3.4.	Summary	32
4.	**The Future of Carbon Accounting Regulatory Oversight**	**33**
4.1.	Gaps in Carbon Accounting Regulation	34
4.2.	Conclusion	37

© Energy Systems Catapult 2024

Acronyms

ALB – Arm's Length Body

ARGA - Audit, Reporting and Governance Authority

ASA – Advertising Standards Agency

CAA – Carbon Accounting Alliance

CBAM – Carbon Border Adjustment Mechanism

CCC – Climate Change Committee

CMA – Competition Markets Authority

ETS – Emissions Trading Scheme

FCA – Financial Conduct Authority

FRC – Financial Reporting Council

GHG – Greenhouse Gas

HMT – His Majesty's Treasury

LCA – Life Cycle Assessment

MRV – Monitoring, Reporting and Verification (of emissions)

SMEs – Small Medium Enterprises

SECR – Streamlined Energy and Carbon Reporting

PPN – Public Procurement Notice

TPT – Transition Plan Taskforce

© Energy Systems Catapult 2024

Executive Summary

In our future Net Zero economy, the use of credible emissions data will be integral to several existing regulated business activities, such as advertising (green claims), securing investment (green finance) and company reporting (carbon disclosures).

In this report, we review existing carbon accounting relevant regulations and the regulators engaged in their delivery. We identify key areas of carbon accounting regulation and where there are gaps in regulatory functions which prevent credible emissions data from driving low carbon decision making. Finally, we make proposals for how those gaps could be filled or supported by the introduction of a Carbon Regulator.

Review of Existing Regulation:

We reviewed existing efforts to regulate carbon accounting activities, including:

- **Carbon Intensity Claims** – existing consumer and competition law could be interpreted to extend to emissions claims, with some guidance issued by the Advertising Standards Agency (ASA) and the Competition Markets Authority (CMA).
- **Carbon Disclosures** – existing regulation targets company level reporting, but with a focus on the what and not the how, it leads to inconsistency in methodologies, as well as limited transparency and comparability across disclosures.
- **Procurement Requirements** – carbon reduction plans are required under Public Procurement Notice (PPN) 06/21 where contracts exceed £5 million. Private sector procurers may require adherence to voluntary schemes.
- **Transition Plans** – the Transition Plan Taskforce framework has been issued by HMT; while currently voluntary, financial accounting firms are advising their clients to begin using the framework in preparation for it becoming a regulatory requirement.
- **Carbon Markets** – significant gaps in regulation and data transparency limit the fungibility of emissions and offsets traded, particularly in international voluntary schemes.

© Energy Systems Catapult 2024

Data sharing legislation and competition laws could also limit the accessibility of emissions data without regulation to explicitly require emissions data transparency. Additionally, the carbon accounting services sector will likely benefit from regulation to increase the credibility and standardisation of services provided to support the above functions.

Review of Existing Regulators:

Existing regulators have, directly or indirectly, regulatory oversight of carbon accounting practices and are developing forms of guidance relevant to their remit. If regulations and associated guidance continues to develop in isolation, it is likely the regulatory landscape will continue to increase in complexity and limit our overall picture of emissions. This also has the potential to increase the administrative burden on industry who already receive routine bespoke requests for emissions data.

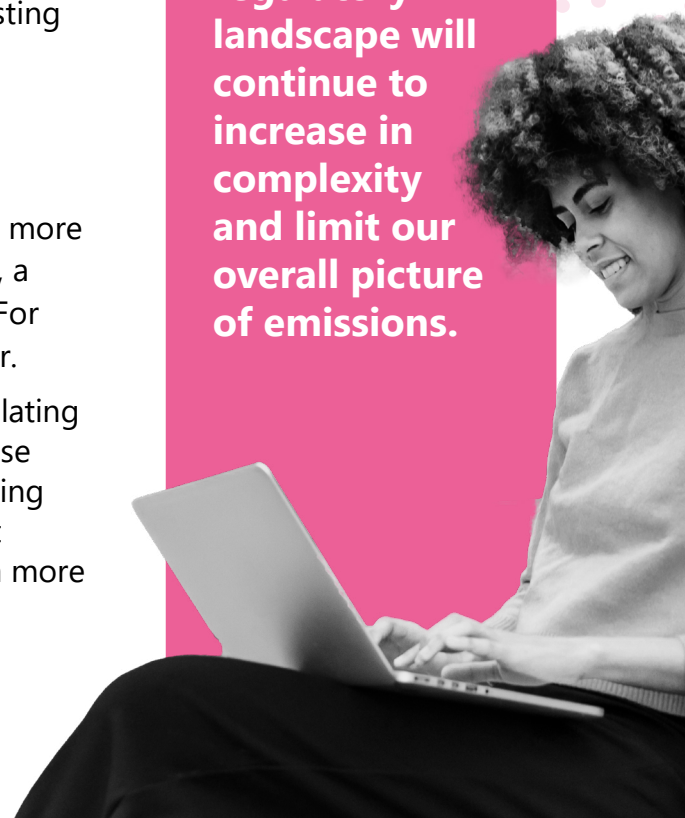
More effective coordination is needed to support sectors and existing regulators in interpreting existing emissions relevant legislation (such as consumer protection law) and promote the consistent use of emissions data. In this report we consider how a Carbon Regulator could support existing regulators and where there are opportunities for consolidation to reduce the overall regulatory burden on industry.

We make two key recommendations for assessing the carbon accounting remit of regulators:

- Where sector specific regulatory bodies exist, with sector relevant expertise and established stakeholder relationships, it may make more sense to retain existing regulatory oversight within that sector, supported by a Carbon Regulator to promote more effective coordination between regulators.
- Where overlapping responsibilities exist (e.g. in overseeing competing claims between sectors) and more specialised carbon accounting expertise is required, a co-regulatory partnership may need to be agreed. For example, between the CMA and a Carbon Regulator.

There may be an opportunity for a sector-led self-regulating body to be implemented to help mature and standardise carbon accounting practices within the carbon accounting sector. If this function could be fulfilled by the sector, it could free up capacity for a Carbon Regulator to play a more

If regulations and associated guidance continues to develop in isolation, it is likely the regulatory landscape will continue to increase in complexity and limit our overall picture of emissions.



supporting and coordinating role, to promote and formalise alignment as recommended by the sector.

Regulatory Functions Supported by a Carbon Regulator

We've identified the following gaps in carbon accounting regulations, reviewed the risks these cause, and potential regulatory functions to fill those gaps:

Gaps in Carbon Accounting Regulation	Associated Risk	Proposed Regulatory Functions for a Carbon Regulator
Lack of coordination between regulators/ government.	Inconsistent requirements increase the administrative burden on industry. This also creates barriers to entry for SMEs.	A coordinating role to improve alignment among existing regulators, supported by Government providing a clearer long term regulatory roadmap.
Lack of detailed methodologies and calculations guidance.	Flexible to different business needs but leads to inconsistencies and a lack of transparency.	Issuing more detailed sector specific guidance – co-developed with industry – to improve alignment.
Lack of third-party verification requirements.	Limits credibility and consistency of disclosures and claims.	Oversight over requirements for third-party verification process and accreditation of verifiers.
Lack of mediation for competing claims on the carbon intensity of products/services.	Creates confusion for buyers and limits credibility of claims.	Support the CMA and ASA, acting as an independent mediator between sectors with competing claims.
Lack of standardised emissions factor datasets and significant gaps in availability of Scope 3 emissions factors.	Use of outdated datasets, which limits accuracy and consistency of disclosures. Could limit effectiveness of audits/verification.	Provide guidance on accurate emissions factor use and set requirements on dataset owners to keep them updated and aligned as far possible.
No standardised qualifications/ accreditations for carbon accountants	Prevents the carbon accounting sector from scaling to meet business requirements in a data driven Net Zero economy and leads to variation in interpretation of standards.	Support industry bodies like the Carbon Accounting Alliance (CAA) to develop qualifications (similar to chartership for financial accountants).
No digital oversight to encourage interoperability and data sharing.	Risks double counting and duplication of effort. Limits visibility of supply chain hotspots.	Development of data best practice guidance and open data licensing conditions to protect commercially sensitive data.

© Energy Systems Catapult 2024

In consultation with government and key industry stakeholders, we will look to prioritise proposals from this table for further investigation. We intend to review the practicalities of regulatory delivery for specific proposals, including timelines for the phasing in of regulation in subsequent reports of this series.

Our future Net Zero economy needs to be supported by a robust regulatory framework, that enables credible emissions data to be disclosed, shared, and aggregated to meet the needs of stakeholders. There is a clear opportunity to act now to implement a more effective carbon accounting framework that can support decarbonising sectors and enable innovation.



© Energy Systems Catapult 2024

1. Operationalising a Carbon Regulator - Project Context

The Innovate UK funded Carbon Accounting programme is led by High Value Manufacturing Catapult in collaboration with Connected Places Catapult, Digital Catapult, Satellite Applications Catapult, and Energy Systems Catapult.

The programme makes the case for a policy and regulatory environment that:

- Supports creating a comprehensive UK framework for greenhouse gas (GHG) emissions, with agreed standards and tools for accounting, tracking, and reporting GHG emissions through supply chains to accelerate industrial decarbonisation.
- Unlocks investment and creates an environment where UK industry excels on the global stage as a destination for low carbon manufacturing.

As part of this programme, Energy Systems Catapult is reviewing the policy and regulatory environment needed to support a data driven Net Zero economy. Credible, science-based emissions data will be essential to inform investment and innovation decisions for industry and the wider economy. Regulation is an important part of the policy toolkit to help standardise reporting practices and increase the credibility of emissions data.

Our Spring 2023 report[1] summarised the role that standardisation of carbon accounting can have in facilitating a policy environment that helps industry make investment decisions for long-dated assets, innovate to reduce emissions, and compete on a level playing field both domestically and internationally.

This built on our earlier work with the South Wales Industrial Cluster (SWIC) Carbon Accounting in Industry project[2], which reviewed the carbon accounting mechanisms and methodologies relevant to UK industry[3] and made proposals to move towards a more consistent and coherent approach to disclosing emissions.

[1] Energy Systems Catapult (2023). Carbon Accounting and Standards in Industry: A Framework for Innovation and Growth. https://es.catapult.org.uk/report/carbon-accounting-and-standards-in-industry-a-framework-for-innovation-and-growth/

[2] Energy Systems Catapult (2022). Carbon Accounting in Industry: Learning from the South Wales Industrial Cluster to Develop a Consistent and Coherent National Framework. https://es.catapult.org.uk/report/carbon-accounting-in-industry/

[3] In this report, we use the term 'industry' to refer to both foundation industries (e.g. metals, ceramics, glass, chemicals, paper, and cement) and manufacturing industries (e.g. automotive, aerospace, pharmaceuticals, etc.).

© Energy Systems Catapult 2024

Net Zero Carbon Policy

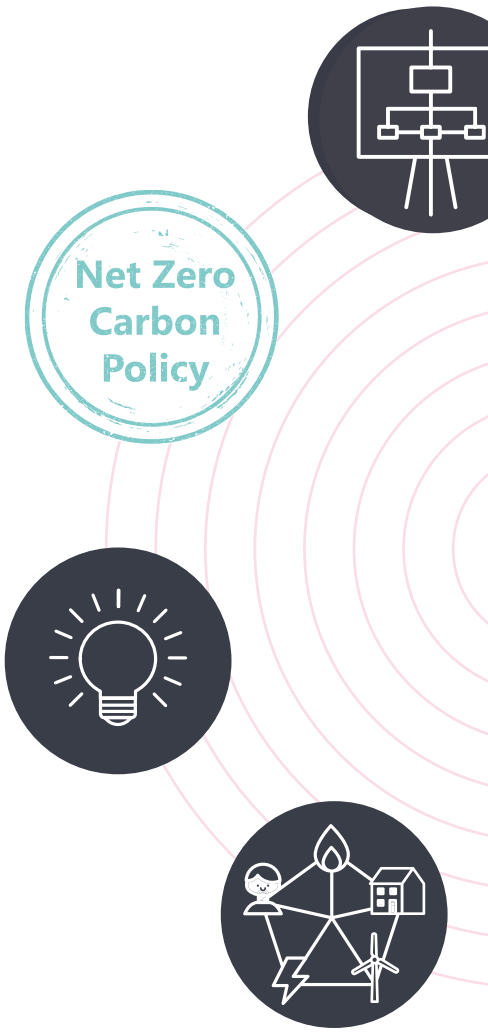
This project sits within Energy Systems Catapult's wider Net Zero Carbon Policy thought leadership programme[4], building on a foundation of high impact industrial decarbonisation reports. Throughout our work we promote an economy-wide, whole systems approach to carbon policy design, highlighting opportunities for innovation and low carbon growth, while recognising the specific needs of different sectors and energy consumers.

We adopt the following principles to guide our approach to research, analysis, and the development of policy recommendations:

- **Encourage innovation** with policies that enable open and competitive markets that reveal the value of clean energy resources and technologies.
- **Understand business needs** with an emphasis on reducing the administrative burden of carbon policies where possible to ensure industry, particularly small and medium-sized enterprises (SMEs), can thrive in a Net Zero economy.
- **Adopt a whole systems approach** to policy design using industry expertise to support economy-wide decarbonisation, facilitate regional partnerships, promote international best practice, and encourage reshoring of industry (while preventing further offshoring).

Within an economy-wide framework, we recognise that carbon policy should be tailored to the unique opportunities and challenges that individual sectors face.

[4] Energy Systems Catapult's back catalogue of Net Zero Carbon Policy work can be found here: https://es.catapult.org.uk/project/net-zero-carbon-policy/



© Energy Systems Catapult 2024

1.1 Our Proposal for a Carbon Regulator

Crucial to the standardisation of carbon accounting practices is the development of a regulatory framework that sets requirements on the gathering and reporting of emissions data as it travels through supply chains. We have previously proposed the introduction of a body charged with responsibility for economy-wide oversight of carbon accounting practices and MRV[5]. We refer to this proposed body as a 'Carbon Regulator'.

A Carbon Regulator would be an independent body, either set up as a new institution, or by extending the mandate of an existing organisation, or it could be a group of bodies working together in a more coherent way.

Reliable and trustworthy emissions data will be essential to the functioning of a Net Zero economy. Economy-wide regulatory oversight can provide clarity, and innovation-friendly regulation can ensure a level playing field for innovators, cut investment risks, and build investor, business and consumer confidence. It can also support:

- **Streamlined reporting** – reducing the administrative burden of reporting emissions and promoting a single source of emissions disclosure. Doing so also establishes a consistent source to be propagated for different carbon accounting use cases (e.g. Life Cycle Assessments and Corporate Reporting). This can only be enabled by the regulation of data best practice and the effective coordination of digitalised reporting and accounting software.
- **Credible emissions data** – regulation can help maintain the integrity of a system, while driving demand for credible, scientifically-backed methods for measuring emissions. This has advantages, including:
  - Providing investors with confidence that the decarbonisation projects they support have a material effect on emissions reduction.
  - Supporting the third-party verification of emissions disclosures.
  - Standardising reporting methodologies where appropriate.
  - Assuring that all carbon accounting adheres to an agreed set of principles.

[5] In our previous reports, we make a clear distinction between MRV (the monitoring, reporting and verification of emissions at their source) and how emissions are then accounted for in different use cases – both functions require regulatory oversight.

© Energy Systems Catapult 2024

- **A transition to improved emissions data –** over time, regulation can improve access for SMEs and other consumers of emissions data to more comparable and complete data sets. During the transition, regulation can also safeguard organisations from unjust penalisation for gaps in their emissions data by phasing in requirements for different businesses sizes, while encouraging a shift towards improved emissions inventories.
- **A level playing field for competition** – independent regulation can mitigate conflicting carbon intensity claims between competing products and services (e.g. construction materials). This can empower climate-conscious consumers and purchasing behaviour, promote fairer competition and help businesses and sectors identify where best to target innovation for Net Zero.

There are already carbon accounting regulations and regulators (e.g. the Environment Agency is responsible for the UK Emissions Trading Scheme (UK ETS)), but they are disparate and specific to individual policy mechanisms. As a result, there is no consistent, economy-wide oversight for carbon accounting and MRV of emissions.

The complexity of carbon accounting related regulation may increase with the implementation of a Carbon Border Adjustment Mechanism (CBAM), which the UK Government have confirmed will be in place by 2027. The government is also exploring whether there is a role for voluntary product standards, that could pave the way for future mandatory product standards. In doing so, it pointed to developing a new emissions reporting framework that would aim to maximise the use of existing data and minimise additional industry reporting burdens.[6] In Government consultation responses, there was also strong support for an independent regulator to verify product embodied emissions.

1.2 Research Approach to Operationalising a Carbon Regulator

In the Spring of 2023, we commenced a two-year project to understand the practicalities of operationalising a well-regulated carbon accounting framework, including considerations for the implementation of a Carbon Regulator. Throughout this project we intend to publish

[6] DESNZ and HMT (2023). Addressing carbon leakage risk to support decarbonisation: Summary of consultation responses and government response. https://assets.publishing.service.gov.uk/media/657c7fbd95bf65000d7190cb/2023_Government_Response_-_Addressing_Carbon_Leakage_Risk.pdf

© Energy Systems Catapult 2024

our learnings through a series of reports, with the aim of establishing a network of informed actors who can contribute to our future work in this area.

In this first year, we are publishing two reports to provide context on the regulatory foundations we propose are needed to support a Net Zero economy. We have focused on the following areas:

- Identifying approaches to regulatory design and delivery, drawing on insights from existing regulated sectors and interview with regulatory experts. Which is the focus of the first report in this series: *Operationalising a Carbon Regulator – Learning from Other Sectors*[7]
- Understanding the existing landscape of carbon accounting regulation in the UK, which is the focus of this report.

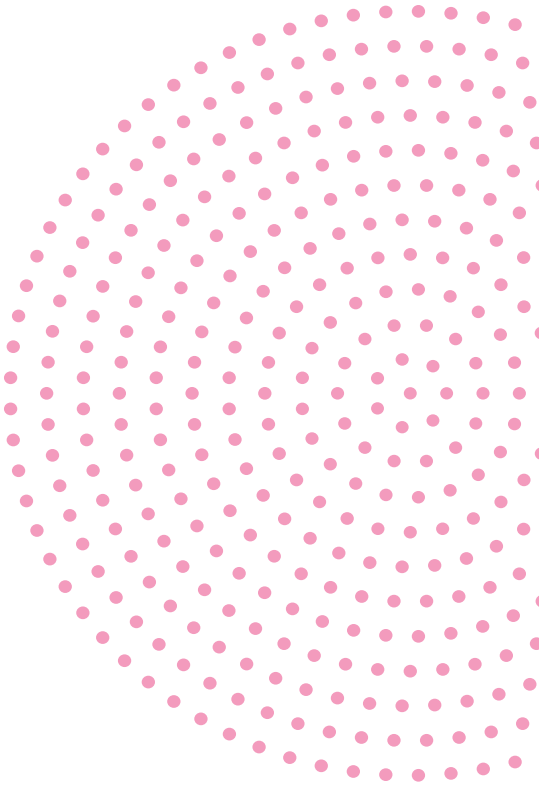
In the second year of this work, we will look to dive deeper into specific gaps in regulation and what practical steps could be taken to fill these gaps. Separately, we are exploring the international considerations for carbon accounting regulation in the UK. As part of this, we have commissioned a report on international considerations for carbon accounting regulation as it currently exists, which we will publish later in 2024.

At the heart of our research, we aim to capture a wide range of stakeholder views. For this report we have conducted a series of interviews with regulatory experts, industry stakeholders and representatives from the carbon accounting services sector.

The rest of this report is structured as follows:

- Section 2 reviews regulatory functions required for a well-functioning carbon accounting ecosystem and highlights regulations that already exist in this space.
- Section 3 reviews existing regulators and their engagement in existing carbon accounting activities. We also explore the potential future engagement of existing regulators as the carbon accounting ecosystem matures to support a Net Zero economy.
- Section 4 concludes the report with a summary of gaps in regulation and propose how those gaps could be filled, we also highlight areas that require further thought and development.

[7] The project website, where we will publish links to relevant publications as they arise can be found here: https://es.catapult.org.uk/project/operationalising-a-carbon-regulator/



© Energy Systems Catapult 2024

2. Carbon Accounting – Key Regulatory Functions

In this section, we review the regulatory functions required for a well-functioning carbon accounting ecosystem in the UK, where regulation already exists and where it could go further.[8]

The following regulatory scenarios for carbon accounting have been expanded from regulatory types applied by the University of Oxford's Net Zero Regulation Tracker[9] and considered in the context of carbon accounting in industry.

- **Carbon Intensity Claims** – where products, services, or companies advertise with an emissions reduction or "Net Zero" claim. Regulation is required to mitigate against greenwashing and hold companies accountable for misleading claims.
- **Carbon Disclosures** – where companies disclose emissions associated with a specific product, project, financial activity, or company-wide emissions. Most commonly this is done at the request of government or to comply with company reporting. There are also voluntary disclosure schemes such as the Carbon Disclosure Project (CDP).
- **Procurement Requirements** – emissions related conditions on the procurement of goods and services.
- **Transition Plans** – where companies, industrial clusters and other stakeholder groups state how they are transitioning to Net Zero or an interim emissions reduction target.
- **Carbon Markets** – where companies have the option to buy or trade carbon credits or emissions allowances to offset polluting activities. These can consist of voluntary or compliance-based markets (e.g. the UK ETS).

In this section we review existing regulations that cover these scenarios, assess whether existing regulatory arrangements are effective and where there may be gaps in carbon accounting regulation.

[8] Regulation refers to the rules and guidelines designed to encourage or prevent certain behaviours, with the aim of maintaining the integrity of the carbon accounting system. For a broader review of regulation, please see the first report in this series: Operationalising a Carbon Regulator: Learning from other Sectors.

[9] University of Oxford (2023). Net Zero Regulation Stocktake. https://netzeroclimate.org/regulation-tracking/

© Energy Systems Catapult 2024

Carbon Accounting in UK Legislation

There are only a handful of notable formally legislated carbon accounting regulations, most of which set out the UK's obligations to report territorial emissions within national boundaries[10].

Where sector specific legislation refers to carbon accounting or emissions reporting, the language used is high level, focusing on the intention to legislate instead of the method of doing so. This enables methods and requirements to be adjusted without having to go through parliament, but in some cases, it also allows for a significant degree of flexibility and interpretation, especially where the regulatory oversight is limited or unclear (e.g. legislation on Corporate Reporting[11]). Therefore, in addition to reviewing formal legislation, we have included supporting regulatory guidance in our review.

[10] The Carbon Accounting (Provision for 2020) Regulations 2022. https://www.legislation.gov.uk/uksi/2022/62/made

[11] Companies Act 2006. https://www.legislation.gov.uk/ukpga/2006/46/contents

Additionally, there are regulatory requirements which do not explicitly relate to carbon accounting, but could influence carbon accounting activities, such as data protection regulations and competition laws. We cover these and their potential implications for emissions data sharing in Section 3.6.

Finally, an underexplored area of regulation which will be essential to the functioning of a Net Zero economy is the regulatory oversight required for carbon accountants, providing accounting services to businesses. Currently activity in this sector is driven partially by requirements on their customers to report emissions and partially by innovative offerings for businesses looking to go the extra mile to understand their emissions profile. We briefly introduce the need for regulation of this sector in Section 2.7 to set the foundations for further work.



© Energy Systems Catapult 2024

2.1. Carbon Intensity Claims

Unsubstantiated claims of products or services being "Net Zero" and "Carbon Neutral" risks undermining the activities of companies taking genuine steps to decarbonise their activities. A global review in 2021 by the Competition Markets Authority (CMA) of randomly selected websites found 40% of "green claims" could be misleading. Claims are not always intentionally falsified; the lack of transparent emissions data within international supply chains can make it very difficult to guarantee the embodied emissions of a product or service.

A global review in 2021 by the Competition Markets Authority (CMA) of randomly selected websites found 40% of "green claims" could be misleading.

In 2023, the Advertising Standards Agency (ASA) issued updated guidance to promote the credibility of "Net Zero" and "Carbon Neutral" claims. The ASA is a sector led body, but it does have a coregulatory agreement with Ofcom to support the regulation of the advertising. Guidance included the need for claims to be qualified with additional context to aid consumer understanding and any use of offsetting should be clearly marked.

The use of claims varies, but can include:

- Claims about the carbon intensity of the advertised product or service, where offsetting is used, the ASA advises advertisers to be clear about which offsetting scheme is being used.
- Claims that the company providing the product or service are Net Zero or have achieve a reduction in their overall corporate emissions. It is often not clear which emissions scopes are included in these claims.
- Claims about the company's forecasted emissions reductions, such as claiming to be on track to reach Net Zero by a certain date.

The Consumer Rights Act and associated statutory instruments (e.g. the Consumer Protection from unfair Trading Regulations and the Business Protection from Misleading Marketing Regulations) also help protect consumers from misleading claims, in both advertisements and contracts/agreements between traders and consumers, including business consumers.

While the legalisation does not make direct reference to greenwashing claims, these could be interpreted as part of the scope of this legislation and have been used by the CMA as justification for the introduction of the Green Claims

© Energy Systems Catapult 2024

Code, which includes the following principles[12]:

- Claims must be truthful and accurate.
- Claims must be clear and unambiguous.
- Claims must not omit or hide important relevant information.
- Comparisons must be fair and meaningful.
- Claims must consider the full life cycle of the product or service.
- Claims must be substantiated.

These guidelines are an example of principles-based regulation which can make requirements harder to enforce, but also enables some flexibility over their interpretation[13].

2.2. Carbon Disclosures

Disclosures encourage decarbonisation by increasing the visibility of polluting activities and can be mandatory or voluntary.[14]

The Companies Act 2006 was updated in 2013 to require companies to disclose their GHG emissions in the Director's report for the financial year. Additionally, in 2019, Streamlined Energy Carbon Reporting (SECR) came into force, requiring larger companies to submit GHG Protocol Scope 1 and 2 emissions reports to Companies House.

The Conduct Committee has the authority to apply to the courts for an order requiring directors to prepare a revised report where the reporting requirements fail to meet SECR requirements. Late filing penalties can be applied by Companies House and submissions can be rejected, where the requirements have not been met.

Disclosure mechanisms can also require the reporting of emissions in support of contractual obligations to reduce emissions, which may be encouraged through financial incentives such as Climate Change Agreements (CCA) where operators receive a discount on the Climate Change Levy, a tax added to electricity and fuel bills, in return for agreements to reduce energy use and CO2 emissions. There are also voluntary schemes either supported by or independent from government, including international schemes such as CDP, which helps inform financial investment decisions.

[12] CMA (2021). Guidance: Making environmental claims on goods and services. https://www.gov.uk/government/publications/green-claims-code-making-environmental-claims/environmental-claims-on-goods-and-services

[13] We review the merits of both principles-based regulation and more prescriptive rules in our previous report in this series: Operationalising a Carbon Regulator: Learning from other Sectors.

[14] We cover emissions disclosures and carbon markets for industry in more detail in our 2022 report – Carbon Accounting in Industry: Lessons Learned from the South Wales Industrial Cluster.

© Energy Systems Catapult 2024

For accounting periods beginning on or after 6 April 2022, mandatory climate-related financial disclosure regulations apply for publicly quoted companies, large private companies and LLPs, aligning to recommendations made by the Taskforce for Climate-Related Financial Disclosures (TCFD). Non-binding guidance to help companies and Limited Liability Partnerships better understand financial disclosure requirements has been issued by government.

The 2022 financial disclosure requirements are intended to complement SECR and not duplicate work. The SECR framework includes requirements for energy efficiency disclosures and the new requirements ensure additional context is provided around financial decisions (risks and opportunities) that are related to the changing climate and demand for low carbon products.

The Department for Business and Trade (DBT) is expected to soon publish UK Sustainability Disclosure Standards (SDS) which will be based on SDS issued by the International Sustainability Standards Board (ISSB) with the goal to provide a globally consistent set of baseline standards for sustainability-related financial disclosures. Government has indicated the UK SDS will form the basis of any future requirements in UK legislation and regulation where companies will be required to report on risks and opportunities relating to sustainability matters, including climate change.[15]

In addition to UK requirements, UK based companies may also be required to disclose their emissions to other countries and regions they export to, such as the EU and requirements under the Corporate Sustainability Reporting Directive (CSRD). This wider international reporting landscape will be considered in a separate report within this report series.

Disclosure requirements on UK businesses continue to evolve. Whilst attempts have been made by UK Government to streamline existing processes, the pace of change has at times increased the administrative burden on businesses. Additionally, thresholds for disclosure (such as total employees or turnover) vary across mechanisms which can make navigating requirements and remaining compliant difficult.

[15] UK Government (2023) UK Sustainability Disclosure Standards Guidance. https://www.gov.uk/guidance/uk-sustainability-disclosure-standards



The pace of change within disclosure requirements has at times increased the administrative burden on businesses. Thresholds vary which can make navigating requirements and remaining compliant difficult.

© Energy Systems Catapult 2024

2.3. Procurement Requirements

The public sector can influence decarbonisation through public procurement practices. The Cabinet Office's Public Procurement Notice (PPN) 06/21 mandates procurers to include selection criteria for a carbon reduction plan where contracts exceed £5 million (excluding VAT) per annum.

The PPN applies to all central government departments, executive agencies, and non-departmental public bodies conducting procurement procedures in line with the Public Contracts Regulations 2015.[16] Given the threshold, infrastructure or larger service contracts are more likely to be affected by the PPN.

Procurement requirements for carbon emissions also exist in the private sector, but they are voluntary. Some companies may have internal policies that require emissions disclosures from suppliers, but there are rarely clear guidelines on what verification or accreditation process suppliers should adhere to.

2.4. Transition Plans

Transition plans set out a company's intention to reduce emissions or achieve Net Zero from a baseline year and the steps that will be taken.

Private company targets are not typically accompanied by transparent and independently verified transitions plans and there is a risk that plans developed in good faith are undermined by greenwashing in some sectors. There has been increased interest from international regulatory networks in recent years to increase the consistency of private company transition plans through agreed standards.

The Transition Plan Taskforce (TPT) was set up by HM Treasury in 2022 to develop a "gold standard" for private sector transition plans in the UK. Throughout 2022 guidelines were tested and developed in consultation with the private sector. A high-level disclosure framework was published in October 2023 and sector deep dives are expected to be published in the first half of 2024.

The TPT framework is currently voluntary, but it is expected these will become more regulated and detailed in the future. The Financial Conduct Authority (FCA) is consulting on mandatory requirements for listed companies and accounting firms such as Deloitte are encouraging their clients to begin using framework in preparation for regulation.[17]

[16] Government Commercial Function (2023). PPN 06/21 FAQs. https://www.gov.uk/government/publications/procurement-policy-note-0621-taking-account-of-carbon-reduction-plans-in-the-procurement-of-major-government-contracts/ppn-0621-frequently-asked-questions

[17] Deloitte (2023). Transition Plan Taskforce publishes final Disclosure Framework and guidance. https://www2.deloitte.com/uk/en/blog/emea-centre-for-regulatory-strategy/2023/transition-plan-taskforces-final-disclosure-framework.html

© Energy Systems Catapult 2024

2.5. Carbon Markets

Carbon markets involve the trading of emissions or credits to incentivise decarbonisation activities or to facilitate the offsetting of hard to decarbonise activities[18]. Underpinning any carbon market is ensuring as far as possible that emissions data is credible and fungible. For a carbon market this requires credits to be based on consistent and interchangeable measures or units of carbon emissions (or tCO2 equivalent).

Voluntary market mechanisms are driven by states, companies, or individuals that take responsibility for their own emissions or planning for future unavoidable emissions. For example, the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), is a global market-based mechanism that aims to achieve carbon neutral growth in international civil aviation from 2020 onwards.

The lack of regulatory oversight that currently exists for voluntary schemes, means that the overall ability to scrutinise claims, and the use of offsets, is limited. While there have been improvements in the credibility of some schemes, there remain limitations on their transparency and accountability which are often exacerbated by the international nature of such schemes.

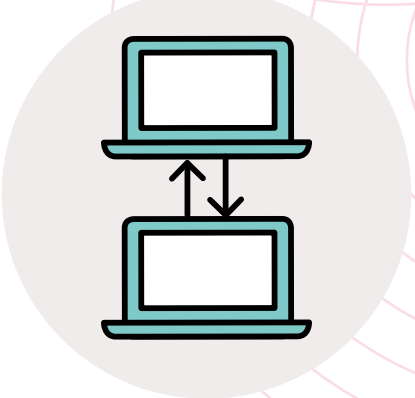
Compliance market mechanisms are implemented by governments and are more regulated. For example, the UK ETS Regulations, include operational functions such as issuing permits and the development of monitoring plans for industrial sites. The UK ETS is overseen by the ETS Authority with day-to-day regulatory functions carried out by designated regulators in each of the UK's constituent nations (e.g. the Environment Agency in England).

2.6. Emissions Data Sharing

To support the functioning of a Net Zero economy, emissions data needs to be transparent and interoperable. While many industries are supportive of increasing data accessibility, there have been concerns around the commercial sensitivity of data, and that data sharing may be restricted through existing competition and data protection laws.[19]

[18] We cover different types of carbon markets in more detail in this report: https://es.catapult.org.uk/report/developing-carbon-credit-markets/

[19] We have previously received anecdotal evidence from industry that emissions data sharing has been difficult to access, such as for the development of industrial cluster plans.



© Energy Systems Catapult 2024

The availability of emissions data is an important enabler for a range of Net Zero related business activities, including:

- The benchmarking and setting of decarbonisation targets on a business' operational or financial activities.
- The design, production, and procurement of new products and materials to decarbonise supply chains.
- Tracking progress towards Carbon Budgets, Nationally Determined Contributions, and the Net Zero target.
- Understanding the impact of government policy interventions.
- Engaging in carbon markets to trade carbon credits or emission allowances.
- Ensuring investments meet pre-determined low carbon criteria.

It is still difficult to get credible data on Scope 3 emissions, which include an organisation's indirect emissions upstream and downstream of their own activities. Accessing indirect emissions data will be essential to establishing demand for low carbon products and services. As a concept, Scope 3 is well defined by the GHG Protocol, with fifteen categories describing the types of activities that might be included. But guidance is flexible, largely due to the challenges of obtaining credible emissions data for activities outside of an organisation's operational control.

Outside of carbon accounting, data sharing legislation has been implemented to place controls on data sharing for several reasons, including not collecting/withholding personal data and national security concerns. Legislative examples include:

- **Utilities Act 2000 (as amended)** – the Utilities Act 2000 (Supply of Information) Regulations 2000. The Authority, a licence holder or the Council may refuse to supply (whether under Section 24 or Section 26) information the making public of which would be against the interests of national security.
- **The Data Protection Act 2018** - the UK's implementation of the General Data Protection Regulation (GDPR). Companies in possession of personal data are obliged to comply with data protection legislation. This requires companies to only collect necessary personal data, anonymise and/or aggregate

© Energy Systems Catapult 2024

where possible, and delete when no longer needed (e.g. Article 5 GDPR13 – 'Principles relating to the processing of personal data').

These statutes do not restrict the interoperability of data that is covered by them; however, they do not directly require or incentivise interoperability either. At this level of legislation there is no specification of data and standards in of itself, the legislation generally points to exemptions to the clause. For example, Section 105 of the Utilities Act specifies the provisions where disclosure of information related to individuals is permissible.

Competition law[20] may arguably give rise to some potential risks around the sharing of some company-specific information, for example emissions data that could reveal operational activity that is deemed commercially sensitive, such as the energy used in a specific industrial process. However, if all businesses within a sector were required to report the same types of emissions, this could mitigate potential competition law concerns and encourage new avenues of competition aligned to emissions reduction.

With the above in mind, it would be important to consider the extent to which existing data protection legislation and competition law might constrain the effectiveness of a Carbon Regulator.

[20] UK Legislation: Competition Act 1998 https://www.legislation.gov.uk/ukpga/1998/41/contents



2.7. The Carbon Accounting Services Sector

The carbon accounting services sector is still emerging, partially driven by an increase in emissions reporting requirements. Companies within the sector vary from bespoke consultancies to large platforms providing digital services to help businesses understand their carbon footprints.

The variety of carbon accounting practices and methods used across the sector is becoming a challenge for its future growth. A lack of standardised qualifications makes recruitment difficult and the limited standardisation in offerings can make it difficult for businesses to identify credible suppliers with accurate datasets. Regulation and industry collaboration is required to help mature the sector and support business needs in a Net Zero economy.

In 2023, the Carbon Accounting Alliance (CAA) was launched to improve alignment and collaboration across the carbon accounting sector, it has over 200 members providing carbon accounting services to companies across more than 30 countries.[21] It is estimated that CAA members collectively measure between 50,000-65,000 company carbon footprints. Carbon Accounting Alliance Co-Founder, Andrew Griffiths, highlights the scale of the opportunity for the carbon accounting sector in the below quote:

> *"Regulation emerging in the next 12-18 months alone will mandate substantially larger numbers to be reporting their emissions, including EU's Corporate Sustainability Report Directive (CSRD) (affecting ~50,000 businesses), USA's upcoming Securities and Exchange Commission (SEC) rules (affecting ~60,000 businesses) and changes in UK policies like Energy Savings Opportunity Scheme (ESOS) and Streamlined Energy and Carbon Reporting (SECR) (affecting 14,000+ businesses).*
>
> *This means that we will see at least 120,000-150,000 businesses legally mandated to provide carbon emissions data, in many instances including gathering data from their supply chains, which magnifies the impact at least hundred-fold. This strongly indicates that the carbon accounting sector could need to scale from a current position of measuring tens of thousands of companies to millions, in the next 3-5 years. While experiencing this exponential growth we must simultaneously ensure that*

[21] About the Carbon Accounting Alliance. https://www.carbonaccountingalliance.com/about

© Energy Systems Catapult 2024

the industry scales in a robust and controlled way that continues to develop and enforce best practices, is matched by supportive policy development and professionalisation of practitioners." -

Andrew Griffiths, February 2024

The international representation of the CAA is promising. With international supply chains commonplace, it makes sense to promote standardised data sharing at the international level where possible. However, from a regulatory perspective there will likely need to be some nationally implemented guidance and standards, possibly coordinated through an international organisation such as the CAA.

Additionally, several key organisations in the carbon accounting sector have headquarters or offices in the UK, highlighting the carbon accounting sector as an emerging area of growth for the UK economy. Regulation that helps mature this sector, improves alignment of offerings and generates demand for services, could have economic benefits beyond the industries required to disclose their emissions.

2.8. Summary

Across the following five regulatory scenarios, we observe the following:

- **Carbon Intensity Claims** – existing consumer and competition law could be interpreted to extend to emissions claims, with some guidance issued by the ASA and the CMA, but there is limited knowledge/ capacity within existing competition regulators to enforce compliance with emissions reporting.
- **Carbon Disclosures** – existing regulation targets company level reporting, but with a focus on the what and not the how, it leads to inconsistency in methodologies, as well as limited transparency and comparability across disclosures.
- **Procurement Requirements** – carbon reduction plans are required under Public Procurement Notice (PPN) 06/21 where contracts exceed £5 million. Private sector procurers may require adherence to voluntary schemes.

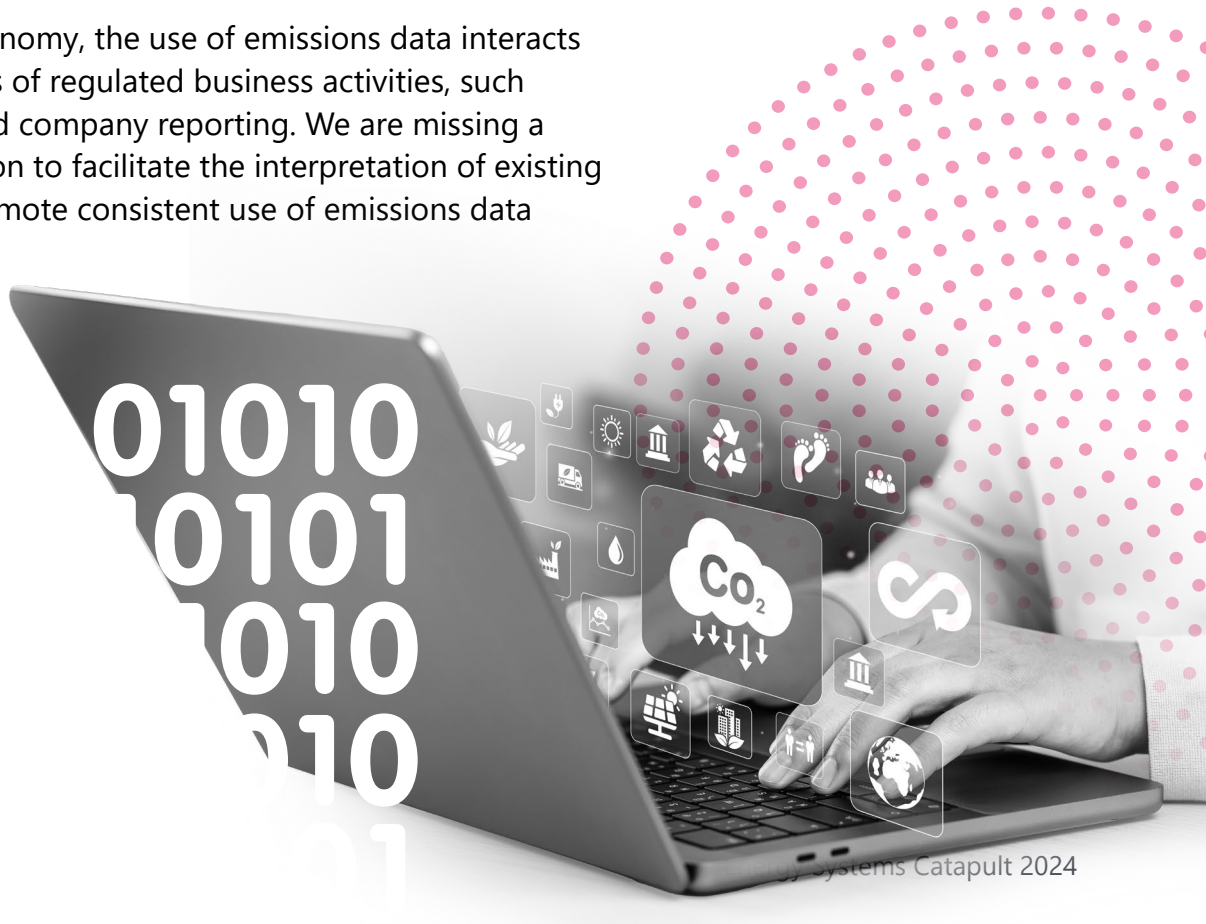
© Energy Systems Catapult 2024

- **Transition Plans** – the Transition Plan Taskforce framework has been issued by His Majesty's Treasury (HMT); while currently voluntary, financial accounting firms are advising their clients to begin using the framework in preparation for it becoming a regulatory requirement.
- **Carbon Markets** – significant gaps in regulation and data transparency limit the fungibility of emissions and offsets traded in international voluntary schemes. Government implemented cap-and-trade schemes, such as the UK ETS, have more stringent requirements in place.

Data sharing legislation and competition laws could also limit the accessibility of emissions data without regulation to explicitly require emissions data transparency. Additionally, the carbon accounting sector will likely benefit from regulation to increase the credibility and standardisation of services provided to support the above functions.

Existing Carbon Accounting legislation is limited and high level. References to carbon accounting focus on the intention to account for emissions, not the process required to do so. Some regulations have been interpreted to have carbon accounting relevance despite no explicit references being made in the original legislation, such the provisions of general consumer protection law. This leaves it up to businesses, sectors and existing regulators to interpret legislation and issue guidelines in a disjointed way, adding complexity to the carbon accounting landscape.

In a Net Zero economy, the use of emissions data interacts with several areas of regulated business activities, such as advertising and company reporting. We are missing a regulatory function to facilitate the interpretation of existing regulation to promote consistent use of emissions data economy-wide.



Systems Catapult 2024

3. Existing Regulators with Oversight of Carbon Accounting Activities

We have identified the need for a carbon regulation to promote comparability of emissions disclosures and reduce the overall reporting burden on businesses, but there may be different routes to achieving this requirement.

We have proposed the introduction of a Carbon Regulator to have economy-wide oversight of carbon accounting practices and Monitoring, Reporting and Verification (MRV)[22]. A Carbon Regulator would be an independent body, either set up as a new institution, or by extending the mandate of an existing or sector introduced organisation, or it could be a group of bodies working together in a more coherent way.

In the case where the existing regulatory landscape is complex – as it is for carbon accounting – a decision to introduce a new regulator with a cross-cutting remit should be a trigger for simplifying the regulatory landscape, e.g. by removing overlapping functions from existing regulators.

There are existing regulators that already oversee some carbon accounting practices, for example, some regulators collect data relevant to carbon accounting, but do so in a disjointed way (e.g. the Environment Agency oversees UK ETS and environmental permits). While other regulators have a Net Zero duty, but it is unclear how they are accounting for and verifying the emissions within their remit (e.g. North Sea Transition Authority). Additionally, there are Arm's Length Bodies (ALBs) that provide data and recommendations that could support the scientific function of a regulator (e.g. the National Physics Laboratory).

As part of this report, we have reviewed the full list of existing regulators and ALBs[23] to help develop our thinking on where it makes sense for specific regulatory functions to sit and where existing responsibilities might need to be streamlined. We intend to expand on this work in further publications within this programme series.

[22] In our previous reports, we make a clear distinction between MRV (the monitoring, reporting and verification of emissions at their source) and how emissions are then accounted for in different use cases – both functions require regulatory oversight.

[23] A full list can be found here: https://www.gov.uk/government/organisations

© Energy Systems Catapult 2024

3.1. Sector Specific Regulators

Some sectors of the economy have more regulatory oversight than others. This is the case for areas where there is a greater risk to public health (e.g. polluting industrial processes) or a greater risk of widespread economic consequences (e.g. the prudential regulation of the UK's financial and energy systems). With emissions reduction becoming an increasingly popular driver for investment and decision-making, it is unsurprising that existing regulators have started to introduce more oversight of these activities within their sectoral remit. In this section we highlight sectors of existing regulatory significance and what this might mean if a new body, a Carbon Regulator, was introduced.

Examples of sectors with regulators that oversee carbon accounting functions include:

- **Finance Sector** – this includes investment firms, financial traders, and banks. The financial sector has seen a significant increase in regulations aimed at reducing the greenwashing claims related to investments. Multiple regulators support the financial sector, but the FCA has primarily led the charge, issuing guidance on climate related disclosures to the financial firms it regulates.[24] The wider regulatory model of the finance sector is also of interest given the similarities between regulatory requirements for financial data and emissions data.
- **Forestry Sector** – within the forestry sector, several ALBs support climate related activities that include monitoring the overall carbon content of UK woodlands and promoting woodland expansion. Scottish Forestry oversees the Woodland Carbon Code, a voluntary standard to verify carbon credits related to woodland management.[25] Despite sector specific oversight of forestry activities, the Woodland Carbon Code also has economy-wide significance as the credits can be purchased to offset the reported activities of businesses in other sectors.
- **Public Sector** – the Cabinet Office is primarily responsible for setting requirements on public spending, including requirements around the procurement of low carbon products and services. There are also several ALBs that support the public sector, for example, the Office for Local Government, which provides data analysis support, and Salix Finance who are the funding administrator for public sector decarbonisation projects.

[24] FCA (2021). FCA's new rules on climate-related disclosures to help investors, clients and consumers. https://www.fca.org.uk/news/news-stories/new-rules-climate-related-disclosures-help-investors-clients-consumers

[25] Woodland Carbon Code. https://woodlandcarboncode.org.uk/



© Energy Systems Catapult 2024

In sectors where there is already an established group of regulators with sector relevant expertise, it might make more sense for regulatory functions to remain with them, and for a Carbon Regulator providing a supporting role to reduce duplication of effort.

Regulating energy sector emissions

The energy sector accounted for 17% of UK emissions in 2021 with renewable energy making up 13% of total energy use.[26] There is much work still to be done to decarbonise the UK's energy system and enable consumers to make low carbon energy choices.

Regulatory oversight for the reporting of energy related emissions is complex. For example, the North Sea Transition Authority is responsible for approving offshore wind projects and ensuring they pass the "Net Zero Test"[27], whereas the Offshore Petroleum Regulator for Environment and Decommissioning has been given the remit of Carbon Capture Utilisation and Storage (though regulation of this emerging sector is still in its infancy).

Ofgem oversees a vast network of energy data and has been supporting efforts to improve the exchange of energy data between energy sector stakeholders. Under the 2023 Energy Act, Ofgem has a statutory duty to support the government's achievement of Net Zero targets and Carbon Budgets.

Ofgem is working to improve the accessibility and digitalisation of energy data. While the focus of this work is to improve insights of the energy system, the data made available can also support our understanding of energy related emissions. Similarly, the approach taken to improve data sharing within the energy sector provides a useful example to support carbon accounting.

[26] ONS (2023). UK Environmental Accounts: 2023. https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/ukenvironmentalaccounts/2023

[27] North Sea Transition Authority (2023). Overview 2023. https://www.nstauthority.co.uk/media/imofibq1/a5la5overview-oeupdate23-final-accessible.pdf

3.2. Economy-Wide Regulators

In our review, we consider economy-wide regulators to have regulatory oversight of business activities that are not sector specific. For example, all companies are required to submit financial statements to Companies House as the credibility

© Energy Systems Catapult 2024

of company information is essential for investor and public confidence. Advertising is another business activity that is not sector specific and the credibility of advertising claims are important for consumer confidence economy-wide.

Emissions reporting may vary in approach and detail between sectors, but the carbon accounting activities described in Section 2 have economy-wide relevance and the credibility of emissions data has consequences for both investors and consumers. Additionally, as policymakers strengthen their response to emission reduction targets, coordination with other regulatory bodies may be required - for example, the proposed introduction of a carbon boarder adjustment mechanism (CBAM), which we would expect to be administered by HM Revenue & Customs.

Examples of regulators that have economy wide oversight include:

- **Competition and Markets Authority (CMA)** is the competition regulator in the UK, promoting fair deals and competition. The CMA has a handful of outstanding cases covering environmental claims. Evidence given to the House of Lords Industry and Regulation Committee by former CMA chair Lord Andrew Tyrie brought into question the ability of the CMA to take on additional responsibilities, such as the competition impacts of emissions claims.[28]
- **Financial Reporting Council (FRC)** ensures compliance with corporate reporting requirements under the Companies Act 2006 and promotes application of consistent reporting standards. The FRC is expected to be replaced with the Audit, Reporting and Governance Authority (ARGA). Legislative changes are required to introduce such a body, but the FRC has already taken several steps to support its transition towards a broader corporate governance remit.
- **Advertising Standards Agency (ASA)** is an independent regulator. The ASA has a co-regulating arrangement with Ofcom for the regulation of broadcasted adverts and Trading Standards act as a legal "backstop" for non-broadcasted adverts.

[28] Industry and Regulators Committee (2023). https://parliamentlive.tv/event/index/712b4bcd-e962-4cee-95b4-6cf14eee4ca8

© Energy Systems Catapult 2024

Advertising Standards Agency

The ASA regulate the advertising sector by responding to consumer complaints and requesting advertisements be removed or amended if they are found to not meet the ASA's code of advertising practice. The ASA was setup by the advertising sector to help set benchmarks for appropriate advertising activities and is funded through a levy on advertising agencies.

The ASA is a non-statutory organisation and cannot interpret or enforce legislation, but previous ASA rulings have been upheld in court. The ASA monitors advertisements to make sure they comply with the Advertising Codes set out by the ASA's sister organisation, the Committee of Advertising Practices.

The ASA self-regulates printed advertisements, including online. For broadcasted advertisements the ASA co-regulates with Ofcom; ASA actions the "day to day" regulation of broadcasted adverts, but can escalate issues to Ofcom if required.[29]

Statutory regulation of the advertising sector was considered in the 1960s, but it was decided that if the ASA could promote self-regulation of the sector, statutory regulation was unnecessary. This approach varies to the approach taken, for example, in the USA, where advertising is formally regulated by the Federal Trade Commission.

Self-regulation, such as that provided by the ASA, may be an option for some carbon accounting activities with co-regulatory support provided by a Carbon Regulator. For example, the carbon accounting sector is starting to mature with sector representation from organisations like the Carbon Accounting Alliance that could support self-regulation. This sector includes carbon accounting providers who offer accounting services, datasets, and digital platforms to support companies calculating their carbon footprints, and would benefit from standardised qualifications to promote consistency in use of methodologies.

One option could be chartership for carbon accountants, similar to financial accountants overseen by the FRC. The FRC's originates from the sector led regulation of financial accountants and was eventually brought under government control.[30] This may also be an option for the establishment of a Carbon Regulator.

[29] Advertising Standards Authority. About the ASA and CAP. https://www.asa.org.uk/about-asa-and-cap/about-regulation/about-the-asa-and-cap.html

[30] For more information see the first report in this series, *Operationalising a Carbon Regulator: Learning from Other Sectors,* which includes a case study on the FRC.



3.3. Supporting Arm's Length Bodies and Regulators

We identified several ALBs who have specialised expertise which, depending on its eventual remit, could support the activities of a Carbon Regulator. For example, there are ALBs responsible for maintaining databases that could be used to extrapolate emissions data and support the use of consistent proxy values.

Some examples of supporting ALBs include:

- **The National Physical Laboratory (NPL)** is the UK's National Metrology Institute (NMI), developing and maintaining the national primary measurement standards, as well as collaborating with other NMIs to maintain the international system of measurement. The NPL has issued guidance on improving emissions monitoring and explores measurements required for emerging technologies such as carbon capture utilisation and storage (CCUS).[31] NPL also supports the development of emissions monitoring technology (e.g. sensors for methane leakage in natural gas supply chain).[32]
- **Companies House** holds information on UK registered companies, including annual reports that comply with the SECR framework.[33] Companies House has made company information accessible through an application programming interface (API), which has the potential to improve the transparency of emissions reported through Companies House.[34]
- **Information Commissioners Office** upholds information rights that are in the public interest, for example, data protection (GDPR) and freedom of information requests.[35] The commercial sensitivity of emissions data and existing data protection laws have the potential to limit the ability of sectors to share information.

Additionally, there are ALBs judged outside the scope of this report, because their focus is on natural capital or other areas of sustainability and environmental reporting. For example, the Office for Environmental Protection has issued guidance on natural capital accounting. While more effective coordination between these reporting activities is desirable, it should not come at the cost of implementing regulatory oversight of carbon accounting practices in a timely manner.

[31] National Physics Laboratory (2021). Measurement needs for carbon capture, usage and storage. https://www.npl.co.uk/energy-transition/carbon-capture-usage-storage

[32] National Physics Laboratory. Greenhouse gas measurements. https://www.npl.co.uk/emissions-atmospheric-metrology/greenhouse-gas

[33] DESNZ (2023). Scope 3 Emissions in the UK Reporting Landscape. https://assets.publishing.service.gov.uk/media/652ea475697260000dccf9db/scope-3-emissions-in-the-uk-reporting-landscape.pdf

[34] Companies House. REST API. https://developer.company-information.service.gov.uk/overview

[35] Information Commissioner's Office. What we do. https://ico.org.uk/about-the-ico/what-we-do/

© Energy Systems Catapult 2024

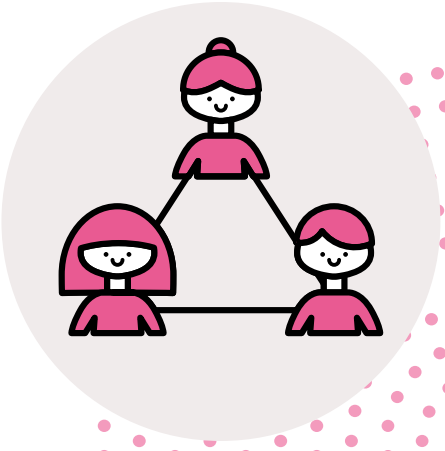
The Climate Change Committee (CCC)

The CCC is the UK Government's independent advisor for action on climate change. Its view of emissions data is somewhat limited to national inventory boundaries as part of its remit of holding government accountable for national carbon budgets. The CCC has not yet weighed in on the wider debate around carbon accounting for private companies and more localised inventory boundaries.

In an earlier report, where we set out our proposal for a Carbon Regulator, the CCC was considered as a potential home for this regulatory function. In our subsequent review of regulators and ALBs, we have concluded it is unlikely that the CCC would be able to take on this function without a significant change to their role and responsibilities. This could reduce its capacity to hold government accountable, which is an essential function of the CCC.

3.4. Summary

Existing regulators have, directly or indirectly, regulatory oversight of carbon accounting practices, with some ALBs providing a supporting role. It is important to consider how a Carbon Regulator could support existing regulators and where there are opportunities for consolidation to reduce the overall regulatory burden on industry.



Where sector specific regulatory bodies exist, with sector relevant expertise and established stakeholder relationships, it may make more sense to retain existing regulatory oversight within that sector, supported by more effective coordination between regulators.

Economy-wide regulators and regulating activities may require more regulatory oversight and support from a Carbon Regulator. Where overlapping responsibilities exist (e.g. in overseeing competing claims), a co-regulatory partnership may need to be agreed. For example, between the CMA and a Carbon Regulator.

There may also be an opportunity for a sector-led self-regulating body to be implemented to help mature and standardise carbon accounting practices within the carbon accounting sector. Both the ASA and FRC originate from sector developed self-regulating bodies that have taken on more formal functions over time. If this function could be fulfilled by the sector, it could free up capacity for a Carbon Regulator to play a more supporting and coordinating role, to promote and formalise alignment as recommended by the sector.

© Energy Systems Catapult 2024

4. The Future of Carbon Accounting Regulatory Oversight

The regulation of carbon accounting is essential to ensure decarbonisation efforts have a material effect on emissions reduction. In this report, we have considered the regulatory foundations required to support a Net Zero economy and steps towards their implementation, building on insights from existing regulated sectors.

Carbon accounting regulations already exist, but it is complex

Existing carbon accounting regulating activities include high level guidelines that help businesses interpret how current legislation (e.g. competition law and consumer protections) should be considered in the use of emissions data for business activities, such as advertising.

There is lack of coordination across these activities and limited guidance to promote consistent and transparent methodologies for emissions data reporting. Existing data sharing legislation and competition laws could also limit the accessibility of emissions data without regulation to explicitly require emissions data transparency. Additionally, there is a lack of regulation in the carbon accounting services sector, to promote consistent use of methodologies to support different regulatory requirements.

There is an opportunity to streamline and strengthen regulations

There is an opportunity for existing regulators, and the introduction of a Carbon Regulator, to support the streamlining and strengthening of carbon accounting regulations required for a Net Zero economy. Consolidation of regulation will need to be conducted in consultation with both existing regulators and the industries they regulate to ensure an overall reduction in administrative burden on industry.

© Energy Systems Catapult 2024

Regulatory oversight can support the increased digitalisation of emissions data and data sharing which could also help to reduce the overall administrative burden of emissions disclosures, making the data required to fulfil requirements more accessible.

Existing regulators have, directly or indirectly, regulatory oversight of carbon accounting practices and some may be better placed to provide regulatory oversight of carbon accounting activities than a new standalone body. Where sector specific regulatory bodies exist, with sector relevant expertise and established stakeholder relationships, it likely makes sense to retain existing regulatory oversight within that sector, supported by more effective coordination.

Economy-wide regulators and regulating activities may require more regulatory oversight and support from a Carbon Regulator. Where overlapping responsibilities exist, such as in overseeing competing claims, a co-regulatory partnership may need to be agreed. For example, between the CMA and a Carbon Regulator. There may also be an opportunity for a sector-led self-regulating body to be implemented to help mature and standardise carbon accounting practices within the carbon accounting sector.

It is also important to consider the SME-specific implications of a Carbon Regulator in the UK. Requirements for smaller organisations to make disclosures should be proportionate and minimise barriers to entry for innovators. Engagement with SMEs at all stages of policy development and implementation will be necessary to ensure regulatory frameworks reflect their concerns, perspectives and capabilities.

4.1. Gaps in Carbon Accounting Regulation

In the below table, we highlight gaps in carbon accounting regulations, the risks these cause, and potential regulatory functions to fill those gaps. This table lays the foundations for the next phase of our work.

In consultation with government and key industry stakeholders, we will look to prioritise proposals from this table for further investigation. We intend to review the practicalities of regulatory delivery for specific proposals, including timelines for the phasing in of regulation.

© Energy Systems Catapult 2024

Gaps in Carbon Accounting Regulation	Associated Risk	Proposed Regulatory Functions
Lack of coordination between regulators/ government.	Increases the administrative burden for industry, with multiple points of disclosure, and creates inconsistency in reporting requirements across the economy. This also creates barriers to entry for SMEs with limited resources to navigate requirements.	Carbon Regulator could have a coordinating role to improve alignment among existing regulators and help hold regulators accountable for the emissions within their remit. This would need to be supported by Government setting a clearer long-term regulatory timeline for expected reporting requirements on all businesses and policies that encourage more effective data sharing between data producers and consumers[36].
Absence of detailed methodologies and calculations guidance within existing regulations and standards	Flexible to different business needs, but open to interpretation and leads to inconsistencies and a lack of transparency.	Carbon Regulator could issue more detailed sector specific guidance – co-developed with industry – to improve alignment.
Lack of third-party verification requirements on disclosures and claims, and inconsistent verification processes.	Limits credibility of disclosures and claims, which limits transparency. Not incentivised to verify emissions. Also limits consistency and interoperability of data to support data sharing, such as across supply chains to support Scope 3 reporting.	Carbon Regulator could have oversight over requirements for third-party verification process and accreditation of verifiers.

[36] In our previous report, Carbon Accounting and Standards in Industry: A Framework for Innovation and Growth, we introduce the concept of emissions data producers and consumers. Improved data sharing infrastructure between these stakeholders would improve access to emissions data whilst reducing the overall administrative burden on industry who are currently required to make multiple bespoke disclosures.

© Energy Systems Catapult 2024

Gaps in Carbon Accounting Regulation	Associated Risk	Proposed Regulatory Functions
Limited action on misleading claims. Lack of mediation for competing claims on the carbon intensity of products/services.	Limits credibility of claims and creates confusion for buyers where materials serve the same function, but have different carbon intensity claims.	Carbon Regulator could support the CMA and ASA in investigating claims and act as an independent mediator between sectors with competing carbon intensity claims.
Lack of standardised emissions factor datasets and significant gaps in availability of Scope 3 emissions factors.	Use of outdated datasets, which limits accuracy, transparency, and consistency of disclosures. Could limit effectiveness of audits/ verification.	Unlikely that a Carbon Regulator could maintain a central set of emissions factors suitable for all use cases, but it could provide guidance on accurate emissions factor use and set requirements on dataset owners to keep them updated and aligned where possible.
No standardised qualifications/ accreditations for carbon accountants	Inconsistent practices limit credibility and leads to variation in disclosures. It also prevents the carbon accounting sector from scaling to meet business requirements in a data driven Net Zero economy.	Carbon Regulator could support industry bodies like the Carbon Accounting Alliance to develop qualifications (similar to FRC and chartership for financial accountants).
No digital oversight to encourage interoperability and data sharing.	Risks double counting and duplication of effort. Limits visibility of supply chain hotspots.	Development of data best practice guidance (similar to Ofgem's for the energy sector) and open data licensing conditions to protect commercially sensitive data.

© Energy Systems Catapult 2024

4.2. Conclusion

Our future Net Zero economy needs to be supported by a regulatory framework that enables credible emissions data to be disclosed, shared, and aggregated to meet the needs of stakeholders.

The existing carbon accounting landscape is complex with the development of disjointed standards and carbon accounting practices that limit the transparency of emissions as they move through supply chains. Well-designed regulation can help create a level playing field for innovation and enable better informed investment decisions. With the support of regulatory oversight, increased digitalisation of emissions data and data sharing can help mature the carbon accounting sector.

It is unlikely that a standalone Carbon Regulator will be able to oversee all gaps in carbon accounting regulation. To be most effective, a Carbon Regulator will need to cooperate with both sector-led self-regulating activities and existing regulators. But without more effective coordination and economy-wide oversight of the kind that a Carbon Regulator can provide, existing regulations will continue to develop in isolation and risk undermining the accuracy of emissions disclosures, while reducing our overall picture of emissions.

There is a clear opportunity to act now to implement a more effective carbon accounting framework that can support decarbonising sectors and enable innovation.



LICENCE/DISCLAIMER

Energy Systems Catapult (ESC) Limited Licence for Operationalising a Carbon Regulator: Review of Existing Regulatory Landscape

ESC is making this report available under the following conditions. This is intended to make the Information contained in this report available on a similar basis as under the Open Government Licence, but it is not Crown Copyright: it is owned by ESC. Under such licence, ESC is able to make the Information available under the terms of this licence. You are encouraged to Use and re-Use the Information that is available under this ESC licence freely and flexibly, with only a few conditions.

Using information under this ESC licence
Use by You of the Information indicates your acceptance of the terms and conditions below. ESC grants You a licence to Use the Information subject to the conditions below.

You are free to:
- copy, publish, distribute and transmit the Information
- adapt the Information
- exploit the Information commercially and non-commercially, for example, by combining it with other information, or by including it in your own product or application.

You must, where You do any of the above:
- acknowledge the source of the Information by including the following acknowledgement:
- "Information taken from Operationalising a Carbon Regulator: Review of Existing Regulatory Landscape., by Energy Systems Catapult"
- provide a copy of or a link to this licence
- state that the Information contains copyright information licensed under this ESC Licence.
- acquire and maintain all necessary licences from any third party needed to Use the Information.

These are important conditions of this licence and if You fail to comply with them the rights granted to You under this licence, or any similar licence granted by ESC, will end automatically.

Exemptions
This licence only covers the Information and does not cover:
- personal data in the Information
- trademarks of ESC; and
- any other intellectual property rights, including patents, trademarks, and design rights.

Non-endorsement
This licence does not grant You any right to Use the Information in a way that suggests any official status or that ESC endorses You or your Use of the Information.

Non-warranty and liability
The Information is made available for Use without charge. In downloading the Information, You accept the basis on which ESC makes it available. The Information is licensed 'as is' and ESC excludes all representations, warranties, obligations and liabilities in relation to the Information to the maximum extent permitted by law.

ESC is not liable for any errors or omissions in the Information and shall not be liable for any loss, injury or damage of any kind caused by its Use. This exclusion of liability includes, but is not limited to, any direct, indirect, special, incidental, consequential, punitive, or exemplary damages in each case such as loss of revenue, data, anticipated profits, and lost business. ESC does not guarantee the continued supply of the Information.

Governing law
This licence and any dispute or claim arising out of or in connection with it (including any noncontractual claims or disputes) shall be governed by and construed in accordance with the laws of England and Wales and the parties irrevocably submit to the non-exclusive jurisdiction of the English courts.

Definitions
In this licence, the terms below have the following meanings: 'Information' means information protected by copyright or by database right (for example, literary and artistic works, content, data and source code) offered for Use under the terms of this licence. 'ESC' means Energy Systems Catapult Limited, a company incorporated and registered in England and Wales with company number 8705784 whose registered office is at Cannon House, 7th Floor, The Priory Queensway, Birmingham, B4 6BS. 'Use' means doing any act which is restricted by copyright or database right, whether in the original medium or in any other medium, and includes without limitation distributing, copying, adapting, modifying as may be technically necessary to use it in a different mode or format. 'You' means the natural or legal person, or body of persons corporate or incorporate, acquiring rights under this licence.

© Energy Systems Catapult 2024

Net Zero Carbon Policy

CATAPULT Energy Systems

Energy Systems Catapult

7th Floor, Cannon House,
18 Priory Queensway,
Birmingham, B4 6BS

es.catapult.org.uk
@energysyscat



Part of the Carbon Accounting programme, funded by Innovate UK:

UKRI Innovate UK | CATAPULT Connected Places | CATAPULT Digital | CATAPULT Energy Systems | CATAPULT High Value Manufacturing | CATAPULT Satellite Applications