



Department for
Business, Energy
& Industrial Strategy

Towards a market for low emissions industrial products

Call for Evidence summary of responses



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Contents

Introduction	4
About the Call for Evidence	4
About this summary of responses	4
Next steps	6
Executive summary	10
Summary of Responses to Chapter 1: Defining Low Emissions	13
Chapter overview	13
Response summary	13
Responses to each question	14
Summary of Responses to Chapter 2: Sector and Product Scope	20
Chapter overview	20
Chapter summary	20
Responses to each question	21
Summary of Responses to Chapter 3: Emissions Reporting and Verification	29
Chapter overview	29
Response summary	29
Responses to each question	30
Summary of Responses to Chapter 4: Policy Implementation	38
Chapter overview	38
Response summary	38
Responses to each question	39
Glossary	44
Annex	48
A1: Emissions Scopes	48
A2. Business, energy and emissions reporting schemes operated by UK government or Devolved Administrations (non-exhaustive list)	49
A3. Emissions reporting, standards and labelling schemes not operated by UK government or Devolved Administrations (non-exhaustive list)	51

Introduction

About the Call for Evidence

On 6 December 2021, the Department for Business, Energy and Industrial Strategy (BEIS) launched a Call for Evidence (CfE) on policies that can support the market for low emissions industrial products. Its aim was to gather evidence from a broad range of UK and international manufacturers, buyers of industrial products and other experts to enable development of proposals that work for the whole of the UK. The CfE was open for 12 weeks, closing on 28 February 2022.

The CfE follows the publication of the [Industrial Decarbonisation Strategy](#) on 17 March 2021. In the Strategy, government committed to developing proposals that help buyers contribute to net zero by providing ways to recognise low emissions products and make green choices. By encouraging the market to grow, these policies can drive decarbonisation and mitigate the risk of carbon leakage (see glossary for an explanation of technical terms in this document). These policies are intended to complement other government tools like carbon pricing and funding mechanisms (business models), helping the UK have a thriving industrial sector aligned with net zero goals.

The CfE contained 4 chapters, each covering a cross-cutting issue for the design and delivery of demand-side policies: defining “low emissions”, sector and product scope, emissions reporting and verification, and policy implementation. Respondents were asked to support their answers with evidence relating to their business, product or sector, published literature studies, or to their broader expertise, wherever possible. The demand-side policies under consideration are included in Table 2.

To develop the CfE questions and raise awareness with potential respondents, BEIS officials held 14 online discussions. These were open to representatives from the industrial sectors (including steel, cement, refining, chemicals, glass, aluminium, automotive, rail and white goods sectors), as well as academia, civil society and devolved administrations.

Alongside the CfE, we published a report from PA Consulting, which reviewed the design and impact of existing labelling schemes, product standards and procurement policies. The report also set out recommendations for the design and delivery of any demand-side policies, which we will consider alongside the responses to this CfE.

About this summary of responses

This document summarises the responses to the CfE. It follows the same structure as the CfE itself. Each chapter repeats the CfE questions, followed by a summary of respondents’ views on the issues.

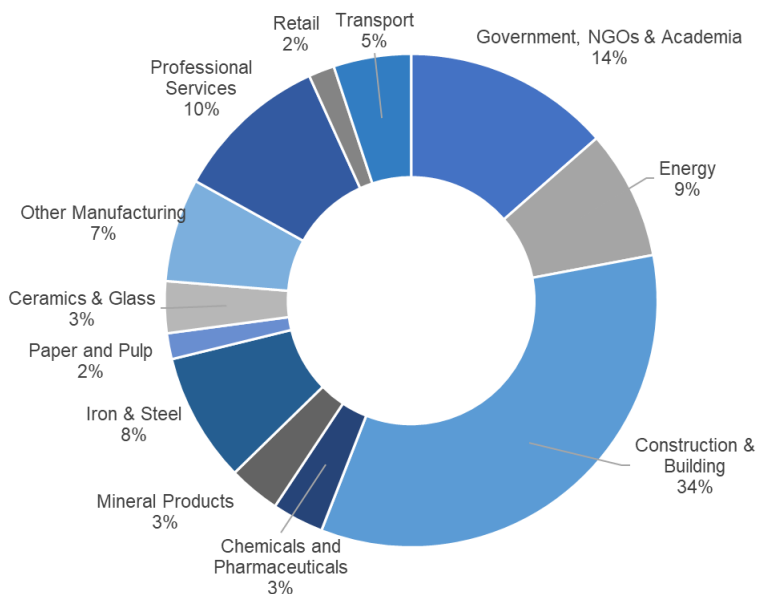
BEIS received 59 responses to the CfE from a diverse stakeholder group (shown in figures 1 and 2), including: Environmental non-government organisations (NGOs); heavy industries; academic institutions; standards bodies; devolved administrations; local authorities; professional firms involved in architecture, construction and other services; trade associations, and the transport industry.

Figure 1: Respondents by type of organisation



The construction sector was the most represented sector, as shown in figure 2, with 17 respondents coming from organisations operating in architecture, construction and building material manufacturing, not including the cement and aggregates industries, which provided a further 4 responses. Steel and cast metals were the second most represented industries, with 6 responses. There were 2 responses from the chemicals and pharmaceuticals sectors. A list of responding organisations who agreed to be named is given at the end of this chapter in Table 1.

Figure 2: Respondents by sector



This document provides an overarching picture of views from the responses we received. While it is not practical to explain every viewpoint or piece of evidence we received in this document, all responses have been reviewed and will be used to inform policy proposals. General comments have been reported under the most relevant question.

The views expressed by respondents are not government policy, and we have not verified the information provided by respondents. BEIS thanks the respondents for sharing their expertise and feedback to the CfE.

Next steps

In the Industrial Decarbonisation Strategy, the government set out the following commitments on demand-side policies:

- develop proposals to improve data transparency
- develop proposals for new product standards
- develop proposals for product labelling
- use public procurement to drive change
- support businesses to make greener choices

The Strategy set out the following indicative timeline for these proposals:

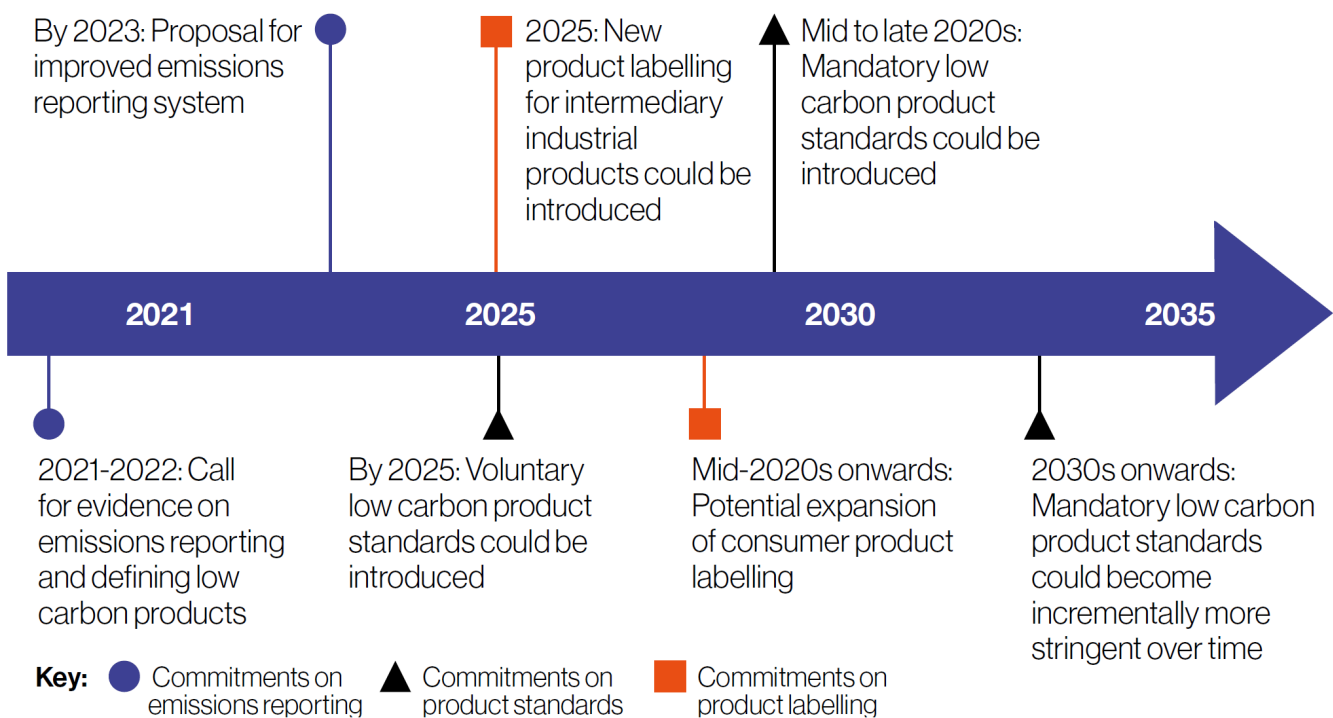


Figure 3: Indicative timeline for policy delivery as set out in Industrial Decarbonisation Strategy

The UK is also playing a leading role in international initiatives to encourage the global market for low emissions industrial products, such as the Glasgow Steel Breakthrough and the Industrial Deep Decarbonisation Initiative.

We will use the evidence gathered, together with further stakeholder discussions in the UK and abroad, to develop our policies for consultation. This will form part of the upcoming consultative process¹ on a range of policies which could help to grow the market for low emissions industrial products and help to mitigate the risk of carbon leakage. BEIS and the Treasury intend to consult later this year on a range of carbon leakage mitigation options, including on the policies discussed here and whether measures such as product standards and a carbon border adjustment mechanism (CBAM) could be appropriate tools in the UK's policy mix.

¹ Announced by the Financial Secretary to the Treasury in a Written Ministerial Statement on 16th May 2022 – statement available here: <https://hansard.parliament.uk/Commons/2022-05-16/debates/22051619000007/UpdateOnCarbonLeakageMitigations>

Table 1 – Responding organisations (where permission to publish their name has been received)

Name	Type of organisation
World Cement Association	Industry body for cement and clinker (international)
Timber Development UK	Industry body for the timber supply chain (UK)
Bellona Foundation	Environmental NGO
ResponsibleSteel	Standard and certification programme for steel (international)
The Institution of Structural Engineers	Professional body (UK)
Carbon Mark	Research project on carbon footprints, Imperial College
ROCKWOOL Ltd	Insulation manufacturer for construction
British Retail Consortium	Industry body/trade association for retail (UK)
British Glass	Industry body/trade association for glass (UK)
The UKRI Interdisciplinary Circular Economy Centre for Mineral-based Construction Materials	Academic research centre, with a focus on construction (UK)
Council for Aluminium in Building	Industry body/trade association for aluminium in construction (UK)
Engineered Panels In Construction (EPIC)	Industry body/trade association for insulated panels in construction (UK)

Table 2: Summary of Potential Demand-Side Policy Options Explored in the Industrial Decarbonisation Strategy

Policy approach	Description	Objective	Target of policy
Voluntary product standards / labelling	Accredits businesses manufacturing products with lower associated emissions than a level set by government.	Enable low emissions manufacturers to distinguish their products from high emissions competitors.	UK & international industry and buyers of industrial products.
Mandatory product standards / regulations	Sets an upper limit on the associated emissions for industrial products that can be placed on the market.	Reduce domestic and imported emissions, supporting the investment case for decarbonisation.	UK industry & UK importers of industrial products.
Mandatory product labelling	Mandates that the packaging/documentation for industrial products displays information about their climate impact, including associated emissions.	Allow buyers to distinguish between different products based on associated emissions, enabling green choices.	Buyers of intermediate industrial products (e.g. construction, automotive industries) and end-consumer products.
Public procurement	Favours low emissions products in contracts for public projects, using labelling and/or standards to inform decisions. Public procurement policy differs across Devolved Administrations.	Create direct demand for low emissions products and catalyse market growth.	Public sector procurers, starting with central government.
Private procurement	Government supporting the private sector to buy low emissions products, for example through facilitating the formation of voluntary buyers' alliances.	Increase and aggregate the demand for low emissions products.	Buyers of intermediate industrial products (e.g. construction, automotive industries).

Executive summary

In general, respondents were supportive of the introduction of any demand-side policies, suggesting that government should take action as soon as it is practical, paying attention to the schemes and initiatives already in operation.

Defining ‘low emissions’

On the emissions to include in a definition of a low emissions product, the majority of respondents agreed that at least some Scope 3 emissions (emissions as a consequence of an organisation’s actions that occur at sources not owned or controlled by the organisation), should be included (Scope definitions can be found in Annex 1). However, some respondents recognised the difficulty of collecting data on Scope 3 emissions, in particular for small or medium-sized enterprises (SMEs).

On the stringency of an initial definition, there was a broad consensus among respondents that the definition should be set at a level which is achievable with current technologies, such as resource and energy efficiency measures.

Most respondents agreed that sector-level definitions would be the most appropriate level of granularity, as opposed to product-level definitions. Respondents from some sectors noted that definitions should consider the functionality of a product, rather than just its product category or sector.

On existing definitions, respondents mentioned schemes including Responsible Steel, SteelZero and ConcreteZero. However, there was a lack of consensus within sectors on whether existing definitions should be endorsed by government.

Sectoral and product scope

On existing demand for low emissions products, respondents in the construction sector pointed to growing interest from designers, contractors and buyers. However, most respondents emphasised that cost remains the dominant factor when choosing a product.

On policy potential, many respondents agreed that clarity on green credentials would improve buyers’ confidence in differentiating products. However, respondents emphasised that policies to make the technology switch commercially viable are also needed.

On sectors to target, respondents from the construction sector mostly said that reporting schemes have been developed already. Respondents also highlighted that future policies should build on these current frameworks. In other sectors, the decarbonisation and associated reporting was reported to be less advanced, especially where technological advances were needed first.

On treatment of imported products, respondents generally supported treating imports the same as domestic products when it comes to reporting requirements. This is although it might be harder to certify the emissions of products manufactured outside the UK. Respondents noted that not including imports could increase the risk of carbon leakage. Additional suggestions included a 'carbon custom union' to allow the trade of low carbon goods between participating countries.

Emissions reporting and verification

Respondents highlighted multiple private sector emissions reporting schemes that could provide data for demand-side policies. Of the schemes, none are universally adopted by industry, but some are popular in specific sectors, such as Environmental Product Declarations (EPDs) used for construction products.

On the granularity of reporting, many respondents noted that benefits of reporting must outweigh administrative costs. Respondents suggested introducing various incentives for businesses to opt for more detailed reporting, such as having less frequent reporting obligations.

On the practicality of reporting, respondents' views varied on how often data should be reported, with suggested frequencies of 1, 2 or 5 years, or to match the reporting cycles for the UK Emissions Trading Scheme, Streamlined Energy and Carbon Reporting and EPDs.

On verifying data, most respondents noted that verification should be underpinned by methodologies approved by the International Organization for Standardization (ISO). Respondents mentioned many existing organisations that can check emissions data.

On existing private sector schemes, respondents mentioned EPDs, Science Based Targets Initiative and sector schemes such as ResponsibleSteel and the Low Carbon Concrete Routemap. On existing government schemes, most respondents agreed that they do not collect the data needed for demand-side policies, for example, product data.

Policy implementation: instrument

Respondents had a variety of views on the role of voluntary measures. Many respondents said that voluntary measures would not change behaviour by buyers and manufacturers because their decisions would remain driven by costs. However, others thought that voluntary measures could galvanise the existing interest in green products and act as a stepping-stone to more stringent measures.

Many respondents mentioned that the public sector could act as a catalyst through its buying power in public projects (green procurement policy).

Policy implementation: timing

Respondents had a variety of views on whether their sector would be a suitable target for new demand-side policy over the next 5-10 years. Most respondents recommended that some

demand-side policy is introduced in the early 2020s or as soon as practically possible. Whilst most respondents think their sector is a suitable target for demand-side policy, some respondents believe implementation needs to prioritise sectors with higher emissions, and some responses suggested implementing policies incrementally.

Policy implementation: communication

Most respondents noted that any demand-side policies would need to be simple to interpret and implement and introduced with sufficient notice. They also stated that any labelling needs to be backed up with quantitative, verified data that is updated over time, to ensure credibility.

A few respondents referenced Environmental Product Declaration (EPD) certificates as a best practice. Most respondents thought that any label expressing embodied emissions should only contain a single metric (e.g. 6kg CO₂/t) accompanied by an indicative RAG or A-E type rating to make it easier for buyers to understand.

Summary of Responses to Chapter 1: Defining Low Emissions

Chapter overview

To implement demand-side policies, we would need a shared definition of 'low emissions' industrial products. This chapter covers the following considerations:

- emissions scope – which emissions associated with the product would be included in the assessment
- stringency – how low emissions would need to be for a product to be considered 'low emissions'
- views on existing definitions of low emissions in industry

Response summary

We received 55 responses to at least one part of Chapter 1; these responses came from a range of stakeholders. There were 11 respondents from the construction sector, 5 respondents from the steel sector, a smaller number of respondents from each of the cement, ceramics, chemicals, timber, glass and biofuels sectors, as well as some NGOs and a local authority. We received 34 responses either directly or indirectly related to the construction sector. The evidence submitted in response to this chapter is therefore heavily weighted towards the views and requirements of the construction sector, as well as manufacturers who produce construction products.

On the emissions scope included in the definition, over half of respondents were in favour of at least some Scope 3 emissions, although opinions varied on whether these should be upstream or downstream Scope 3 according to sector. A group of respondents mostly from the construction sector, were in favour of whole life carbon assessments and the use of Environmental Product Declarations (EPDs) in any future approach. However, there were also numerous suggestions from respondents that greenhouse gas emissions should not be the only indicator that is taken into account. Representatives of different sectors provided a range of suggestions of additional metrics to include, such as land-use change and impacts on air quality.

Respondents largely agreed that sector-level definitions for low emissions products are likely to be the most appropriate level of granularity for demand-side policies. Many respondents recommended that government collaborate with industry on setting definitions and stringency levels, in particular to ensure that definitions would be initially set at a level achievable with current technologies.

Steel sector respondents emphasised the need to mitigate the risk of carbon leakage, whilst respondents from the construction sector consistently suggested that considerations such as strength and durability should be taken into consideration for construction products. In their view, this would avoid the use of a greater number of ‘low emissions’ products leading to higher emissions at a project or building level.

Responses to each question

Q6. Do you agree with the approach to the emissions scope set out in Chapter 1?

Chapter 1 proposed that a shared definition of a low emissions product should include Scope 1 and 2 emissions, but that initially some Scope 3 emissions could be excluded to ensure that businesses can feasibly report the required emissions data.

There were 50 respondents that answered at least one part of Question 6.

Figure 4: Proportion of responses agreeing and disagreeing with Q6



There were 6 respondents that did not answer the question directly. There were 24 respondents that agreed with the approach to emissions scope set out in Chapter 1, 16 disagreed and 4 answered ‘Don’t know’.

Additionally, 11 respondents recommended the use of EPDs and/or existing international standards, such as BS EN 15804 as part of the methodology to collect emissions data and set definitions of low emissions products.

On the optimal scope of a definition, 23 respondents would like to see the inclusion of some or all Scope 3 emissions in the definition of a low emissions product. Whole life carbon assessments were recommended by 9 respondents. There were nuances to this viewpoint; for example, one NGO respondent suggested that some products have significant end of life emissions (either in-use or disposal) and that excluding Scope 3 emissions would distort consumer choices. The NGO instead suggested using a ‘materiality threshold’. For example, where Scope 3 emissions constitute above a certain percentage of total emissions, they should be included in the definition of a low emissions product from that sector.

Respondents from the steel sector preferred the inclusion of upstream Scope 3 emissions only, recommending that downstream Scope 3 emissions should be addressed separately as they are beyond the control of the manufacturer. On the other hand, respondents from the concrete

and biofuels sectors recommended the inclusion of downstream Scope 3 emissions in the definition to account for in-use and end-of-life emissions.

Respondents who raised issues with the inclusion of Scope 3 emissions were from multiple sectors including glass and chemicals. Respondents cited the difficulty of collecting this data, and the relatively small proportion of emissions in this category compared to Scopes 1 and 2. One respondent noted that the challenge of data collection was particularly acute for SMEs.

We received a range of information on how emissions are split between Scopes 1, 2 and 3; respondents noted that, even within sectors, there can be a big difference between the proportion of emissions in each category depending on production methods, and that these splits can change year-on-year.

On value retained products (see glossary), 9 respondents mentioned that EPDs already capture relevant indicators. There were 2 respondents that mentioned that double counting of historic emissions (from the product's previous use) must be avoided, and 2 other respondents raised the issue of data availability affecting the ability to accurately compare new products with value retained products. There were several suggestions of factors that need to be taken into account, for example, distinguishing between products which are endlessly recyclable and products which have a limited lifespan, as well as distinguishing between downcycling and closed-loop recovery of materials.

Finally, on the limitations of an emissions-only approach, almost all respondents who answered this question were in favour of taking other factors into account to avoid unintended consequences. In the construction sector, 2 respondents suggested that separate legislation is needed to define low emissions at a building or infrastructure level to avoid the unintended consequence of low emissions construction materials leading to higher emissions buildings and structures. Respondents from the construction sector also recommended that durability and strength of materials needed to be taken into consideration.

In terms of other metrics to consider, common environmental factors mentioned were land-use change, deforestation, water pollution, air quality, biodiversity and responsible sourcing of materials. Social and ethical factors such as employment rights, equal opportunities and health and safety were also raised.

In wider comments, respondents from the steel sector recommended that the risk of carbon leakage should be considered when assessing the impact of setting low emissions definitions.

Q7: How do you think the level of emissions at which the definition of low emissions products is set should change over time?

47 respondents answered at least one part of Question 7.

A large majority of respondents agreed that the definition of low emissions products should become more stringent over time. 4 disagreed and 2 answered 'Don't know'.

Figure 5: Proportion of responses agreeing and disagreeing with Q7



A common view amongst respondents who agreed was the need for a definition to be set at an achievable level initially, and a need for sector- or product-specific stringency levels. Several respondents raised the need for better data collection in advance of definitions being set.

Respondents who disagreed had varying views based on their sector. In the construction sector, there are considerations such as strength and durability, which would not be reflected in an emissions-based definition. These respondents argued that using products determined to be 'low emissions' could lead to higher emissions at a project or building level since strength issues with lower emissions products could mean that they would need to be used in greater quantities.

Respondents from other sectors, including steel and glass, emphasised that definitions would need to be set in a way that is achievable with current technologies. For example, it was noted that some industrial sites may have access to carbon capture use and storage (CCUS) and hydrogen technologies later than their competitors. These respondents were also concerned about the risk of carbon leakage and stated that supportive policies would need to be in place to prevent carbon leakage before mandatory standards on domestic production could be implemented.

Respondents had varying views on how definitions should be set; some suggested that this should be done in collaboration with sectors or using existing sector roadmaps, whilst others thought definitions should be related to climate ambition and tied to carbon budgets or the Science Based Targets initiative. There were 5 responses that highlighted that the trajectory of decarbonisation would include a series of step-changes rather than linear progress, and that this would need to be taken into account in setting stringency.

We received a wide variety of views on how far in advance industry would need notice of an increase in stringency. There were 7 responses that said they required only one or two years' notice, whilst 4 respondents required between 5 and 10 years. There were 2 respondents would prefer to be notified as far in advance as possible.

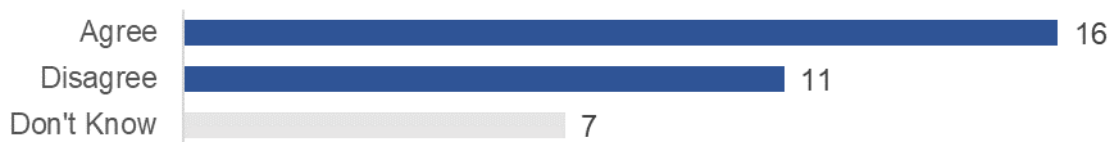
Responses included several suggestions of using a simple labelling system providing consumers with embodied emissions figures to avoid the need for setting definitions and increasing stringency altogether, and 1 suggestion to set multiple definitions from the outset with a lettered labelling system (e.g. A-G).

Q8: Do you agree with the approach of setting more stringent emissions levels as the basis for voluntary standards, vs lower-stringency mandatory standards?

Chapter 1 proposed that 2 systems could operate in parallel:

- a lower stringency mandatory standard that is achievable through widely available technologies, such as energy and resource efficiency measures; and
- one or several higher stringency voluntary standard(s) to enable product differentiation for manufacturers who are decarbonising faster than their peers

Figure 6: Proportion of responses agreeing and disagreeing with Q8



We received 41 responses to this question. There were 16 respondents that agreed that 1 or several more stringent definitions could be used as the basis for voluntary standards, 11 disagreed, 7 answered 'Don't know' and 7 did not answer the question directly.

Most respondents agreed that setting more stringent voluntary standards could be beneficial, but only if implemented in conjunction with a lower-stringency mandatory product standard. A common theme amongst these responses was that voluntary standards could be used to drive change, creating product differentiation, and encouraging suppliers and consumers to lower their emissions.

Respondents who disagreed stated that higher-stringency voluntary standards would not be necessary as market forces would drive further emissions reductions and product differentiation, beyond the minimum level set by mandatory standards. In some sectors (including chemicals and construction products) voluntary standards already exist and, according to one respondent, had little impact. One NGO respondent mentioned that there is little evidence that voluntary standards are effective for bulk commodities. Instead, voluntary standards could be better applied to finished products. Respondents from the steel sector highlighted that, since the decarbonisation pathway for the sector would be a series of step-changes rather than linear progress, voluntary standards would not be appropriate for this sector.

There were 3 respondents who suggested that, to be most effective, a range of voluntary standards with different stringency levels should be set out, and these should be implemented alongside product labelling. A further 3 respondents suggested that more stringent voluntary standards could be used as a baseline for public procurement. There were 2 respondents who suggested that introducing a requirement for whole life carbon assessments of buildings and

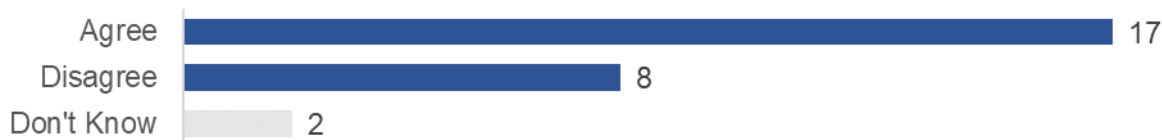
other structures, including a maximum level of embodied emissions, would drive uptake of voluntary standards. There was one suggestion that mandatory standards should be used for Scope 1 and 2 emissions, whilst voluntary standards could be used for Scope 3.

Some respondents, mostly from the construction sector, suggested that we use whole life carbon assessments or EPDs as a methodology for setting voluntary standards.

Q9: Do you agree that sector-level definitions are likely to be the most appropriate level of granularity for demand-side policies?

Chapter 1 proposed that the most appropriate level of granularity for definitions would be industrial sector level definitions (e.g. steel, cement, glass), rather than product or product-category level definitions (e.g. steel beams, Portland cement, flat glass).

Figure 7: Proportion of responses agreeing and disagreeing with Q9



We received 27 responses to this question. Most respondents agreed that sector level definitions for low emissions products are likely to be the most appropriate level of granularity for demand-side policies. However, 8 respondents disagreed giving various reasons, and 2 respondents answered 'don't know' or provided evidence in a different format. One respondent, who answered 'don't know', highlighted that fundamentally, any definition needs to be meaningful for consumers and improve product differentiation on the market.

Of the respondents who agreed, a common theme emerged that sector level definitions should be neutral and not favour specific products or businesses within that sector. Whilst they agreed, respondents from the ceramics, steel and mineral products sectors each noted that definitions should consider the functionality of a product, rather than just its product category or sector. For example, some respondents suggested that high-strength and low-strength concretes should have separate definitions, because they are not functionally interchangeable products. In support of this, respondents shared the Institute of Civil Engineer's Low Carbon Concrete Routemap. Similarly, respondents from the steel sector suggested that a definition for steel should consider the proportion of scrap used in production. Scrap content has a significant effect on the embodied emissions of the end product but can affect the functionality of the product. Several respondents suggested that government adopt the ResponsibleSteel Standard. However, one respondent highlighted that this standard could unfairly benefit the businesses involved in creating the standard.

Of the respondents that disagreed, respondents from the chemicals, mineral products and ceramics sectors shared the view that any definition needs to be more granular than sector-

level. However, these respondents differed in their view of what an appropriate granularity would be, with sub-sector, product category and individual product-level definitions all suggested as the optimum.

Q10: What are your views of the existing efforts to define low emissions for industrial products, either in your sector/for the products you manufacture, or for wider industry?

We received 29 responses to at least one part of this question, representing sectors including construction, steel, timber, cement and ceramics, with a small number of responses from manufacturers of biofuels and NGOs.

Across all respondents from the construction sector, there was support for EPDs and BS EN 15804 to be incorporated into any future approach. However, some construction sector respondents did raise that EPDs are not always comparable across products, as different methodologies are used, and that there is a need for further standardisation of the approach and more consistent source data to be used. One respondent from the construction sector said that a benchmarking process is needed alongside EPDs to support manufacturers' engagement in reducing greenhouse gas emissions.

Respondents recommended schemes such as the Code for Construction Products, Responsible Steel, SteelZero, Concrete Zero, the Low Carbon Concrete Group and the Low Carbon Fuel Assurance Scheme. Most respondents were not members of the schemes they suggested.

ResponsibleSteel was mentioned in 7 responses. However, respondents from across the steel sector cited the lack of consensus amongst steel manufacturers as a factor in them being unsure about government endorsement of the scheme. One respondent said they were awaiting publication of the final standard from Responsible Steel before they could fully endorse it, and another said they would endorse Responsible Steel if consensus across the steel sector could be reached. Two respondents from the steel sector urged caution about endorsing a scheme or certification which is outside of government's control.

One respondent from the biofuels sector recommended that government endorse the Low Carbon Fuel Assurance Scheme, of which they are already a member. They said that this scheme ensures the provenance of the materials being purchased under a recognised code, with regular audits for compliance.

In wider comments, respondents said that any standard would need to be internationally applicable and third-party verification would be needed to avoid greenwashing via self-certification.

Summary of Responses to Chapter 2: Sector and Product Scope

Chapter overview

It is likely that any new demand-side policy would apply to a small group of priority sectors or products at first, with more added over time once systems are established. This chapter examines how policies could be targeted across industry, considering:

- the current state of demand for low emissions industrial products
- the potential for demand-side policies to support decarbonisation in sectors
- the implications of demand-side policies for supply chains and the wider market
- coverage of industrial products imported to the UK

Chapter summary

Responses to this chapter were predominantly from the construction sector, with responses also received from the steel, cement, glass, timber and ceramics sectors. A small number of responses were also received from stakeholders in academia, the chemicals and biofuel sectors, manufacturing, and a devolved government.

Most respondents agreed that there is demand for low emissions products and, in some cases, that it was growing. However, the majority of respondents commented that the demand is too small to create a business case for investing. Several respondents listed the availability of technologies and the capital investment associated with them as barriers to investment. The majority of respondents stated that new demand-side policy could help buyers, with some noting that consumers currently had no method of differentiating their products.

On voluntary measures, a range of sectors, particularly construction and iron and steel manufacturing, said that voluntary standards or product labels would “have a limited market impact”, citing existing schemes in construction and the dependency on “green consumers”. Respondents stated that mandatory standards would be most beneficial, giving businesses a clear strategic focus to drive progress and creating a regulatory requirement and establishing a level playing field in a limited time.

On timing, respondents from the construction, building and materials, biofuel, Combined Heat and Power, metal and environmental sectors said their sector may be a suitable target for new demand-side policy over the next 5-10 years.

On sectors and products to target, some respondents felt that we need to consider more factors than just individual product-level emissions. Sectors’ trade and carbon emissions

intensity were mentioned as key factors. It was also highlighted that sectors' access to decarbonisation opportunities and infrastructure needs to be considered, as this may differ across regions and sectors and lead to unfair advantages for some.

Both buyers and sellers thought that an embodied emissions product label would be helpful to differentiate products from each other in the market. However, some respondents noted that RAG ratings can be misleading, and that labelling would only work if products are compared in the context of their use. Another noted that the value of a product standard would only be as valuable as its stringency.

On implications for supply chains and the wider market, most respondents felt that new policy could drive cost increases for manufacturers further along the supply chain. There was also recognition that new policies could create carbon leakage risk elsewhere in the supply chain if the policies did not also apply to imports. Most respondents disagreed that a 'mandatory for UK products only' approach would be a reasonable first step in rolling out new mandatory standards or labelling policy. Respondents noted that such policies would encourage imports that are lower priced due to lower emissions standards and lower costs and would increase the risk of carbon leakage for products or sectors that trade internationally.

A number of respondents highlighted that the higher the stringency of a measure, the higher the risk of unintended adverse effects.

Responses to each question

Q11: How are products bought and sold in your sector and what is the demand for low emissions products?

There were 34 respondents to this question in total. There were 17 responses from a range of sectors including energy generation, construction, metal manufacturing, cement and glass that stated that there is demand for lower emissions products in their sector. Two stated that they did not know if there was demand or not, and one response stated that no demand exists in their sector. The construction sector was reported as the most common sector to sell to. Three trade associations, from the cement, metals, and ceramics sectors, and 2 private businesses reported that they/their sector sold also to the public sector.

Overall, most respondents agreed that there is demand for low emissions products and, in some cases, that it was growing. The sources of this demand included contractors who want to gain credits in BREEAM, investors and developers. However, most felt that this was insufficient to sway a buying decision or create a business case for investing in decarbonisation when considering other factors. The other factors mentioned were:

- Strong competition on price, and lack of willingness from buyers to pay extra for low emissions products

- Product performance and compliance with other standards, like fire safety
- The significant additional cost of low emissions production methods, and the lack of available technologies, in some cases

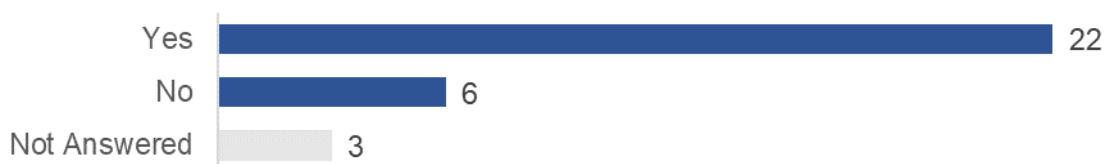
There were 9 respondents in energy generation, retail, cement and building materials sectors that stated that the demand for lower emissions products was sufficient to invest in decarbonisation, 9 respondents from the cement, metal production, manufacturing, timber and energy production sectors stated a need for more government intervention to create the demand needed to secure the investment case for low emissions products.

Of the responses that indicated that they either did not know, or did not believe there to be demand for low emissions products in their sector, 2 argued that price is the major driver of demand, with purchasers being interested in low carbon products but it not necessarily influencing their final purchasing decisions. The one sector that did not think there was demand for low carbon products stated that their sector does not have lower emissions alternatives available.

There were 2 respondents from biofuels and manufacturing sectors that stated that government should introduce mandatory standards to create the demand needed to secure the investment case.

Q12: Have some businesses in your sector already undertaken some level of decarbonisation? Could new demand-side policy help consumers distinguish between products with different climate impacts?

Figure 8: Proportion of responses saying yes or no to Q12



There were 31 responses to this question. Many respondents commented that some level of decarbonisation had begun in their sectors. Where respondents answered no to this question, this was in reference to the second part of the question, where respondents believed some decarbonisation was happening, but that further demand-side policy would not help consumers distinguish between products. Some respondents did note that not all businesses in their sector are undertaking decarbonisation.

Many also said that demand-side policy could have a positive impact, although one respondent believed that policy would not enhance what the sector was already doing itself (to reduce embodied carbon in construction projects), stating that there is already significant amount of activity in the UK and internationally around the measurement of embodied emissions that is driving demand for information at a local level.

Respondents from the concrete and cement industry highlighted the sector's rapid decarbonisation rate to date and the promotion of lower carbon options, such as removing higher clinker content. However, they said that more demand is needed to significantly reduce emissions further. This could be done through, for example, setting embodied carbon targets for new buildings in law.

Q13: Do you think that a voluntary product standard and/or product label would be sufficient to change buyers' behaviour? Why/why not?

We had 37 responses that addressed this question. Most respondents commented that a voluntary product standard and/or label would not be sufficient on its own, with some of these respondents suggesting that it could partially change buyers' behaviour in some situations, could work as part of a wider package of measures, and/or be a positive first step towards other policies. Key themes included cost, pricing, and the use of Environmental Product Declarations (EPDs).

Four respondents stated that they think a voluntary standard/ product label would change buyers' behaviour, however 2 of these agreed with the view that voluntary standards and labelling should be part of a wider package of measures.

Of those in favour, 2 respondents stated that voluntary programmes can demonstrate leadership for companies. One respondent noted that voluntary programmes can be powerful to "accelerate market momentum", but on their own are insufficient to achieve the necessary level of national impact.

Some respondents, particularly from the construction and steel sector, but also including Catapults and lobbying groups, commented that voluntary standards do have a role to play, particularly where there is a clear market for low-carbon products; however, noting that cost and time for voluntary standards to gain traction are still common barriers.

Several responses mentioned the need for supporting policy to ensure the standards were effective, with 2 responses noting that voluntary product standards could be effective in public procurement.

A trade association commented that it could be fairer to implement voluntary product standards and/ or labelling in the case where technologies to decarbonisation are unavailable. A private business noted that for a voluntary standard to encourage behaviour change, it would need to be recognised across the different sectors and supply chains as being credible. A trade association in the construction sector noted that product labelling is incompatible with how products are purchased in their sector, stating that the first time a product label would be seen by a buyer would be the point of delivery.

The construction sector, including representatives from trade associations, academia, and private businesses mostly responded that voluntary standards or product labels would "have a limited market impact", citing existing schemes in the sector that are more effective (for

example, BS EN 15804). A trade association commented their uncertainty that a government-backed voluntary standard would have any additional impact beyond the industry-led work in progress for the concrete industry, but believe it to have important roles elsewhere, e.g. in public procurement where it could produce significant demand for low carbon products. Another noted that there are currently voluntary schemes that are niche and would require regulation for further impact. The high cost of decarbonisation and the low impact of voluntary measures was noted by one respondent, arguing that more would be needed to change buyers' behaviour.

Of the 4 respondents who noted the use of EPDs in the construction industry as an example of an existing voluntary scheme, 3 were in favour of their use. A business noted that an EPD provides more detail than a product label and can help buyers distinguish between products with different climate impacts.

Q14: How do the green credentials of a product feature in buyers' behaviour and purchasing decisions?

This question had 7 sub-questions, including questions relating to training and knowledge amongst sales and procurement teams in different organisations. There were 35 respondents that answered at least one of the sub-questions.

Price or cost was identified by most respondents as the most important factor for purchasing decisions, with green credentials also an important or growing factor.

On labelling, several respondents, both buyers and sellers, thought that a product label would be helpful and could help differentiate products from each other. Some respondents noted that RAG ratings can be unhelpful for buyers who require more technical or granular data of a product and labelling would only be effective if products are compared in the context of their use. Four respondents from industry favoured existing standards or measurement methods, such as verified EPDs, with 2 noting their use in calculating whole building embodied emissions.

Several others noted that embodied emissions could be misleading and a whole-life cycle approach would be preferred to provide a greater visibility of a product's overall impact. Other considerations included information about product sustainability and environmental impacts on labels. Some respondents also mentioned the need for product 'health warnings' outlining the limitations of using CO₂ data to make decisions.

On training, 5 buyers of industrial products commented that their budget and procurement teams had received training and 2 responded that they had not. There were 6 sellers of industrial products who stated that their sales team had received training to market the climate impacts of their products.

Q15: What impact could demand-side policy, such as low emissions product standards or procurement, have on your sector's supply chain, both upstream and downstream?

There were 30 responses to this question from a wide range of industries with construction, and iron and steel, the most represented. Key themes include cost increases along the supply chain, the impact on raw and recycled material, increased risk of carbon leakage in the absence of supporting policies, and risks being amplified where stringency is increased.

There were 12 respondents that said demand-side policies could adversely affect the market for specific raw or recycled materials. Some respondents noted concern that policies targeting blending fractions of recycled materials could make the price of recycled materials less cost competitive compared with higher emissions steel that uses virgin material.

Most respondents felt that new policy could drive cost increases for manufacturers further along the supply chain. However, it was noted that these policies could allow manufacturers to pass costs through to the end user, and, in some cases, the increased cost of the final product would be small. It was highlighted that some sectors are more able to do this than others, so special attention should be paid to sectors at risk of carbon leakage.

There were 13 respondents who said that new policies could create carbon leakage risk elsewhere in the supply chain. Some respondents highlighted that applying standards to intermediate goods rather than end-products risks these goods being manufactured outside the scope of regulations and then imported. Other respondents suggested that the proper design of demand-side policies, or alignment with international standards, could help to mitigate carbon leakage risk.

Finally, in relation to how impacts may vary based on the stringency of the low emissions definition, a number of respondents highlighted that the higher the stringency of a measure, the higher the risk of unintended adverse effects. A few respondents highlighted the need for fairness between both domestic and non-domestically produced goods.

Q16 - Do you agree that the factors discussed above are key to assessing which sectors should be targeted by demand-side policy?

We received 24 responses to this question, the majority of which were from the construction, and iron and steel sectors. Respondents noted that when assessing which sectors should be targeted by demand-side policy, we need to consider more factors than just individual product level emissions, whereas a few recommended that sectoral trade and carbon emissions intensity are key factors in decarbonising their sectors supply chain.

A few respondents from the construction sector mentioned that emissions should not be compared at the product level, but instead they should be considered via a functional unit or a whole life carbon assessment of the final building or asset. Another 4 respondents in the

construction and steel sectors noted that product performance also needs to be considered in key areas, such as fire and thermal efficiency, or longevity, and that the relative importance of various sector characteristics depends on building design and end use.

It was recommended by 3 respondents that differences in access to decarbonisation opportunities and infrastructure need to be considered, such as emitter access to regional networks and CCUS business models. This may differ across regions and sectors and lead to unfair advantages for some.

On determining whether sectors would be suitable for demand-side policies, 4 respondents recommended that trade, carbon and energy intensity would be key demand-side factors in decarbonising their sectors supply chain. The metal castings and steel sectors were noted as examples of emissions intensive and trade exposed sectors. Other considerations noted by respondents included a discussion of other policies in place to incentivise decarbonisation, such as the UK ETS, and examples of demand-side measures that exist already in the UK or abroad, for example, the Green Construction Board's low carbon labelling scheme for concrete.

Q17: Would your sector be a suitable target for new demand-side policy over the next 5-10 years?

Figure 9: Proportion of responses saying yes or no to Q17



There were 25 responses to this question from a wide range of industries, with construction, and iron and steel the most represented. Most respondents agreed that their sector would be a suitable target for demand-side policies.

On which industries should be prioritised for demand-side policies, some respondents felt that industries with the highest embodied emissions should be prioritised, this included the steel and concrete sectors. A few respondents noted that industries without existing roadmaps or frameworks should also be prioritised. One respondent recommended that all sectors should be targeted.

Several respondents, from the steel and timber sectors, suggested that demand-side policies should be developed incrementally – for example, voluntary product labelling first, then to be supplemented with mandatory labelling once a methodology has been developed. Depending on the rate of decarbonisation, stringent standards could then be introduced at the point where policies are sufficient to protect against carbon leakage.

Amongst the respondents that did not think their sector was a suitable target, some felt that the timescale was unachievable as their sector is reliant on technology that is not ready to be

decarbonised. They advised that there would not be enough time to allow for businesses to take the necessary steps to ensure that they can decarbonise. Some respondents proposed how government could help businesses take actions towards decarbonising including the expansion of schemes to develop 'green skills', issue vouchers under a 'Help to Green' initiative, and better understand what is technically feasible in each industry before introducing any demand-side policies.

Q18 - Could a 'mandatory for UK products only' approach be a reasonable first step in rolling out new mandatory standards or labelling policy?

Figure 10: Proportion of responses saying yes or no to Q18



We received 21 responses to this question, with most responses coming from the construction sector, and the iron and steel sector. Most respondents answered 'no' to this question and felt the policy approach would lead to increased imports and carbon leakage; however, a few respondents were open to the approach if the conditions were right.

Carbon leakage was cited as the main argument against a mandatory for UK products only approach. Respondents, particularly from the glass, iron, and steel sectors, noted that introducing a 'mandatory for UK products only' approach would incentivise imports that are lower priced due to lower emissions standards and lower costs and would increase the risk of carbon leakage for products or sectors that trade internationally. There were 2 comments from respondents that this policy approach would damage progress on industrial decarbonisation.

The opportunity for the UK to work with other countries was highlighted. Two respondents said that the development of product standards represents an opportunity for the UK to work with other countries to build momentum, and jointly-address the complexities of implementing this type of mechanism, as well helping to drive global demand for low carbon industrial products.

On maximising the impact of demand-side policies, one respondent recommended that a mandatory UK standards impact would be greatest if introduced in consultation with European and international partners as a template for wider adoption. Another respondent highlighted that it is essential that international suppliers are involved in the development of new global standards that impact their ability to produce and export goods affordably, for example, farmers or workers in emerging economies.

Of the 3 responses that showed support for a 'mandatory for UK products only' approach, one suggested that it could be used as a means of raising consumer awareness, showing UK climate leadership, and showing the policy can work to encourage international alignment, and one suggested imposing rules on imports could have negative impacts on developing states.

However, these responses did not argue that a UK only approach was preferable, focussing instead on whether it would be an effective interim policy.

Q19. Under what circumstances, or for which products, is it essential to target both UK production and imports from the start?

There were 25 responses to this question from a wide range of industries, with construction, and iron and steel the most frequently represented.

Most respondents said that it was essential for demand-side policies to apply to both domestically produced products and imports from the implementation of any measure, citing the risk of carbon leakage if policies were not to apply equally. Many respondents said that this approach should apply to all products, but there were specific mentions that concrete, cement, steel, glass and construction products should be targeted. One respondent suggested that a carbon customs union with like-minded countries should be established in order to allow trade of low carbon goods.

Summary of Responses to Chapter 3: Emissions Reporting and Verification

Chapter overview

Demand-side policies would need to be underpinned by robust emissions reporting. This chapter examines the characteristics of any reporting scheme for demand-side policy, including:

- design factors for any reporting scheme
- views on existing climate data reporting undertaken by industry

Response summary

In Chapter 3, we asked for views on the emissions measurement, reporting and verification that would be needed for new demand-side policies, and how this should be designed. Most responses to this chapter were from the steel, cement, glass, timber and ceramics sectors, the trade associations of those sectors, and consultancies. A small number of responses were also received from stakeholders in the chemicals and biofuel sectors, automotive manufacturing, and a local authority.

Although views varied, 3 key themes emerged from the majority of respondents:

- Government should adopt a standard methodology for measuring and reporting the embodied emissions of industrial products. Doing so would improve the comparability of like-products and reduce administrative burden for businesses reporting against multiple standards. Ideally, this would be constructed from existing emissions measurement activity in the market.
- Benefits gained from more consistent reporting should outweigh the burden and cost of compliance.
- Imported goods should be subject to the same reporting requirements as domestically produced goods.

In relation to existing private sector schemes, responses suggest that detailed emissions reporting is most common in the construction products sector. There would therefore be a greater burden on other sectors to implement such reporting. Furthermore, it was suggested that some sectors (for example, chemicals) are not suitable for product-level emissions reporting due to the high number of processes and end-products, which would make detailed reporting burdensome.

Responses to each question

Q20 - What are your views on how emissions reporting could be simplified?

Chapter 3 proposed that, in order to simplify emissions reporting, product averages could be used instead of product-specific data. This would allow industry to assign emission factors to their products based on the method of production and region of origin.

We received 30 responses to this question and 2 topics of discussion emerged:

- The acceptability of using product averages to simplify emissions reporting
- The use of existing or emerging reporting schemes operated by both the public and private sector

10 respondents supported the use of product averages to simplify reporting, while 2 respondents opposed it on the grounds that using aggregated data benefits the most carbon intensive businesses in a sector. A further 10 respondents supported the use of product averages alongside positive and negative incentives for businesses to report more granular data.

Suggestions of positive incentives included:

- Businesses that report product specific data would not need to resubmit data as frequently as those businesses using product averages
- Financial rewards, such as preferable tax rates

Suggestions of negative incentives included:

- A requirement to clearly signpost averaged data
- Where product averages are used, a multiplier would be added to the emissions intensity of those products (for example, emission intensity multiplied by 1.25)
- Businesses would be forced to use 'worst case scenario' data for that product, rather than product averages

It was also suggested that the 'penalty' (negative incentive) for using averaged data could increase each year.

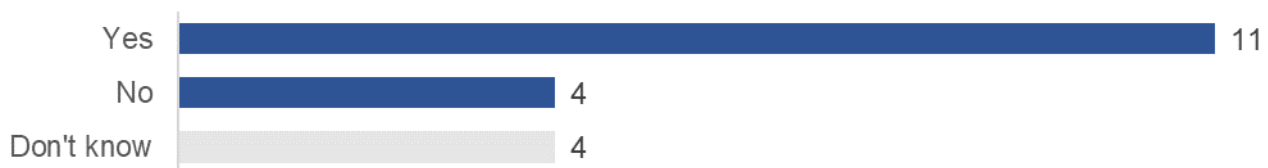
One respondent highlighted that using product-specific data would be most important for products sold in high volumes in the UK. For low volume, specialist, and niche products, product averages would be more acceptable. This would help target the products with the greatest share of emissions. Another respondent highlighted that using averages could be acceptable for processes whose emissions intensity does not change over time, such as the combustion of natural gas. Several respondents suggested that using product averages would be beneficial for SMEs. Finally, one respondent highlighted the possibility of using technological solutions, such as machine learning, to improve the quality of aggregated data.

Respondents endorsed the proposal that government adopt existing schemes, as a method of collecting data for new demand-side policy. There was support from 7 respondents for the use of Environmental Product Declarations (EPDs) and 4 respondents suggested using data from other schemes, including Streamlined Energy and Carbon Reporting (SECR), UK Emissions Trading Scheme (UK ETS) and Chartered Institution of Building Services Engineers (CIBSE) TM65. Additionally, 2 respondents supported the use of EPDs but highlighted the need to reduce the quantity of aggregated data permitted in their production. A few respondents supported the use of sector-specific schemes, including one scheme operated by the Global Cement and Concrete Association (GCCA) and the other by ResponsibleSteel.

Q21: Does your sector already compile aggregated products emissions data? If so, who is responsible for compiling and sharing this data?

We received 21 responses to this question, 11 respondents answered Yes, 4 responded No, 4 responded Don't know. 2 respondents did not directly answer the question and are not counted in Figure 10.

Figure 11: Proportion of responses saying yes, no, or don't know to Q21



8 respondents, representing the steel, cement, timber and ceramics sectors noted that multiple organisations compile product average emissions data for construction products, and that this is disjointed and duplicative. For example, data submitted to private sector organisations that aggregate product and sector emissions data is often duplicative of the data submitted to the UK ETS and other UK government compliance schemes (e.g., SECR, ESOS, CCA), and that if government plans to introduce new reporting, there is an opportunity to streamline this.

One respondent noted that there is no widespread voluntary data reporting at the product level in the chemical sector, and it is difficult to aggregate or compare emission intensity across sub-sectors.

One respondent noted that significant work to create product averages has been carried out across industry and suggested that government should look to endorse existing sector-specific and cross-sector databases operated by trade associations and/or research institutes, including WorldSteel, EcoInvent, Gabi and the Bath ICE database.

Another respondent noted that, currently, the carbon accounting and product specification methodologies are not aligned across different databases and that government should look to standardise this.

Q22: To maintain accuracy and trust in the system, how frequently should product emissions data be reported?

Chapter 3 noted that the length of the reporting cycle would determine the accuracy and administrative impact of any new demand-side policies. At a minimum, businesses would need to submit data when a policy is introduced and whenever there is a change to the stringency of the policy.

We received 14 responses to this question. In addition to comments on the frequency of reporting, respondents also suggested mechanisms for the frequency of reporting and to allow businesses to submit emissions data outside of the normal reporting cycle.

On frequency, 8 respondents suggested that data should be reported every 5 years, to match the current reporting frequency of EPDs. Five respondents suggested that data should be reported annually, in line with the UK ETS, and one respondent suggested that reporting every 2 years would maintain accuracy and trust in the system, whilst managing burden on industry.

In addition to reporting at a set frequency, respondents suggested that businesses could voluntarily gain recognition for improvements made to their processes. Other respondents said that reassessment should be mandatory for businesses that make substantial changes to their processes. Some said that a system could facilitate both types of updates.

Respondents from the cement and concrete sectors suggested that a 5-year reporting cycle is most appropriate in the short-to-medium term, because the sector will not see significant decarbonisation until the 2030s.

Q23: For your sector, please submit evidence on the potential financial and administrative cost of mandatory product emissions reporting and verification for products sold in the UK.

We received 21 responses to this question, mostly from the steel, cement, timber and ceramics sectors. Given the large proportion of responses from the construction sector, many responses relate to EPDs.

15 respondents answered Yes, they do collect the data required to measure emissions at product level, 3 answered No, they do not, and 3 answered Don't know.

Figure 12: Proportion of responses saying yes, no or don't know to Q23.1: Do you already collect the data required to measure emissions at product level?



Of those that responded Yes, 12 operate in sectors where EPDs are widely used (i.e. construction products), and respondents viewed EPDs as a good tool to differentiate products in the market, especially if benchmarks for emissions were set.

There were 3 respondents that noted that product-level reporting is either being developed or is already happening, but only partially. For example, one respondent noted that they currently collect detailed data for specific 'green' products, and that they would support mandatory reporting across the rest of their product lines.

Where reporting is not happening already, respondents mentioned cost and practicality as barriers. One said that product-level reporting is possible at specific stages in the manufacturing chain but would be impractical for all finished products in their sector. A trade association from the construction sector noted that, whilst product-level reporting is important, the financial burden could bankrupt smaller companies if made mandatory. Finally, one noted that the benefits of reporting would need to significantly exceed the compliance cost for the policy to be attractive to industry.

Respondents noted the importance of measuring upstream emissions, but highlighted concerns about the practicality of doing so. The majority of respondents to Q23.3 noted that government should explore the use of validated industry average datasets where specific data would be excessively difficult to source. One respondent, a consultancy, noted that government should assess how important product-specific upstream data would be for meeting the policy goals. It was suggested that industry average data could be used for upstream emissions, and businesses would collect detailed data for the processes they control.

Q24: What are your views on how the embodied emissions of imported industrial products should be reported?

We received 25 responses to this question, with a general consensus that imported products must face the same rules as domestic products. Respondents noted the importance of aligning domestic standards with existing international standards to reduce friction between schemes in different countries, with 6 respondents highlighting Environmental Product Declarations (EPDs) (compliant with BS EN 15804) as a mechanism to do this.

There were 2 respondents that suggested that, if reliable data are not available for imported goods, default industry averages could be used, and a further 2 respondents suggested that whole life carbon should be considered in order to take into account additional transport emissions associated with imported goods.

Q25: What are your views on appointing a certification body?

We received 23 responses to this question. All supported the appointment of a certifying body (or bodies) to verify the emissions data needed for demand-side policies, with several respondents noting that this would be an essential implementation step.

There were 4 respondents that suggested that government should set out a specification for certification systems using standards from the International Organisation for Standardization (ISO) and International Sustainability and Carbon Certification (ISCC). Certification systems based on that specification could then be offered by private sector and non-profit organisations.

Respondents mentioned 20 certification bodies that could offer this service, 10 specific to manufactured products (e.g., steel, cement, maritime components) and 10 that are generalist. The UK Accreditation Service (UKAS) and ECO Platform were both listed as directories of certifying organisations that government could work with to accredit certification bodies, that in turn would certify products for manufacturers. Respondents also named SGS UK, Bureau Veritas, Lloyd's Register and DNV, among others.

There was strong alignment in the responses from sectors where Environmental Product Declarations (EPDs) are regularly used. EPD programme operators (organisations that verify, issue and store EPDs online) registered with ECO Platform were mentioned 7 times. There were 2 respondents, both advocating for the endorsement of EPDs by government, highlighted the risk of adding additional certification or verification processes on top of existing systems, which they considered to be sufficiently rigorous and transparent.

Q26: What are your views on existing government reporting schemes?

We received 23 responses to this question. Eleven respondents agreed that existing government reporting schemes do not provide the information necessary to calculate the emissions associated with industrial products, 5 disagreed and 7 gave responses in the form of additional context.

There were 3 themes that emerged in the responses:

- Schemes developed in the private sector (non-government schemes) can fulfil the function of product-level emissions reporting. Government could use data from these schemes for demand-side policy, rather than create a new system.
- The administrative and financial burden posed by new reporting requirements could be a risk for industry.
- Progress in this area is slow because government has not standardised carbon accounting methodologies.

Respondents noted that existing government reporting adequately covers Scope 1 and 2 emissions for domestic industry, but Scope 3 emissions reporting remains voluntary, and this data is less reliable (for more information on emissions 'Scopes' please see Chapter 1). There were 4 respondents that suggested that government should endorse the use of EPDs for Scope 3 product level reporting. Of these, 2 respondents included concerns about the methodology (BS EN 15804), that government should address if EPDs are adopted. No other private sector schemes were suggested.

It was suggested that if a new, more detailed system is required, any business taking part in this scheme should be automatically compliant with other, less detailed government schemes.

Q27: In relation to existing non-government reporting schemes, please provide evidence where applicable on:

- **Schemes operating in your sector or supply chain to monitor and verify the embodied emissions of intermediate and/or end-consumer industrial products, and whether you participate.**
- **The reporting framework and emissions scope covered by these schemes. Please be as specific as possible, including any internationally recognised frameworks, for example: 'BS EN 15804 EPD verification scheme, GreenBookLive, ISO 14025'.**
- **The proportion of your business's output (UK only) that is reported under such a scheme (please specify products and destination markets where possible).**
- **Why your business voluntarily reports product level embodied emissions. Or alternatively, why your business does not currently participate in voluntary emissions reporting schemes.**

We received 22 responses to this question. Of these, 19 responses were from stakeholders that operate in, or manufacture products for, the construction sector, including steel, cement, glass, timber, and ceramics. The other 3 responses were from stakeholders in the chemicals, transportation fuel and metal casting sectors.

A clear theme emerged among respondents that supply products to the construction sector, with all 19 currently measuring and reporting the embodied emissions of products using EPD (BS EN 15804) methodology. Of these, one went on to specify that government should use the updated EN 15804+A2 methodology to align with the EU Product Environmental Footprint (EU PEF) methodology. This view was shared by a consultancy in the construction sector.

Many respondents observed that there are too many schemes with competing lifecycle analysis methodologies, especially steel products. Examples include SteelZero, ResponsibleSteel, WorldSteel, Science Based Targets initiative (SBTi) and the Net Zero Steel Pathway Methodology Project, as well as international standards including: EN 19694, ISOs: 14404, 20915 and 21930. Respondents noted that such a diversity of standards is a burden for industry, especially where end-consumers require data conforming with different schemes.

Respondents mentioned the use of multiple EPD databases, including GreenBookLive (6 mentions), EnvironDec (2 mentions), International EPD System (2 mentions), ECO Platform (one mention), and IBU (one mention).

One respondent highlighted a new standard in development for construction products (prEN 17672) that provides guidance to participant businesses on how to communicate the results of EPDs produced using EN 15804+A2.

2 respondents noted concern about the use of 'pre-approved' EPD systems, which can deliver fast and low-cost EPD reports. The respondents suggested that these systems are too simplified, and results should be peer reviewed by a trained practitioner. The respondents suggested that these systems could be valuable but require verification by a central authority.

Of the 3 respondents that do not supply products specifically for use in the construction sector, one respondent suggested that government explore the ZEMO Low Carbon Fuel Assurance Scheme for transportation fuels.

One respondent was not aware of any schemes operating in the cast metals sector.

Q28: Do you believe there would be value in aligning any new demand-side policy data reporting framework with an existing voluntary emissions reporting scheme? If so, which?

We received 17 responses to this question. We had 12 respondents indicate that there would be value in government aligning with existing voluntary emissions reporting schemes. There were 3 respondents that were unsure, and 2 respondents do not believe government alignment on reporting would be valuable.

Figure 13: Proportion of respondents that agree, are unsure, or disagree with Q28



Two thirds of respondents shared the view that government must act to standardise emission reporting methodologies across industry. Businesses are often required to comply with more than one and this is a financial burden.

Most respondents to this question were from the steel, cement, timber and ceramics sectors. Five of the 12 respondents in support of government alignment suggested that government should align reporting requirements with EPDs produced to EN 15804 standard or the British Standard equivalent. Respondents from the steel sector were generally supportive of any standardisation, naming the ResponsibleSteel standard, BES6001 and BS EN 15804 as possible options. One respondent from the steel sector noted that any adopted standard must not unfairly benefit the business models of the founding members of that standard.

One respondent did not believe alignment would be valuable on the grounds that government should pursue whole life carbon reporting and standards, rather than product-level policy, to avoid unintended consequences in the construction sector. A further respondent disagreed on the grounds that there are no market failures to address, because buyers are already placing demands for low emissions products on manufacturers.

Of the 3 respondents that replied don't know, one respondent, a construction products trader, suggested that it would be helpful to understand what % of a manufacturer's product lines have undergone whole life carbon analysis, in order to help differentiate high and low emissions manufacturers in the market.

Summary of Responses to Chapter 4: Policy Implementation

Chapter overview

Alongside emissions reporting, there are several delivery considerations for any demand-side policy. This chapter examines these considerations, including:

- the role government can play in maximising the interest in demand-side policies from both manufacturers and buyers
- the timing of introduction of any new demand-side policy

Response summary

We received responses from a range of respondents including businesses, trade associations, NGOs, devolved administrations, and local government. There were responses from the building and construction materials sector, iron and steel manufacture, chemicals, and timber among others.

In response to how voluntary demand-side policies should be designed and communicated to maximise uptake amongst manufacturers, several respondents suggested that a combination of workshops, meetings and consultations would be useful. Some respondents noted that the design process must be transparent. Some respondents said that building regulations requiring whole life carbon assessments for buildings and other structures would support the adoption of voluntary demand-side policies by increasing the demand for low carbon goods.

The majority of respondents suggested that, to maximise uptake of voluntary demand-side policies amongst buyers, the scheme needs to be simple to understand, with easy to interpret labelling systems. Respondents also stated that labelling needs to be backed up with quantitative, verified data. There was also encouragement for further government engagement with industry and customers to design and implement the policies.

Around half of the respondents recommended that some demand-side policy be introduced in the early 2020s or as soon as practically possible. It was also noted that sector readiness should be improved before demand-side policies can be introduced and exceptions and exemptions may be needed for industries that do not have low carbon alternatives readily available. A few respondents noted that government should enable, rather than penalise, industries that are transitioning to low carbon.

Responses to each question

Q29: How should voluntary demand-side policies be designed and communicated to maximise uptake amongst manufacturers?

This question focused on the manufacturer's perspective. There were 22 responses to this question from a range of organisations including trade associations, businesses, and local government.

One respondent suggested that regulations requiring whole life carbon assessments for buildings and other structures would increase the demand for verified low carbon goods, with 5 respondents mentioning existing Environmental Product Declarations ([EPDs](#)), including BS EN 15804. This in turn would incentivise greater participation in voluntary demand-side policies. Three respondents noted that manufacturers of construction products are voluntarily undergoing assessment to meet buyer's demands for data. Another respondent suggested that direct financial incentives, such as reduced VAT rates or access to preferential borrowing rates, would increase participation in voluntary demand-side policies.

One respondent noted that, to make any scheme desirable to participate in, the process must be transparent, with robust and consistent methodologies. Other suggestions made by the respondent included co-design with industry, and digitisation of the process. However, another respondent noted that this may be complex due to the large range of industrial products produced.

Five respondents identified SMEs as the group most likely to require support to onboard new practices, with financial support to help companies put systems in place being the most common type of support suggested.

A range of barriers to the uptake of voluntary standards were identified, including access to information on how to meet a standard, and the fact that some products would be hard to label due to their lack of packaging, such as timber. One respondent suggested that these barriers could be overcome through a range of online tools, such as digitisation to track a product's compliance with a standard. Another respondent noted that voluntary demand-side policies would require effective communication, with one respondent advising industry ownership and leadership on communications campaigns.

Finally, several respondents providing feedback on methods of engagement with government for the design and rollout of demand-side policies agreed that a combination of workshops, meetings, and consultations would be useful. Some respondents suggested that workshops or meetings should be sector-specific due to the different issues faced by each sector.

Q30: How should demand-side policies be designed and communicated to maximise uptake and understanding amongst buyers?

This question focused on the buyer’s perspective. We received 15 responses to this question. Most respondents provided suggestions for policy design, implementation, or incentives, including considerations to avoid unintended consequences.

There were 6 respondents that noted that any scheme needs to be simple to interpret and implement. Additionally, 4 respondents suggested design features including a label system with a simple colour-coded pictorial system, and clear RAG ratings depicting carbon emissions. There were 5 respondents who also stated that labelling needs to be backed up with quantitative, verified data that is updated over time, to generate trust or credibility. One respondent suggested a QR code be included on the labels, so that information can be traced and verified to build confidence and credibility.

One respondent encouraged further government engagement with industry and customers to design and implement the policy. A few respondents highlighted that comprehensive guidance on voluntary policies would be critical. One respondent in the construction sector suggested best practice on green procurement be shared to reduce the burden on both distributors and manufacturers, and another respondent recommended that government includes carbon emissions specifications in procurement.

It was recommended by 3 respondents that monetary support, such as lower tax and VAT on low carbon products, would incentivise uptake of demand-side policies.

In the construction sector, 3 respondents highlighted that policy design should avoid unintended consequences such as reduced building performance or increased costs due to labelling and manufacturing process changes, and one respondent said that guidance needs to be accompanied by regulation to be effective.

Q31: In your view, are there further environmental criteria or sustainable practices that public contracting bodies could consider in individual commercial processes? Please provide examples and explain how these could support a market for low emissions industrial products.

Figure 14: Proportion of responses agreeing and disagreeing with Q33



We received 25 responses to this question, of which 21 agreed that there were further criteria or sustainable practices that could be considered. There were three broad themes: suggestions for further environmental criteria or sustainable practices, wider design considerations and suggestions regarding the use of existing schemes.

Some respondents, mostly from the construction sector, suggested that in-use energy efficiency should be considered as a further environmental criterion that builds on existing public procurement practices. A few respondents within the aggregate and construction industries strongly advocated increasing the consideration of the longevity of structures, alongside the re-use, refurbishment and resilience of buildings and structures.

Two respondents recommended that sustainability criteria should be aligned with the broader climate change objectives and commitments, whether that be human rights, deforestation or biodiversity.

One respondent recommended using existing certification schemes. For timber, respondents mentioned the Forest Stewardship Council, the Programme for the Endorsement of Forest Certification, and Grown in Britain. For construction products, respondents mentioned the Ecopoint, a unit for measuring environmental impact developed by the BRE Trust. Other respondents suggested government can learn from the voluntary Green Public Procurement (GPP) criteria and early Government Buying Standards. Another respondent advocated for enhancing standards to generate more scientifically robust outcomes and to promote more sustainable decision making. One respondent noted that Environmental Product Declarations (EPDs) do not cover transport emissions from factory to construction site, which are difficult to calculate due to the variability in journey distances and size of vehicles used.

Two respondents disagreed or did not know whether further environmental criteria and sustainable practices should be considered. A representative for the ferrous foundries industry noted that, although there are many commendable environmentally sustainable practices and criteria, such as those that encourage increased biodiversity, they should not be confused with emissions schemes, arguing that a simple focus on embodied carbon is most beneficial to industry and end-consumers.

Q32: When would demand-side policies ideally be introduced to best support decarbonisation of your sector or business?

We received 32 responses to this question. About half of the respondents recommended that some demand-side policy is introduced in the early 2020s or as soon as practically possible, with considerations for sector variations and policy approaches. However, some respondents highlighted the need for the voluntary implementation of demand side policy in the first few years to provide sectors with a reasonable amount of time to respond to any changes any policies could create. Additionally, a few respondents noted that demand-side policies may have a limited impact on the decarbonisation of their sector as they already have similar policies in place, which would mean any new demand-side policies would be a duplication of work that is already being delivered by their respective sectors.

A few members of the steel sector recommended that voluntary product labelling should be introduced in the early 2020s to help identify any issues with the methodology. They recommended that mandatory product labelling and less-stringent standards are introduced from 2025, followed by stringent standards from 2030-35 to create a market for low-emission

steel and to protect against carbon leakage. One respondent in the heat and power sectors supported the introduction of standards as soon as practically possible, with increasing stringency over time. A few other respondents highlighted they wanted to understand the definitions for low emissions products as soon as possible.

There were 3 respondents that suggested the timing and aims of any demand-side policy' should align with upcoming regulatory changes and with decarbonisation roadmaps being developed, such as the Future Buildings Standard and the UK Green Building Council Whole Life Carbon Roadmap.

On the introduction of demand-side policies, 2 respondents from the aluminium sector stated that although not all sectors are ready for demand-side policies to be introduced, such as the construction sector, many end-use sectors are ready, for example transport and packaging sectors. Some respondents highlighted that the introduction of policies need to allow time for businesses to decarbonise their operations. They recommended that businesses and competing sectors be on a level playing field, for example with access to the decarbonisation infrastructure required, particularly before mandatory standards are introduced.

There were 4 respondents from the glass, cement and construction sectors stated that an early inception of demand-side policies would not have a significant impact on their energy and resource efficiency. They stated that this is because investment in other decarbonisation technologies such as CCUS or hydrogen production would still be required.

One respondent from the construction sector stated that there is no current market failure that needs addressing through policy, as buyers are currently placing demands on manufacturers, which is leading to change.

Q33: What other factors should government take into account when designing demand-side policies?

There were 19 responses to this question. The need to consider SMEs was raised by two respondents, particularly with relation to the cost of EPDs to businesses. The majority of respondents also raised the point of exceptions and exemptions with the design of demand-side policies. This includes consideration of retrofit, reuse and recyclability of products and their circular economy possibilities to enable, rather than penalise, industries that are transitioning to low carbon. A few respondents also raised the issue of how the carbon label would be applied in an event of disruption to carbon capture and storage networks or during the repair and maintenance of systems.

Three respondents commented on labelling and packaging. Two of these respondents advocated for sector-wide agreements and collaboration when implementing any sustainable labelling, due to its complexity. Another respondent suggested that the responsibilities should sit with the regulator, and that labelling alone would not impact producer behaviour.

One respondent from the glass sector commented that additional policy is not required in the packaging sector due to existing high regulations, including DEFRA's upcoming Deposit Return Scheme and Extended Producer Responsibility Regulations.

Lastly, two respondents referenced improving and aligning with existing schemes (including voluntary schemes) such as SECR or EPDs. A manufacturing sector representative suggested that further guidance should be provided on the interpretation of reporting and that all companies should adhere to scope 1 & 2 of the UK ETS, whereas scope 3 emissions should have a more sectoral focus.

Glossary

Term	Definition
Buyers	Individuals or organisations that purchase industrial products, such as those in the construction or automotive sectors.
Carbon leakage	The displacement of production, and associated greenhouse gas emissions, in ways that would not have happened if the pricing (or regulation) of emissions across jurisdictions was implemented in an equivalent way.
Circular Economy	An approach to managing resources that involves products and materials being kept in use for as long as possible, extracting maximum value from them. It means products and materials are reused, repaired, remanufactured, recycled or regenerated whenever possible and appropriate.
Consumption emissions	Emissions that are associated with consumption spending on goods and services, wherever in the world these emissions arise along the supply chain, and those which are directly generated by households through private motoring and burning fuel to heat homes.
COP	COP stands for 'Conference of the Parties' and refers to the decision-making body of the United Nations Framework Convention on Climate Change (UNFCCC). In November 2021, the UK hosted the 26th annual session of the Conference of the Parties to the Convention, or 'COP26', in Glasgow.
Decarbonisation	A process of reducing the greenhouse gases we release into the atmosphere.
Demand-side policies	Government actions that aim to increase overall demand for a product or service through growing the market. In the case of this Call for Evidence, we are focused on mandatory and voluntary product standards, product labelling, and public and private procurement approaches for low emissions industrial products. Table 1: Summary of Potential Demand-Side Policy Options Explored in the Industrial Decarbonisation Strategy provides further detail.

Embodied emissions	The sum of all the emissions produced in the manufacture, use and end of life stages of a product, outside of operational emissions. This includes (but is not limited to) emissions from the extraction and transportation of raw materials, and the manufacturing processes used to create the final product.
Emissions Trading Scheme (ETS)	Provides a long-term carbon price signal for UK heavy industry, aviation and power sectors to incentivise sector decarbonisation and support the UK to meet its legally binding carbon reduction targets.
End consumer	The end-user or consumer of a product that is not sold on or used in the manufacture of another product.
End-consumer product (or 'finished' product)	A product which, once purchased, is consumed or used directly by the purchaser and is not sold on or used in the manufacture of another product.
Energy efficiency	When something performs better using the same amount of energy or delivers the same performance for less. The principle of energy efficiency can be applied to many things: buildings, products, appliances, manufacturing processes, to name a few.
Environmental Product Declaration (EPD)	An independently verified report that communicates what a product is made of and how it impacts the environment across its entire life cycle.
Greenhouse Gas (GHG) Emissions	Addition to the atmosphere of gases that are a cause of global warming, including carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride and nitrogen trifluoride.
Industrial Deep Decarbonisation Initiative (IDDI)	A global coalition of public and private organisations working to standardise carbon assessments, establish public and private sector procurement targets, incentivise investment into low-carbon product development and design industry guidelines, to stimulate demand for low emissions industrial products.
Industry	Businesses and organisations involved in manufacturing, refining, coke production and mining.

Intermediate industrial product (or 'semi-finished' product)	A manufactured product which goes on to be used in the manufacture of a final product. Examples include steel, cement and glass (Some products can be both an intermediate product and an end-consumer product).
Lifecycle assessment	Lifecycle assessment is a cradle-to-grave or cradle-to-gate analysis technique to assess environmental impacts associated with all the stages of a product's life, from raw material extraction through materials processing, manufacture, distribution, and use.
Low emissions products	Products manufactured producing fewer, or zero, emissions. This is a working definition for the purpose of this Call for Evidence, per the discussion in Chapter 1.
Mandatory Product Standards	Regulations requiring products to meet certain criteria in order to be placed on the market.
Manufacturers	Businesses that manufacture industrial products, such as steel or glass firms.
Net Zero	Refers to a point at which the amount of greenhouse gas being put into the atmosphere by human activity in the UK equals the amount of greenhouse gas that is being taken out of the atmosphere.
Offsets	A reduction in greenhouse gas emissions – or an increase in carbon storage e.g. through land restoration or planting trees – to compensate for emissions that occur elsewhere.
Product labelling	A mark or label on a product's packaging which conveys information to the consumer about the product's unique value. For example, a label might signal that a product has been certified as meeting a particular standard.
Sector	A grouping of businesses that procure or sell similar products (e.g. the chemicals sector).
Small and Medium Sized Enterprises (SMEs)	Businesses with fewer than 250 employees and an annual turnover under €50 million.

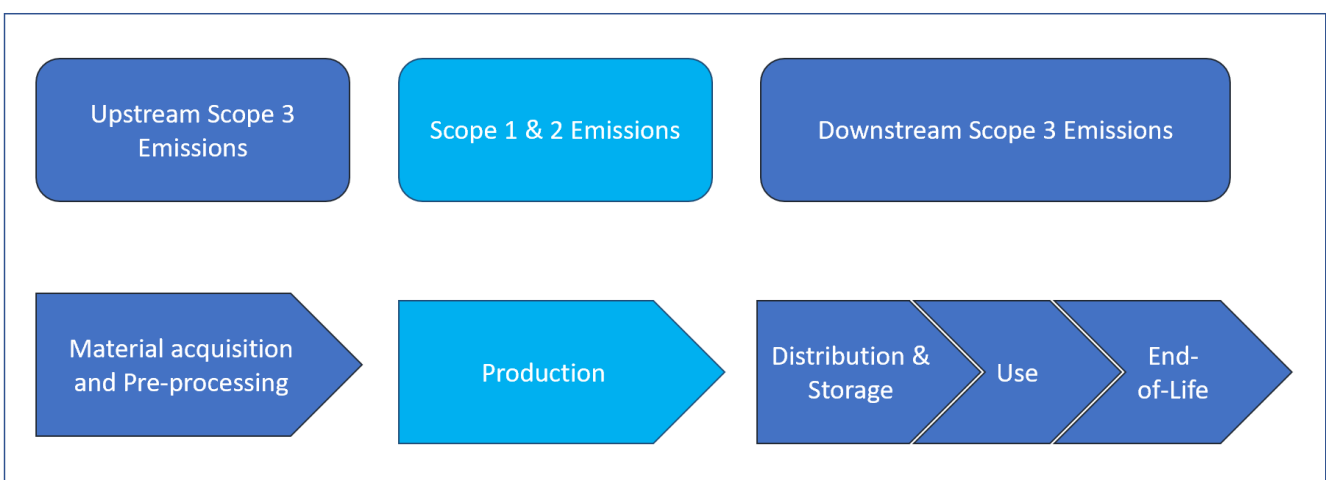
Supply chain	The entire process of making and selling goods, which may involve intermediate products transferring between businesses who undertake different manufacturing stages, before becoming end-consumer products.
Value-retained products (VRP)	<p>Activities that involve or enable the extension of a product's service life beyond its original expected lifespan. These processes include reuse, repair, refurbishment, and remanufacturing. Key enablers to VRP include design and manufacture to enable continued use, and business model innovation such as "through-life engineering services", sharing and servitisation. After a VRP, the same form as the original product is retained, thus displacing the emissions associated with production of a new product with only the lower emissions associated with the VRP.</p> <p>Value can also be retained in the economy after products reach end-of-life and are disposed, for example by recovering and reusing the constituent materials from which they are made, including via recycling processes.</p>
Voluntary buyers' alliance	Two or more organisations combining their purchasing power in order to achieve value for money.
Voluntary Product Standards	<p>Voluntary product standards establish a recommended specification for a particular aspect of a product. Manufacturers can choose whether to meet this standard. Those that do, receive certification which demonstrates to consumers the quality or value the product has, which differs from others on the market.</p>

Annex

A1: Emissions Scopes

Emissions Scopes are a way of categorising different greenhouse gas emissions sources for reporting purposes.

- Scope 1 (direct emissions): emissions from activities owned or controlled by an organisation. For example, emissions from combustion in owned or controlled boilers, fuel used in company vehicles, and emissions from chemical production in owned or controlled equipment.
- Scope 2 (indirect emissions): emissions associated with an organisation's consumption of purchased electricity, heat, steam and cooling. These indirect emissions are a consequence of an organisation's energy use, but occur at a source not owned or controlled by the organisation (e.g. a power plant).
- Scope 3 (other indirect): emissions as a consequence of an organisation's actions that occur at sources not owned or controlled by the organisation and are not classed as Scope 2 emissions. This includes both upstream and downstream emissions.
 - Upstream emissions: e.g. business travel by means not owned or controlled by the organisation, waste disposal or the embodied emissions of materials or fuels purchased by an organisation.
 - Downstream emissions: e.g. processing of sold products, use of sold products and the end-of-life treatment of sold products.
- Product Lifecycle Emissions: all the emissions associated with the production and use of a specific product from cradle to grave, including emissions from raw materials, manufacture, transport, storage, sale, use and disposal i.e. Scope 1, 2 and 3 combined.



A2. Business, energy and emissions reporting schemes operated by UK government or Devolved Administrations (non-exhaustive list)

UK Government Scheme	Reporting Requirements (simplified)	Participation	Reporting Period
Annual Business Survey (ABS)	Financial data (GVA, turnover, expenditure) Purchases (goods, materials, services) Employment	Mandatory (selected businesses)	Annual
Climate Change Agreements (CCAs)	Emissions reduction target, target year and baseline year Facility throughput (units processed) Energy use at target unit by fuel type (e.g. electricity, gas) Actual production level	Voluntary	2 years
Energy Label	Energy use and product activity (intensity metric dependent on product, e.g. kWh per 1000h use)	Mandatory (energy-using products)	Per product, standards rescaled as required
Energy Savings Opportunity Scheme (ESOS)	Company-level energy consumption and costs Energy efficiency opportunities	Mandatory (large companies)	4 years
Procurement Policy Notice (PPN 06/21)	Carbon Reporting Plan Waste generation	Mandatory (when bidding for government contracts >£5m)	Per project

	Upstream and downstream transportation and distribution Employee commuting, business travel		
Scottish Pollutant Release Inventory (SPRI)	Annual releases of specified pollutants to air and water Waste output	Mandatory (SEPA-regulated industrial facilities)	Annual
Streamlined Energy and Carbon Reporting (SECR)	Company-level annual emissions Scope 1 and 2 required Scope 3 voluntary Company specific emissions intensity ratio	Mandatory (large companies)	Annual
Taskforce on Climate-related Financial Disclosures (TCFD)	Climate related risks and opportunities Company-level Scope 1-3 emissions	Mandatory (large companies, phased 2023-25)	Annual
UK's Carbon Footprint (published by DEFRA)	UK territorial emissions UK consumption emissions by product category (from products imported to the UK)	Data aggregated from other government schemes	Annual
UK Emissions Trading Scheme (UK ETS)	Emissions from installations Monitoring approaches and plan, identified data gaps	Mandatory (Energy Intensive Industries and large installations)	Annual

A3. Emissions reporting, standards and labelling schemes not operated by UK government or Devolved Administrations (non-exhaustive list)

Private Sector / International Scheme	Reporting Requirements (simplified)	Participation	Reporting Period
Building Research Establishment's Environmental Assessment Method (BREEAM)	<p>Project-level life cycle impacts and costs of materials (inc. embodied and operational emissions)</p> <p>Materials and quantities</p> <p>Installed energy and water consuming products</p> <p>Third-party verified impact data, e.g. EPDs compliant with BS EN 15804, ISO 14025)</p>	<p>Voluntary</p> <p>(some local authorities mandate use)</p>	<p>Per project, with follow up</p>
Environmental Product Declarations (EPDs)	<p>Environmental impact assessment with product category rules for a wide range of products</p> <p>Based on lifecycle analysis but reporting frameworks vary</p> <p>Metrics include environmental impacts (not limited to): global warming potential, ozone layer deletion, acidification and eutrophication potential, fuel resource depletion potential</p> <p>Based on internationally recognised standards (e.g., ISO 15804)</p>	<p>Voluntary</p>	<p>5 years</p>

EU Ecolabel	<p>Dependent on product group</p> <p>Life cycle analysis data (ISO 14024)</p> <p>Not always emissions related</p> <p>Some national governments mandate EPDs for businesses making green claims about products</p>	<p>Voluntary</p>	<p>Standards reviewed every 3-5 years</p>
Leadership in Energy and Environmental Design (LEED)	<p>Material lifecycle impacts and costs</p> <p>Materials and quantities</p> <p>Operational efficiency (energy, water)</p> <p>Third-party verified material impact data (e.g. EPDs)</p>	<p>Voluntary</p> <p>(some local authorities mandate use)</p>	<p>Per project</p>
Nordic Swan Ecolabel	<p>Dependent on product group (59 groups included)</p> <p>Assessment against harmful materials and processes</p> <p>Not always emissions related</p>	<p>Voluntary</p>	<p>Standards reviewed every 4 years</p>
PAS 2080 – Carbon Management in Infrastructure	<p>Full lifecycle carbon emissions reporting and management in infrastructure projects</p> <p>Target setting, baselines</p>	<p>Voluntary</p>	<p>Per project</p>

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