

Climate Change Plan call for views: summary of responses for the Industry sector

The Net Zero, Energy and Transport Committee ran a proactive [Call for Views on the forthcoming Draft Climate Change Plan \(CCP\)](#) from 27 June to 19 September 2025. This SPICe briefing highlights key industry sector issues raised by respondents. It is not intended to be a comprehensive summary, but a brief overview of key issues raised. Full responses are published on the Scottish Parliament website: [Published responses for Draft Climate Change Plan Scrutiny 2025 - Scottish Parliament - Citizen Space](#).

A table of acronyms used to refer to the organisations that submitted responses is included at the end of the document.¹

What are the most important policies needed to achieve the proposed carbon budgets?

The key areas of policy outlined across responses were to promote carbon capture, utilisation and storage (CCUS), electrification of industrial processes, improved energy efficiency and policy to encourage switching to low carbon or reusable resources.

The University of the West of England highlighted the electrification of industrial processes, expanding on site renewable generation in industry, promoting CCUS, transitioning to low carbon materials, and increasing energy efficiency.

The Centre for Energy Policy also noted the role that carbon capture, utilisation and storage (CCUS) will need to play, highlighting the potential economic benefits which could contribute 3,000 jobs and £300m by the 2040s if 'fully' established. The submission notes that the Scottish Government modelling suggests that CCUS will process 2.2 MtCO₂ by 2030, but there is a commitment to reach 5.7 MtCO₂ per year by 2032:

“Finally, Scotland’s comparative advantage lies in its vast CO₂ storage capacity, holding 75% of the UK and 18% of Europe’s potential. Developing this into an export market could raise annual GDP benefits to nearly £490 million and support close to 5,000 jobs by 2042”

The response highlights the role that carbon pricing can play in encouraging the adoption of lower carbon processes.

SEPA also highlighted the importance of support for CCUS, calling for the CCP to establish the infrastructure and signal its support for this, while noting that their

¹ Note: The table includes all organisations that submitted a response to the Call for Views. However, not all organisations responded to every section, and not all acronyms appear in each briefing.

hierarchy approach would suggest a focus on reducing and optimising in the first instance.

NECCUS suggest that CCUS will be vital to decarbonise industrial processes where there isn't a viable low carbon alternative, and highlight several devolved areas where the Scottish Government can support the development of CCUS. Planning and consenting processes need to be resourced to be able to respond quickly to developments, and the skills pipeline must be strong to enable Scottish firms and employees to take advantage of the opportunities through the transition. This can be supported through guaranteeing college and apprenticeship funding. The Scottish Government can also support biogenic CO2 managements to support the move away from fossils fuels in chemical and fuel production.

South Lanarkshire Council suggest a focus on fuel switching, CCUS, energy and resource efficiency, and supporting the development of markets for low carbon products.

The Highland Council also suggest supporting efficiency and electrification, the development of green hydrogen, support and transport for CCUS, incentivisation for the circular economy and material switching.

On the priorities for their region, Highland Council state that:

“Highland ports and estates such as Invergordon, Nigg, Ardersier and Kishorn are ideal for collocated clusters that combine hydrogen, storage, and manufacturing. Policy must ensure these hubs are adaptation-ready, with protection against flooding, storms, and supply chain disruption.”

Stirling Council call for infrastructure investment plans to give equal weight to ‘blue and green investments’, and ‘traditional grey investments’, while Perth and Kinross Council suggest that there needs to be greater incentives for producers and manufacturers to design products that can be repaired.

The Royal College of Physicians highlight that industry is responsible for around 20% of Scotland's emissions. They call for policy to limit air pollution, and for the strengthening of SEPA to better enforce regulations. Large emitters should be required to produce a clear road map to transition to low carbon fuels, including binding emissions milestones. Public funding should be prioritised for companies with clear net zero plans. Public Health Scotland note the importance of following the Climate Change Committee (CCC) expert advice.

ClimateXChange [highlight two of its reports](#) on the potential for Scotland to utilise hydrogen, noting that Scotland has advantages in its access to significant renewable sources of electricity, a skilled workforce, and close proximity to a major market in the EU.

The UK Energy Research Centre note that existing policy has to an extent focused on the Grangemouth area. While the submission suggests that this is ‘understandable’, it notes that there are several dispersed industrial sites which sit outside of this cluster – and the Green Industrial Strategy makes no reference to how these dispersed sites will be supported. The submission calls for the Scottish

Government to clarify this in the Climate Change Plan (CCP). The submission highlights Project Willow, which gives a clear view of the possible future for the Grangemouth cluster, and suggests that similar strategies at a smaller scale should be produced for other areas around the country

An individual highlighted the importance of reducing clean energy costs to support the transition. East Dunbartonshire Council also highlight that this will require increased clean electricity generation, and grid capacity.

Stop Climate Chaos Scotland note that the key policies in the indicative statement are participation in the UK ETS, and the Scottish Industrial Energy Transformation Fund, but that more detail is required in the CCP as to how these will deliver decarbonisation

Seafood Scotland call for the electrification of ports, highlighting that this can significantly reduce vessels emissions.

Food and Drink Federation Scotland highlight the decarbonisation of heat as being important to their sector, and note that the current high cost of electricity is a major disincentive for investment.

2050 Climate Group highlight young people's concerns about ensuring a just transition for industry, noting the importance of funded retraining. Just transition plans should be properly integrated with their local communities; this could be place-based plans, or with a degree of regionally tailored planning.

Anderson Bell and Christie Architects call for strengthened regulation around embodied carbon and for re-using materials.

One individual response highlighted tax and financial incentives for district heating, and support for the manufacturing sector as key priorities, whereas some individual responses stated their opposition to any net zero policy.

When should these policies be introduced, and over what timeframe should they be implemented?

Some responses suggested that policy needs to be introduced as soon as possible, to give industry and stakeholders certainty and to account for the time taken to make major infrastructure investments. Other responses noted that it is important to sequence policy to avoid bottlenecks, with policy that reduces the cost of renewable electricity an important priority.

The University of the West England call for a phased approach to implementation to allow time for industry to adapt, and reduce potential disruptions. Priorities should include establishing carbon pricing at a relatively low level, with rates increasing over time; energy efficiency regulations for industrial facilities with short term emission reduction targets; public sector support for research and development in hydrogen; CCUS and other electrification technologies. The Scottish Government should also support pilot projects for low carbon materials in key industries such as steel and cement.

An individual called for policy to prioritise supporting the transition to clean electricity, remove additional taxation on oil and gas companies to support maintaining revenues and sustain jobs.

Seafood Scotland call for the expansion of shore power infrastructure to be prioritised between 2026-2030 as well as piloting low carbon fishing gear, for the use of renewable electricity to be scaled up in processing between 2031-2035, and focus on expanding circular economy practices.

The Centre for Energy Policy call for the prioritisation of CCUS and other negative emission technologies (NETs). Supporting the finalisation of the business models for the Scottish Cluster should be done by 2027 and should be accompanied by workforce planning to identify skills shortages. Resource sequencing frameworks should be used to prevent resource competition across clusters. By 2030, the Acorn transport and storage system should be operational, connected to major emitters at Grangemouth and Mossmorran, and capturing between 5 and 10 MtCO₂ annually. During the 2030s, there should be a move from demonstration to full deployment, leading to 2040 when Scotland should have three quarters of the UK CO₂ storage capacity, and 18% of European. This should have contributed to an 80% reduction to net emissions from the industrial sector.

Anderson Bell and Christie Architects state that a policy framework for embodied carbon is required in 2025, with milestones in 2030, 2040 and 2045.

South Lanarkshire Council call for a phased approach to implementation starting with carbon pricing and infrastructure planning now, with the large-scale deployment of carbon capture, hydrogen and electrification in the medium term.

Public Health Scotland state that the CCC have set out the required policy and timeframes, and what is required from the Scottish Government is to clearly set out how this will be coordinated at national and local level.

The Highland Council call for an industrial decarbonisation route map by 2026, which is aligned to carbon budgets. There should also be policy and funding to support hydrogen and CCUS feasibility work, and to complete the climate resilience assessments for all major sites.

Food and Drink Federation Scotland call for a focus on reducing the cost of renewable electricity, coupled with targeted energy efficiency and heat decarbonisation grants. There also needs to be increased advisory and capital support for SMEs, and support for businesses more broadly to pilot electrification. The Royal College of Physicians highlight that infrastructure lifecycles are long term – which means immediate action is required to prevent further carbon lock in. Policy certainty is also required to enable investment and workforce planning. The Scottish Government should require all large industrial emitters to publish net zero transition plans, and there should be independent monitoring of progress against these plans.

The SG should also start phasing out subsidies or grants for large industrial polluters without credible net zero plans.

Some responses called for policy to be implemented as soon as possible.

What are the expected costs of implementing these policies?

Respondents note that the costs will vary significantly, depending on the site and technology which is transitioning. Responses also highlighted the potential economic and environmental benefits from making these investments.

The University of the West England note that the costs of implementing policies will vary significantly depending on the scale of the investment, and the technologies chosen. Their submission provides illustrative capital costs for a range of investments. The submission suggests that £100 million to £500 million will be required for research and development on green hydrogen production, with further investment potentially required to scale. Demonstration projects for electric steelmaking and other emission free industrial technologies may require £50 million to £200 million.

Seafood Scotland state that shore power infrastructure will cost between £0.5 million and £2 million per port, while fleet modernisation will cost between £0.1 million and £0.3 million per vessel. Processing upgrades will range between £0.25 million and £0.5 million per facility

The Centre for Energy Policy note that the costs of industrial decarbonisation are likely to be significant, but that there are also large economic opportunities:

“Industrial decarbonisation and negative emissions technologies involve some of the largest single-project costs in the transition, but also some of the highest potential returns. The Acorn CCUS project alone is expected to generate £17.7 billion in UK-wide economic output, with £9 billion accruing to Scotland.”

Food and Drink Scotland note that the costs of decarbonisation vary significantly; their response suggests that a bakery could face costs of between £10 million and £35 million depending on the size of the site. In addition to the capital costs, Food and Drink Scotland note that some low carbon alternatives have higher operating costs.

The Highland Council note that it will be important to develop mechanisms to draw in private finance to support the costs of industrial decarbonisation. They suggest the use of contracts for difference for hydrogen and CCUS projects, anchor offtake agreements from the public sector for heat, low carbon materials and hydrogen, and the use of green bonds and public guarantees.

The Royal College of Physicians cite CCC estimates that industrial decarbonisation will require £15 to £20 billion annually in the UK by 2030, with Scotland's share of this cost likely to be in the range of £1.5 billion to £2.5 billion. However, the response notes that there are costs of not taking action:

“delaying action will impose far greater costs in terms of public health, economic competitiveness, and climate damages.”

Public Health Scotland also cite the CCC modelling.

East Dunbartonshire Council note that demand restriction measures can deliver savings as well as other benefits.

Those who call for net zero policy to be abandoned suggest this would not entail costs and would in fact reduce costs for industry and consumers.

What are the expected benefits of these policies?

Responses highlighted that economic, social, environmental and public health improvements could be delivered through policy supporting industrial decarbonisation, but that it would be important to design policy carefully to ensure these benefits are realised.

The University of the West of England suggest that achieving decarbonisation of industry will have environmental, economic, health and social benefits. Industries can expect energy savings of between 5% and 30% annually depending on the scale of the energy efficiencies achieved. A greener industrial base will be more resilient to future economic shocks, such as changes to the gas price or other fossil fuel costs.

East Dunbartonshire Council highlight research from the CCC which states that:

"Net Zero will increase economic security against fossil fuel price shocks, which have caused around half of the UK's recessions since 1970. There are also opportunities for new jobs in areas such as heat pump installation, and growing markets such as green finance. Clean, efficient, electric technologies will mean reduced air pollution and should mean lower energy bills than continued reliance on fossil fuel technologies."

NECCUS suggest that deploying CCUS across Scottish industry could reduce the costs of reaching net zero. South Lanarkshire Council suggest that the policies will reduce greenhouse gas emissions, but will also drive innovation, improve energy efficiencies and result in lower operating costs over time.

Aberdeen City Council suggest there will be environmental and economic benefits, but also suggest that the transition is an opportunity to improve equity in business

opportunities to share the benefits with a broad range of communities and stakeholders.

Public Health Scotland note that positive health outcomes cannot be assumed from policy, but will require well designed policy which considers differential impacts. However, there are opportunities to improve public health through reducing the frequency of extreme weather events associated with global warming, and improving air quality.

Seafood Scotland note that this could lead to job creation in coastal communities, as well as improving the environment and health outcomes around port areas.

The Centre for Energy Policy highlight the economic opportunities that the transition could offer, stating that:

“Decarbonising industry and deploying CCUS and NETs present Scotland with a unique opportunity to combine deep emissions cuts with economic renewal. Research shows CCUS deployment could support 15,000–20,000 jobs in peak years and raise Scottish GDP by 1.3–2.3% (£3.8–£6.7 billion) by 2045. Once operational, transport and storage systems are expected to sustain nearly £900 million in additional GVA annually across the UK economy. With 46 GtCO₂ of storage capacity in the North Sea, Scotland is well placed to become a European hub for CO₂ import, storage, and associated technology and service exports.”

What do you think the key challenges would be in delivering these policies?

Responses highlighted access to finance and policy uncertainty as two major challenges to achieving industrial decarbonisation. This is expected to be a particular challenge for SMEs who find it more difficult to access finance.

Seafood Scotland highlight the capital constraints faced by SMEs, competition for space between fisheries and offshore wind developments, as well as data gaps related to blue carbon accounting and emissions.

South Lanarkshire Council also highlight the high costs and the barriers to securing investment, especially for SMEs, with policy uncertainty being one of the barriers. The submission also highlights the lack of infrastructure outside of major industrial clusters which can be a barrier – such as a lack of pipeline for hydrogen transportation, access to affordable low carbon grids, or carbon storage facilities.

The Highland Council highlight similar issues, but also note that it is important to ensure that infrastructure is sequenced in a sensible way to reduce bottlenecks, highlight operational risks around significant retrofit projects while the sites aim to maintain production, and notes that electricity remains more expensive than fossil fuel alternatives.

The Scottish Wholesale Association also note the particular challenges faced by SMEs in their sector, stating:

“The wholesale sector faces distinct challenges in the transition to net zero due to its crucial role in Scotland’s food system and involvement across multiple high-impact areas - transport, building and heat emissions, refrigeration, and the circular economy. With over 90% of Scottish wholesale businesses operating as SMEs and average net margins of just ~1.3%, the sector has limited capacity to absorb the costs of change. The breadth of action, combined with constrained financial resilience, means that without targeted and sector-specific support, there is a real risk of deepening disparities between early adopters and those willing but unable to act.”

The University of the West of England highlight that key challenges include the initial high capital costs of the required investments, uncertainty around the return on investment particularly from emerging technologies, but also the long payback periods, which may act as a disincentive. The submission also notes that there is uncertainty around whether emerging technological solutions will prove to be scalable.

East Dunbartonshire Council note that as industry increasingly shifts to electrification, this will increase pressure on the grid. Capacity must be increased at sufficient scale to not act as a bottleneck.

Food and Drink Scotland highlight the relatively high cost of electricity, noting it is between three and six times as expensive as gas currently. NECCUS note it will be important for the Scottish and UK Government’s to work closely to ensure that sufficient funding is available to industry, both capital and operational, to ensure that industry does not relocate in the face of cheaper, higher carbon imports.

The Royal College of Physicians note that some methods of decarbonisation may have a negative impact on air quality.

Public Health Scotland highlight the high capital costs, and also note that many of the policy levers are reserved.

The Centre for Energy Policy suggest that the key challenges relates to labour shortages and skills gaps. They cite research which suggests that up to 4,000 jobs could be displaced due to wage competition, if labour supply is not sufficient. This challenge is exacerbated by uncertainty around policy and technological solutions.

IPPR highlight the need for the CCP to provide sufficient detail, stating:

“The government must have far more explicit descriptions of what it expects to change and over what time period. In the CCC’s balanced scenario, the deployment of clean heat ramps up every year from 2025 to reach a pace of about £1.5 billion per year in additional capital expenditure by 2034 (7). If the

plan is to have any hope that supply chains are going to grow at the pace needed to furnish this demand, industry will need to have a very clear understanding of whether that demand will materialise”

Aberdeen City Council note that for their area the key concern is around achieving a managed just transition from oil and gas, alongside access to finance for SMEs.

Anderson Bell and Christie Architects suggest that the key barrier is a lack of policy, providing both incentives and penalties to industry in order to drive progress. SEPA note a concern that a shift to electric heat in industrial processes may undermine the planned utilisation of heat networks in Scotland

How could these policies support a Just Transition for workers and communities?

Responses highlighted the importance of training and reskilling opportunities for school learners and the existing workforce, particularly for those working or living in areas reliant on fossil fuels currently. The timing of new opportunities in the green economy is also cited as important, with some responses calling for a prioritisation of policy which will support earlier green job creation.

The University of the West of England highlight the importance of retraining opportunities for workers in carbon intensive industries, suggesting that these could take the form of vouchers of subsidised education which should be focused on the skills needed in emerging green industries. Also important is the timing of new opportunities becoming available in green industries – policy is required to promote job creation to ensure roles are available when workers will need to transition to them, as activity in carbon intensive industries declines.

In addition to supporting workers, the submission highlights that communities which depend on carbon intensive industries may require support to boost resilience. Anderson Bell and Christie Architects echo this point, noting that a circular economy will prioritise local and regional supply chains.

The Centre for Energy Policy suggest that the just transition is “one of Scotland’s greatest opportunities for a fair shift to net zero, but also one of the biggest risks if managed poorly”. As oil and gas declines, it is important to ensure that the existing skills base is retained, retrained and available to support the development of CCUS and other negative emission technologies. The submission notes that it is also important to retain the existing infrastructure which can be repurposed, particularly by CCUS. Research suggests that CCUS presents a particularly ‘strong transition pathway’ for offshore workers.

Colleges Scotland suggest that both school learners and the existing workforce need to have better information on the opportunities available through the transition, and the opportunities that colleges can offer to upskill or reskill to take advantage of them. The submission also highlights that industry demand for modern

apprenticeships outstrips supply, with employers requesting 34,000 starts in 2024/25 but funding provided for only 25,500.

Aberdeen City Council note that regional skills planning for the North East is essential to support the oil and gas workforce.

East Dunbartonshire Council note the analysis from the Climate Change Committee which suggests that the number of green jobs created by 2030 in the UK could be between 135,000 and 725,000, which highlights the importance of upskilling and retraining opportunities for those presently working in carbon intensive industries or roles.

South Lanarkshire Council note the importance of sufficient retraining opportunities for workers in carbon intensive industries, but also that sufficient support is provided for SMEs to adopt clean technologies. Local communities should be engaged in planning for industrial changes. Public Health Scotland also make this point, suggesting that there should be place based transition plans.

The Highland Council call for public contracts to be clustered in a way which makes them accessible for local SMEs to participate, strengthening the supply chain.

Food and Drink Scotland also call for targeted support for SMEs, and also for rural businesses and vulnerable groups to ensure equitable access to the opportunities from the transition. Fair work principles should be embedded in all public funding and procurement.

Seafood Scotland highlight the importance of training opportunities, and note that it is essential to ensure that rural and island communities also benefit from these investments.

ClimateXChange note that while there is 'strong' STEM training provision in Scotland, there is a risk that workforce planning is delivered through a siloed approach, which does not reflect the reality that several industries draw from the same talent pool. The response notes that stakeholders in the solar and onshore wind sectors have noted poor visibility of careers and low job attractiveness as holding back development of those sectors.

The Royal College of Physicians note that the just transition should not only be about ensuring communities have access to the economic opportunities, but also ensuring an improved environment including air quality for those communities affected by pollution. New jobs created through the transition should be high quality, safe and unionised, while decarbonisation projects should include community benefit clauses to ensure local hiring, support for SMEs and that a place-based approach is taken.

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Table of acronyms used to refer to organisations

| Acronym | Full form of respondent |
|-----------------|-----------------------------------------------------|
| C2050 | 2050 Climate Group |
| ABCA | Anderson Bell & Christie Architects |
| ACC | Aberdeen City Council |
| AGS | Auditor General for Scotland |
| ALLIANCE | Health and Social Care Alliance Scotland |
| BE-ST | Built Environment Smarter Transformation |
| BEFS | Built Environment Forum Scotland |
| BHHPA | British Holiday & Home Parks Association |
| CCAN | Cardross Climate Action Network |
| No acronym used | Climate Cafe Shetland |
| CEP | Centre for Energy Policy, University of Strathclyde |
| CERG | Climate Emergency Response Group |
| CIAT | Chartered Institute of Architectural Technologists |
| CITB | Construction Industry Training Board |
| No acronym used | Colleges Scotland |
| CreScot | Creative Scotland |
| CS | Consumer Scotland |
| No acronym used | Culture for Climate Scotland |
| CXC | ClimateXChange |
| No acronym used | Cycling UK |
| No acronym used | Edinburgh Communities Climate Action Network |
| EDC | East Dunbartonshire Council |
| EHA | Existing Homes Alliance |
| EMEC | European Marine Energy Centre |
| EST | Energy Saving Trust |
| FDFS | Food and Drink Federation Scotland |
| FES | Future Economy Scotland |
| FOES | Friends of the Earth Scotland |
| GCC | Glasgow City Council |
| GGM | Get Glasgow Moving |
| HC | Highland Council |
| HES | Historic Environment Scotland |
| HfS | Homes for Scotland |
| IKEA | IKEA Ltd |
| IPPR Scotland | Institute for Public Policy Research Scotland |
| No acronym used | Liquid Gas UK |

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|-----------------|-------------------------------------------------------------------------------------|
| No acronym used | Logistics UK |
| RESPECT project | LUNZ Hub RESPECT Project |
| MCS | The MCS Foundation |
| NECCUS | North East Carbon Capture Utilisation and Storage |
| NESTRANS | Nestrans (Regional Transport Partnership for Aberdeen City & Aberdeenshire) |
| NHS Lothian | National Health Scotland Lothian |
| NFUS | National Farmers Union Scotland |
| NS | NatureScot |
| No acronym used | Nourish Scotland |
| No acronym used | Orkney Islands Council |
| No acronym used | Paths for All |
| No acronym used | Peat-free Partnership Scotland Advocacy Group |
| PHS | Public Health Scotland |
| No acronym used | Perth and Kinross Council |
| No acronym used | Propertymark |
| PS | Police Scotland |
| QS | Quakers in Scotland |
| QMS | Quality Meat Scotland |
| RCPE | Royal College of Physicians Edinburgh: Air Pollution Working Group and Climate Café |
| RICS | Royal Institution of Chartered Surveyors |
| RMT | National Union of Rail, Maritime and Transport Workers |
| RSPB Scotland | Royal Society for the Protection of Birds Scotland |
| SAP | Scottish Agroecology Partnership |
| SC | Scottish Care |
| SCCS | Stop Climate Chaos Scotland |
| SE | Scotland Excel |
| SCIS | Scottish Climate Intelligence Service |
| SEDA | Scottish Ecological Design Association |
| SEPA | Scottish Environment Protection Agency |
| SEStran | South East Scotland Transport Partnership |
| SF | Stockfree Farming |
| SLC | South Lanarkshire Council |
| SPT | Strathclyde Partnership for Transport |
| SRAEHL | Scottish Research Alliance for Energy, Homes and Livelihoods |
| No acronym used | Seafood Scotland |
| SSN | Sustainable Scotland Network |

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|-----------------|----------------------------------------------------|
| StC | Stirling Council |
| SuSc | Sustrans Scotland |
| SWA | Scottish Wholesale Association |
| TACTRAN | Tayside and Central Scotland Transport Partnership |
| No acronym used | Transform Scotland |
| UKERC | UK Energy Research Centre |
| UoGSoL | University of Glasgow, School of Law |
| UWE Bristol | University of the West of England Bristol |
| WWF Scotland | World Wide Fund for Nature Scotland |