Construct Zero Performance Framework Dashboard

Construction Leadership Council

Department for Business, Energy & Industrial Strategy

ConstructZERO

The Construction Industry's Zero carbon change programme

CLC 4th Performance Assessment Q4 2022

Background

The Construction Leadership Council (CLC) is leading the sector's response to the Net Zero challenge, through the Construct Zero change programme. Building on the success of the sector's collaborations during COVID, the CLC has engaged the industry to develop the Performance Framework, which sets out how the sector will commit to, and measure it's progress towards, Net Zero.

Construction Leadership Council

CLC 4th Performance Assessment Q4 2022

What is the Performance Framework?

The Performance Framework has been developed to provide the CLC with a sector level dashboard on our progress towards Net Zero aimed at motivating businesses to action and to help those outside the sector understand our progress. We intend to collate data for the dashboard on a quarterly basis albeit not every metric will be available quarterly. The data itself will be drawn from sources which already aggregate it, known as data point owners.

The Performance Framework is very closely aligned with Government policy and draws on emerging thinking on carbon measurement and assessment, as such it will evolve over time and we will no doubt update and improve the metrics. The current metrics and performance published today is a starting point so we can review, test and refine.

Executive Summary

A year in review

- At COP 26 in November 2021, we launched a performance framework to define and measure the construction industry's progress towards reaching net zero. This was a world first and a clear statement that now is the time for collaborative action and delivery, a sentiment echoed by the Climate Change Committee when it launched its monitoring framework for the whole economy in June of this year.

- Recognising that performance data plays a huge part in driving successful change, the Construction Leadership Council (CLC) was keen to lead the way in measuring whether we're doing enough, fast enough and focussing on the right areas to meet our net-zero ambitions as a sector.

- Since the launch of our performance framework, the reach and influence of the wider Construct Zero programme has grown exponentially over the past year.

- Today, we have over 200 business champions and partners sharing information and measuring progress in a consistent way. We're working together to co-ordinate our initiatives, overcome challenges and seize opportunities. We're pulling together as an industry that understands that Net Zero transition is bigger than any one company or subsector.

Executive Summary

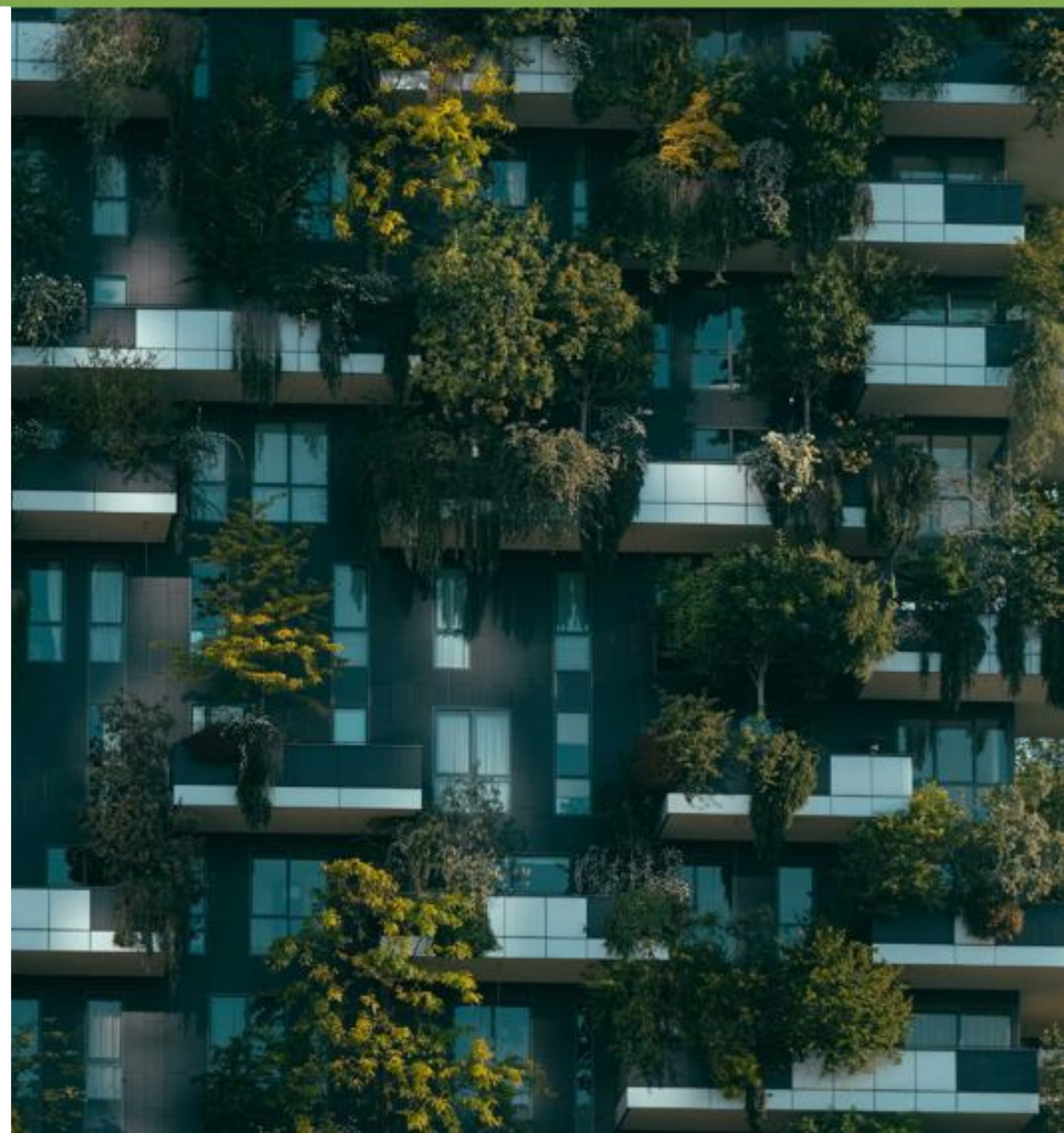
Influence

- The data from the performance framework has also added additional weight to the CLC's influence on government policy. Most recently our submission to the Skidmore review focused on the need to accelerate retrofit in the built environment, bringing both data as evidence to bear on why and how retrofit needed to be enabled through a combination of funding, consumer education and improved government and industry collaboration.

- The impact of this submission could be seen with the recent budget energy efficiency taskforce, which was well aligned with our submission.

- Beyond retrofit we have been active in discussion with Government throughout the current energy crisis: engaging to shape the short-term energy relief offered directly to businesses and for the longer term The CLC champions Sizewell C and is helping to shape Great British Nuclear – the government's proposed nuclear delivery body to deliver the long term, balanced provision of renewable and nuclear power.

- Finally, given the fast pace of net zero policy, we have kept abreast of the changes and announcements on behalf of the industry, partnering with the Green Construction Board to create the Policy Heat Map which sets out - in real time - the current policy and regulatory under each of our 9 priorities. This is useful, not only as live point of reference for businesses and projects across the, but as a helpful barometer for us to identity gaps and further opportunities to collaborate with Government.



Executive Summary

Delivering for Industry

- Turning our attention back to the Performance Framework, its measures and metrics have been a welcome guide for the sector, bringing consistency to how business and projects set targets and share their data.
- That said, there is much more to do on this as we move into 2023, with important standards and initiatives being developed including the PAS 2080 update, RICs Whole Life Carbon Assessment Standard and the Net Zero Carbon Building Standard being published. Essentially these will start to formalise consistency of carbon measurement across the sector in way that clients, funders and businesses can rely on.
- One of the core values of the Construction Leadership Council is our desire to co-ordinate and sign post the good work happening across the sector in order to accelerate progress. We do this through the Construct Zero web page, which covers industry guidance and signposting of initiatives through the lens of the 9 priorities.
- A couple of notable initiatives that have made fantastic progress this year include the Construction Industry Council Carbon Zero Action Plan for professional bodies, which ensures carbon literacy is part of professional training and CPD offered to members reaching over 350,000 professionals, and the launch of the Future Homes hub – developed by the Home Builders Federation in partnership with government - which helps sets standards and prepares industry to tackle net zero and environmental challenges in the delivery of new homes.
- Whilst the role of Construct Zero is not to create new initiatives, there are occasions where a truly cross sector response is needed. One such example is the sector wide plan to transition to Zero Diesel Construction sites, which required collaboration across all parts of the sector and supply chain. This important work led by HS2 and the Civil Engineering Contractors Association will eliminate 78% of diesel plant from construction sites by 2035.

Executive Summary

To Conclude

In such uncertain times as we've had this year perhaps most important in all that we've achieved is in keeping track on our progress through data, targets and metrics. We couldn't have foreseen much of what occurred during 2022 and 2023 perhaps looks similar. In an uncertain world what we can be assured of is the value of the Performance Framework.

Richard Robinson

Deputy Co-Chair of the
Construction Leadership Council

Hannah Vickers

Programme Director of
Construct Zero Programme

One year on from COP 26

TRANSPORT

Priority	Industry delivered	Government delivered	Which achieved
1. Accelerating the shift of the construction workforce to **zero emission vehicles** and **onsite plant**.	**Industry plan for Zero Diesel sites**, indstruy wide plan developed, resources, targets and actions for industry to achieve the 78% of diesel plant to eliminated from construction sites by 2035 target.	Changes to red diesel rebates which incentivise reducing diesel **consumption on site**. Diesel Replacement competition: Phase 1. £40 million funding for projects developing low carbon alternatives to red diesel for construction.	· 30% of our Tier 1 Contractors have trialled one zero diesel site to date. · An increase of 55.7% in electric van registrations compared to 2021 now representing although still only making up 5% of new registrations.
2. Optimize the use of **Modern Methods of Construction** and improved onsite logistics, in doing so reducing waste and transport to sites.	Continued investment in MMC and productivity improvements learning from site restrictions during Covid.	Construction Playbook: captures commercial best practices and specific sector reforms outlining the government's expectations of how contracting authorities and suppliers, including the supply chain, should engage with each other.	• Whilst still lagging economy wide our productivity has tracked 7.5% above the 10 year average since Covid. This trend is ahead of economy wide trend over the same period.
3. Championing **developments** and **infrastructure** investments that both **enable connectivity with low carbon modes** of transport and design to incorporate readiness for zero emission vehicles.	Through the **Future Homes Hub** partnering with Government to develop Future Homes standard which includes readiness for Zero Emission Vehicles in new homes from 2025. Prepared our transport and town planning professionals with carbon literacy training through the Construction Industry Council Action plan.	Through the **Future Homes Hub** partnering with Government to develop Future Homes standard which includes readiness for Zero Emission Vehicles in new homes from 2025. Grant schemes for electric vehicle charging infrastructure. Details of OZEV grant schemes for the installation of electric vehicle charging infrastructure: guidance and application forms.	· Achieved a 33% annual increase in EV charging points installed across the sector compared to 2021. · Both RTPI and CIHT have in place carbon literacy in their professional qualification and CPD training available to their members.

One year on from COP 26

BUILDINGS

Priority	Industry delivered	Government delivered	Which achieved
4. Work with Government to **deliver retrofitting** to improve energy efficiency of the existing housing stock.	Used the National retrofit Strategy to influence Government Policy, providing evidence to make the case for a co-ordinated approach to retrofit, supported by Government in the 2022 Autumn Statement. Built our capability across the retrofit supply chain - established industry 'quality scheme' routes and licensing consistent with PAS2035 through Trustmark.	Heat and buildings strategy. Ambition on how the UK will decarbonise its homes, and its commercial, industrial and public sector buildings, as part of setting a path to net zero by 2050. Announcement in the Autumn Budget of the Energy Efficiency taskforce to co-ordinate and enhance retrofit demand.	· Trained 539 retrofit co-coordinators during 2022. · Launched the scheme for businesses to become accredited.
5. Scale up industry capability to deliver **low carbon heat solutions in buildings**, supporting heat pump deployment, trials of hydrogen heating systems and heat networks.	Invested in the Heat Pump supply chain and capacity building to train and install Heat Pumps through the **MCS certified scheme** – giving consumer confidence.	Boiler Upgrade Scheme: Scheme will be open to domestic and small non-domestic properties in England and Wales to provide grant funding for eligible properties to install air source heat pumps, ground source heat pumps and biomass boilers. It will run from 2022 to 2025.	· 15% of all buildings now connected to low carbon heat networks and heat pumps installed against a target of 50% by 2035. · Delivered 55,000 heat pump installations in 2022 to date and trained over 4100 registered installers.
6. Enhancing the **energy performance** of **new and existing buildings** through higher operational energy efficiency standards and better building energy performance.	Through the **Future Homes Hub** partnering with Government to develop Future Homes standard which includes enhanced operational efficiency regulations for all new homes from 2025.	Social Housing Decarbonisation Fund: Will upgrade a significant amount of social housing stock to an Energy Performance Certificate rating of C	· Increased % of homes sold with EPC of C or above from 38% in 2010 to 56% in 2022 (including all existing housing stock). · Reduced energy consumption from domestic properties from 2008 by 15% in electricity and 20% in gas.

One year on from COP 26

CONSTRUCTION ACTIVITY

Priority	Industry delivered	Government delivered	Which achieved
7. Implementing **carbon measurement**, to support our construction projects in making quantifiable decisions to remove carbon.	Prepared our estimating processionals with carbon literacy training through the Construction Industry Council Action plan. **Updated PAS 2080** to ensure consistency in carbon measurement across infrastructure projects.	Towards a market for low emissions industrial products: call for evidence: Following the commitments made in the Industrial Decarbonisation Strategy, this call for evidence asks for information and views on the design and implementation of policies that can support the growth of a market for low emissions industrial products.	· Accredited 10 companies through PAS 2080 in 2022. · RICS has in place carbon literacy in their professional qualification and CPD training available to their members.
8. Become world leaders in **designing out carbon**, developing the capability of our designers and construction professionals to design in line with circular economy - shifting commercial models to reward measurable carbon reductions.	Prepared our designers estimating processionals with carbon literacy training through the Construction Industry Council Action plan.	Boiler Upgrade Scheme: Scheme will be open to domestic and small non-domestic properties in England and Wales to provide grant funding for eligible properties to install air source heat pumps, ground source heat pumps and biomass boilers. It will run from 2022 to 2025.	· All 13 of the professional bodies involved in design have in place carbon literacy in their professional qualification and CPD training available to their members. (Including RBIA, ICE, IStructE).
9. Support development of innovative **low carbon materials**, as well as advancing low carbon solutions for **manufacturing production processes and distribution**.	Co-ordinated approach to material supply and demand through product availability group in order to manage demand and give confidence to manufacturers in long term pipelines. Published the **Low Carbon Concrete Roadmap** through the GCB & ICE.	Government commits to deploy CCUS in 2 industrial clusters by the mid-2020s, and a further 2 clusters by 2030 with 20 projects shortlisted for next stage of carbon capture, usage and storage (CCUS) cluster process in August 2022.	· As we move into the fourth quarter of 2022, all regions are reporting the best product availability in two years, both in the range and volume of products available and delivery/lead times.

Case Studies

HS2

HS2 announced it's set up their first diesel-free construction site in May 2022 at Canterbury Road in south Kilburn, London, where HS2 is building a vent shaft for an HS2 tunnel. This project aligns with Construct Zero Priority One.

The site has one of the UK's first 160-tonne, emission-free electric crawler cranes. HS2 are using biofuels including hydrogenated vegetable oil to power plant and machinery, utilising their main power grid connection on renewable energy tariff.

This means HS2 is able to reduce its carbon emissions during the construction stage of this project.

HS2, in partnership with Construct Zero and the Civil Engineering Contractors Association, will publish an industry-wide route-map to achieving zero diesel in Spring 2023.

Case Studies

The Pallet Loop

Since becoming a CO2nstructZero Business Champion, the team has been working tirelessly with some of the biggest names in UK construction – encouraging a behaviour shift through the adoption of a transformative pallet reuse scheme that will actively contribute to companies' individual sustainability goals and the UK's broader net zero carbon target. This project aligns with Construct Zero Priorities Eight and Nine.

Every year 18 million pallets are made for UK construction – with around 90% making just one trip through the supply chain, before being skipped or scrapped. This outdated linear practice is unsustainable in every sense.

The Pallet LOOP offers a circular alternative – incentivising pallet returns via a cost effective, easy-to-use, returnable pallet scheme – that's greener, safer and leaner.

Case Studies

Gripple

Gripple has been producing documentation for its catalogue of building services products to support The Chartered Institution of Building Services Engineers (CIBSE)'s TM65 carbon calculation methodology.

Gripple has performed basic and mid-level Life Cycle Analyses (LCA) for its building services products, utilising a set of industry approved assumptions for various stages of the LCA. This supports consultants, researchers, and manufacturers in assessing the embodied carbon of building services equipment where no environmental product declaration is available.

This work aligns with Priorities Seven and Eight. It allows contractors and specifiers to compare and consider the carbon impact of building services materials ahead of project delivery. The products have been engineered to provide a low-carbon alternative to traditional materials, offering a material weight saving of up to 97% when switching from threaded rod and channel to wire rope or track-based suspension systems.

To further progress Priority 7, Gripple is committed to training and upskilling the industry in the use of TM65 methodology and will deliver EPDs for its construction product portfolio throughout 2023 and into 2024.

Performance Framework Data

Construction Leadership Council

Department for Business, Energy & Industrial Strategy

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The Construction Industry's Zero carbon change programme

Priority 1

Transport

Accelerating the shift of the construction workforce to **zero emission vehicles and onsite plant**

Performance framework target

78% of diesel plant to eliminated from construction sites by 2035

TRANSPORT

	Performance framework metric		
1	Annual increase in non-diesel plant in use from plant hire firms		Data: Expected Jan 2023
2	Every construction or client business over 250 staff to trial one zero diesel site by end of 2023	30%	Data: CECA & Build UK
3	Annual increase in electric vans in – new registrations of battery electric vans	55.7% Annual increase	YTD 2021 - 5692 YTD 2022 - 8865 Data: SMMT

Priority 2

Transport

Optimise the use of **Modern Methods of Construction** and improved onsite logistics, in doing so reducing waste and transport to sites

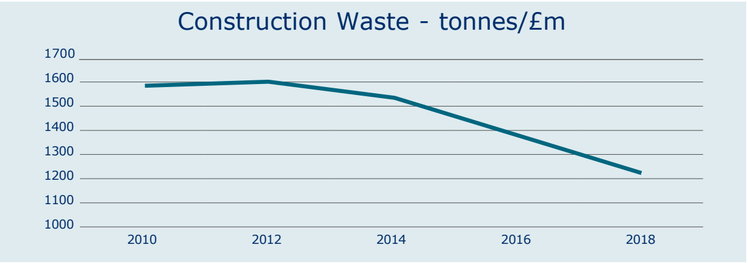
Performance framework target

Close the productivity gap between Construction and economy average output per worker by 2035

TRANSPORT

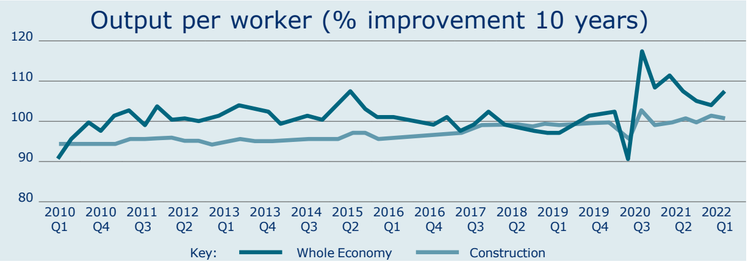
4 **Performance framework metric**

Annual reduction in construction and demolition waste and excavation waste tonnes/£m output



5 **Performance framework metric**

Measure industry onsite productivity output/FTE



6 **Performance framework metric**

Increase % of pre-manufactured value across sector year on year

Priority 3

Transport

Championing **developments** and **infrastructure** investments that both **enable connectivity with low carbon modes** of transport and design to incorporate readiness for zero emission vehicles

Performance framework target

From 2025, planning applications from the sector must connect to public / active transport and include EV charging where parking is provided

	Performance framework metric	
7	Measure % of relevant qualifying bodies to put in place: Entrance requirements include threshold carbon literacy/competence test (100% by January 2025).	**100%** Data: Construction Industry Council
8	Measure % of relevant qualifying bodies to put in place: Continued Professional Development on climate change mitigation for all professional members (100% by 2022).	**100%** Data: Construction Industry Council
9	Measure % of relevant qualifying bodies to put in place: Continued Professional Development on climate change mitigation for all professional members (100% by 2022).	**33%** Data: DfT

Priority 4

Buildings

Work with Government to **deliver retrofitting** to improve energy efficiency of the existing housing stock

Performance framework target

Working with Government deliver retrofitting to 27 million homes by 2040

BUILDINGS

10 — **Performance framework metric**

Deliver retrofitting to 855,000 homes by 2024, 12,300,000 homes by 2030, and 27,300,000 homes by 2040.

Data: Unavailable

11 — **Performance framework metric**

Establish industry 'quality scheme' routes and licensing consistent with PAS2035 and target annual increase in number of businesses registered

Data: Expected Q1 2023

12 — **Performance framework metric**

Number Trustmark Retrofit Coordinators targeting 30,000 by 2028

2022 Target 1000

539

Data: Trustmark

Total 30k

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Priority 5

Buildings

Scale up industry capability to deliver **low carbon heat solutions in buildings**, supporting heat pump deployment, trials of hydrogen heating systems and heat networks

Performance framework target

From 2025 all new buildings will be designed with low carbon heating solutions

BUILDINGS

13 — **Performance framework metric**

Increase in Heat Pump installations per year to exceed Government target of 600,000 per year by 2028

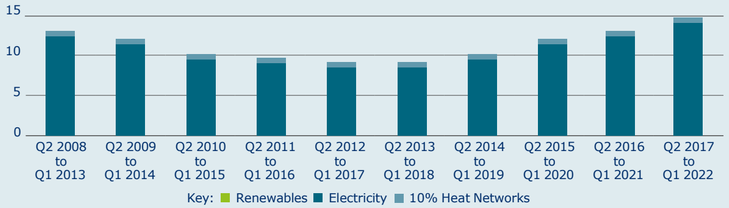
55k Data: BSRIA

Total 600k

14 — **Performance framework metric**

Number of buildings connected to low carbon heat networks and heat pumps installed as % of overall building stock – target 50% by 2035

Target 50% by 2035 - Data: ONS



15 — **Performance framework metric**

Annual increase in trained Heat Pump Installers (MCS Registrations) aiming for 30,000 by 2030

2022 Target 3750

4102 Data: Trustmark

Total 30k

Priority 6

Buildings

Enhancing the **energy performance** of **new and existing buildings** through higher operational energy efficiency standards and better building energy performance

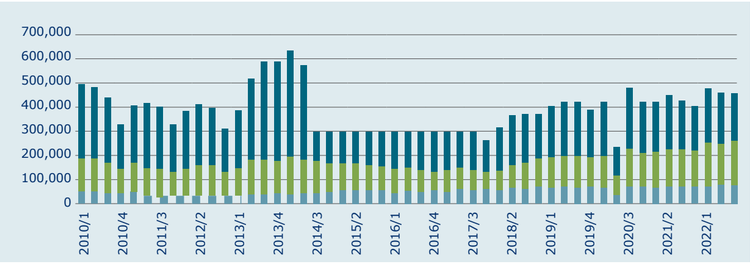
Performance framework target

From 2025 we will deliver new homes and buildings which will minimise energy demand and reduce emissions in operation by 75% (dwellings) and at least 27% (commercial buildings) compared to current standards

16

Performance framework metric

Annual reduction in average energy requirements for new dwellings and existing (EPC based) A to C EPC rated buildings



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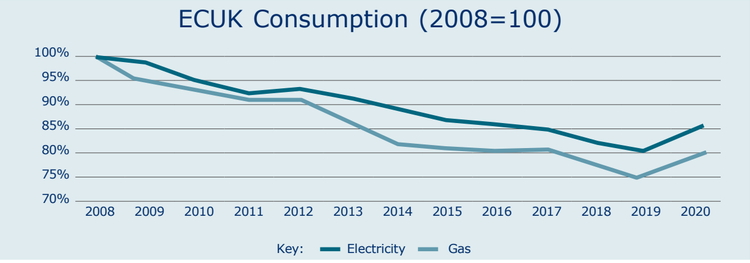
Performance framework metric

Annual reduction in actual domestic energy usage in Buildings (ECUK based)



BUILDINGS

Priority 7

Construction

Implementing **carbon measurement**, to support our construction projects in making quantifiable decisions to remove carbon

Performance framework target

Every client of the sector will be provided carbon data by 2030 to make informed lower carbon choices

CONSTRUCTION ACTIVITY

	Performance framework metric	
18	Measure % of relevant qualifying bodies to put in place: Entrance requirements/membership assessments to include threshold carbon literacy/ competence test by January 2025	**86%** Data: Construction Industry Council
19	Measure % of relevant qualifying bodies to put in place: CPD on climate change mitigation for all members to be available from January 2022 and mandatory from January 2024	**93%** Data: Construction Industry Council
20	40% of product portfolios to have EPDs by 2025 with 100% by 2030, targeting a baseline and annual updates from 2025	Data: Unavailable
21	Every business or client over 250 staff in infrastructure to achieve PAS 2080 accreditation, monitor % coverage, target 100% by 2025	**10** Accredited

Priority 8

Construction

Become world leaders in **designing out carbon**, developing the capability of our designers and construction professionals to design in line with circular economy - shifting commercial models to reward measurable carbon reductions

Performance framework target

From 2022, we will give all our clients the chance to become net zero by offering alternative low carbon design options and advice to clients, even if not scoped

CONSTRUCTION ACTIVITY

22 — **Performance framework metric**

All businesses or clients over 250 staff to identify, specify and trial a relevant low carbon alternative product on a project by the end of 2023.

Data: Expected Jan 2023

23 — **Performance framework metric**

Measurement of total MtCO2 emitted based on client Net Zero advice and designs accepted

Data: Expected Jan 2023

24 — **Performance framework metric**

Measure % of relevant qualifying bodies to put in place: Entrance requirements include threshold carbon literacy/competence test (100% by January 2025).

100%
Data: Construction Industry Council

25 — **Performance framework metric**

Measure % of relevant qualifying bodies to put in place: Continued Professional Development on climate change mitigation for all members (100% by 2022)

100%
Data: Construction Industry Council

Priority 9

Construction

Support development of innovative **low carbon** materials, as well as advancing low carbon solutions for **manufacturing production processes and distribution**

Performance framework target

By 2035 we will have reduced construction product emissions down by 66% from 2018

CONSTRUCTION ACTIVITY

	Performance framework metric	
26	Work with Government to have CCUS operational on 2 clusters by 2028	**0 of 2** Data: BEIS
27	Establish 2018 baseline and target annual reduction in energy used in production kWh/Tonne for key product lines	Data: Unavailable
28	Establish 2018 baseline and target annual reduction in embodied carbon CO2/Tonne for key product lines	Data: Unavailable

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