



Assessment of the Clean Power 2030 Action Plan against investor principles for sector decarbonisation roadmaps

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Executive summary

Sectoral decarbonisation roadmaps, underpinned by coherent policy and financial frameworks, play a critical role in national transition planning. By translating high-level climate commitments into sector-specific pathways, they help operationalise economy-wide targets and strengthen countries' ability to attract the long-term investment required to meet ambitious climate goals. For investors, they offer strategic policy signals and can affect investors' future capital deployment.

However, current roadmaps vary significantly in the content and detail of what they contain, impeding their usefulness for investors. To address that, earlier this year, IIGCC published *Principles for developing sector decarbonisation roadmaps – the investor perspective for policymakers*, setting out investor-led principles to guide policymakers in developing sector decarbonisation roadmaps.

Since then, there has been increasing interest in roadmap development in the UK. Both the Transition Finance Council and the Net Zero Council have this year launched workstreams to support the development and delivery of sectoral roadmaps. This is driven by the aim to accelerate the flow of capital to support the UK's decarbonisation efforts, particularly for high-emitting and hard-to-abate sectors.

This paper applies investor principles to assess an existing UK roadmap and illustrate their practical value. Specifically, we examine the government's Clean Power 2030 Action Plan (CPAP), published in December 2024, against the criteria set out in IIGCC's principles paper published earlier this year. Our review identifies both strengths and gaps in the CPAP.

Evaluating a government-owned roadmap for the power sector highlights its key strengths and reveals gaps that must be addressed to provide investors with certainty on decision-making. The focus on the power sector reflects its key role in enabling the transition of the wider economy. It is also aligned with our earlier recommendation to prioritise sectors of highest impact and economic significance for roadmap development.

The CPAP is the most comprehensive example of a sector decarbonisation pathway examined by IIGCC to date. It meets the criteria set out in the IIGCC paper by being credible and underpinned by a strong policy component backed by government action. It also provides clarity on overall investment needs but lacks sufficient granularity and detail on the financing component. There is also a need for more work to link the Clean Power 2030 mission and the expected rise of electrification after 2030. Greater interconnectedness should be promoted between the CPAP and other documents, such as the UK's Nationally Determined Contribution (NDC). This would help clarify real economy dependencies and the unlock the necessary policy support to support the transition.

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Introduction

General

While national, economy-wide climate targets remain essential for setting long-term ambition, governments are increasingly recognising the need to support these targets with credible sectoral pathways. These pathways enhance the credibility of national commitments and attract private investment in specific sectors, particularly high-impact and high-emitting sectors.

IIGCC defines sector decarbonisation roadmaps as long-term strategic plans developed by policymakers to support the decarbonisation of material sectors in a jurisdiction's economy. Their importance on the path to net zero lies in setting out an action plan for how each sector will assist the country's decarbonisation efforts.

They are particularly valuable for investors and policymakers providing both with an improved understanding of the trajectory and pace of emissions reductions for economic sectors material to a country's decarbonisation, and clarity on the sequencing considerations and trade-offs that will need to be navigated as part of this transition. They also effectively function as a bridge between economy-wide emissions reduction targets and the growing number of entity-level transition plans being developed by corporates and financial institutions.

The development of these roadmaps is increasingly viewed as a priority in the UK policy landscape. Similar activity is seen in jurisdictions such as France, Japan and Australia, where governments are seeking to accelerate progress towards net zero and outline concrete actions to achieve long-term decarbonisation goals. For example, the Australian Climate Change Authority produced sectoral plans to support the country's Net Zero Plan, providing detailed, sector-specific roadmaps for six material sectors in their economy.

UK state of play on sector roadmaps

Numerous UK documents have been published which contain the characteristics of sectoral roadmaps, although none of them have been presented as such. They have been published with various names, differences in the level and detail of information disclosed, and produced by different bodies e.g. government, industry, and advisory bodies e.g. the Climate Change Committee (CCC).

In December 2024, the government published the UK Clean Power 2030 Action Plan which sets out the plan to decarbonise the power sector by 2030. Further, the government had previously published technology-specific roadmaps such as the UK Offshore Wind Net Zero Investment Roadmap, UK Heat Pump Investment Roadmap, UK CCUS Net Zero Investment Roadmap, and the UK Hydrogen Net Zero Investment Roadmap. These pathways need to be aggregated as part of a wider sectoral plan. Stakeholders have noted that these technology-specific roadmaps were insufficient in detail and scope to effectively inform decision-making.

Other examples of similar documents include the Food and Drinks Federation Roadmap to Net Zero, co-produced by industry and WRAP, an NGO; the Climate Change Committee's transition pathways set out in the Seventh Carbon Budget (which are not official government policy), and the Transition Pathway Initiative (TPI)'s sector decarbonisation pathways.

Although these provide valuable insights, a key challenge remains the absence of a common template outlining core elements that such roadmaps should include. Broader consistency and comparability would help provide sufficient clarity and confidence to private investors. Compounding this challenge is the disparate ownership of roadmaps which makes delivery more difficult. Co-creation between policymakers and industry can facilitate the delivery process.

Addressing the lack of a consistent template was the main challenge the IIGCC paper published earlier this year sought to address, by setting out principles that should inform the design of roadmaps to ensure they are decision-useful for investors. Specifically, we proposed that policymakers should produce sectoral roadmaps that meet the following criteria:



1 Are developed or co-owned by policymakers.



2 Are credible and decision-useful for investors by being action-orientated and directly supporting economy-wide decarbonisation targets.



3 Provide clarity on how current and anticipated government policies will interact to support sectoral decarbonisation.



4 Are accompanied by financing mechanisms that articulate total investment needs alongside measures to de-risk and crowd-in private capital.

There had been previous attempts to establish some guidelines for roadmaps, including by the first Net Zero Council, launched in 2022. However, the guidelines for business roadmaps were viewed as too high-level.

Sectoral roadmaps are now a key focus for the reconstituted Net Zero Council and the Transition Finance Council (TFC). Earlier in September, the TFC published a paper titled *Sector Transition Plans: The Finance Playbook*, setting out guidance on integrating finance plans within sector transition plans and technology scale-up roadmaps. Both Councils will be producing dedicated roadmaps for specific sectors. This IIGCC paper intends to support and inform their work in addition to the broader debate around sectoral roadmaps in both the UK and internationally.

Rationale for this paper

This paper applies investor principles in a UK context to identify strengths and gaps of an existing roadmap. The evaluation process helps highlight elements that should be preserved in future roadmaps, while also identifying gaps to avoid repeating them. These insights can subsequently inform government policy in this space. We focus on the CPAP, published in December 2024, as it is a comprehensive government document for a critical sector and a key step towards Britain's goal of becoming a "clean energy superpower."

Overview of Clean Power 2030 Action Plan (CPAP)

The Clean Power 2030 Action Plan (CPAP) offers a comprehensive blueprint for the transition to a clean power sector by 2030. It defines the 2030 target for the first time, explaining the target means that Great Britain will produce enough clean power to meet its annual electricity demand, “backed up by unabated gas supply to be used only when essential.”

The government’s priorities for accelerating existing projects are the following five strategic areas:

1. Expanding renewable energy deployment, particularly offshore wind.
2. Streamlining planning and permitting for energy infrastructure projects, to accelerate deployment.
3. Significantly investing in the electricity grid to support the increased capacity of renewable energy sources.
4. Reforming the electricity market, including through the Review of Electricity Market Arrangements (REMA), to incentivise investment.
5. Scaling up CCUS, hydrogen and long-duration storage to provide grid flexibility to the grid.

The CPAP clearly states the government’s ambition to secure investment and growth, in addition to improving energy security and affordability. However, the government clarifies that the focus is on the 2030 mission and there is no attempt to link the power transition to sectoral pathways in other sectors that will rely on electrification for their own decarbonisation.

The CPAP sits alongside a number of other publications that contribute to the UK’s decarbonisation mission such as the [Industrial Strategy](#) which was under consultation at the time and presents an action plan to shore up UK competitiveness, and the [10-year Infrastructure Strategy](#) that sets out how to improve planning and delivery across all types of infrastructure.

Key takeaways

The CPAP is a government-owned document that places strong emphasis on government-led action including in the implementation phase. Notably, it was developed with industry feedback which lends it strong credibility. It is detailed, action-oriented and evidence-based. These attributes mean the CPAP performs strongly against the first two criteria: ownership, and credibility and decision-usefulness for investors.

The document also provides clarity around current and anticipated government policies, reassuring investors that there is a plan of action to mitigate policy risk. The policy processes are clearly spelled out, and upcoming reforms aiming to accelerate project delivery – including streamlined planning and permitting processes, reforms to electricity market arrangements and a restructured grid connection system – are clearly flagged and signposted. These should be replicated in roadmaps for other sectors, as they provide critical information to investors on how the 2030 target will be supported by policy initiatives.

While the CPAP performs strongly against the first three criteria, there are some gaps in how financing and investment is addressed. The document articulates total investment needs and provides information on potential measures that could be – and already are – effectively used to de-risk and crowd-in private capital. This includes the mobilisation of capital through the National Wealth Fund (NWF) and Great British Energy (GBE). Changes to the Capacity Market and reforms to Contracts for Difference (CfD) rounds to improve eligibility, transparency, and support for supply chains are also clearly highlighted.

Yet, there is a need for more granularity and detail on the financing strategy and the total investment directed to each sub-sector. Some specific technologies e.g. hydrogen, long-duration storage are mentioned, but the Plan does not sufficiently provide a breakdown of investment opportunities. It also does not clarify how investment will be phased year by year or the form of private capital contribution. Future roadmaps should give greater detail on financing will be structured and sequenced. This focus will be critical to closing the financing gap and ensuring capital flows support sectoral decarbonisation.

Based on IIGCC's recent work, including our [assessment of EU steel roadmaps](#), this gap appears frequently in sectoral roadmaps. The TFC's [paper](#) further corroborates this point, noting that existing plans tend to emphasise technological ambition and emissions outcomes but provide limited detail on how financing needs will be met. While there are some strong financing components to the CPAP compared to other roadmaps, more can be done to improve their decision-usefulness for investors.

Another shortcoming of the CPAP is its narrow focus on power sector decarbonisation to 2030. It does not link the power transition to sectoral pathways in transport, buildings, or industry – all of which will rely heavily on electrification for their own decarbonisation. As a result, the CPAP misses an opportunity to support broader coordination across the UK's net zero transition. More could be done to contribute to the overall coordination across the broader net zero transition in the UK.

We recommend that sectoral roadmaps take a more holistic approach to the net zero transition. While there are references to live documents such as the Industrial Strategy, this is not done sufficiently. Roadmaps should be more explicitly linked to important policy documents, such as the UK Net Zero Strategy and the UK's NDC. Strong alignment and interconnectedness are critical to ensure sectoral roadmaps are embedded in the wider net zero policy and regulatory framework.

Detailed assessment

Key

	Document is aligned with the relevant principle
	Document is partially aligned with the relevant principle
	Document is not aligned with the relevant principle

1. Ownership

Principle	Rating	Commentary
Developed or co-owned by policymakers		Government document that lays out an action plan to meet the Clean Power 2030 goal.

2. Credible and decision useful

Principle	Rating	Commentary
Action-oriented, with clear actions for relevant stakeholders that can be transparently monitored.		Lists clear actions under seven areas including planning and consenting; networks and connections; renewable and nuclear project delivery; reforming electricity markets; short-duration flexibility; long-duration flexibility; supply chains and workforce. This is a government plan that focuses on what the government can do to drive delivery. But it notes the complexity of implementation and working hand in hand with industry to deliver the plan.
Supports economy-wide emissions reduction goals set out in a country's NDC and/or relevant national legislation, in line with the Paris Agreement		References the 2030 NDC and the Carbon Budget 6 which were the goals set by the UK at the time of publication in December 2024. Also implicitly references the legally binding 2050 net zero goal.
Prioritises highest impact sectors		The power sector's rapid decarbonisation is a UK success story and critical to meet the 2050 net zero goal. As the CPAP notes, the Clean Power 2030 goal can help eliminate emissions that currently come from electricity generation but also via the electrification of heat in buildings, transport and industry. A full section ('Why clean power by 2030') is dedicated to setting out the rationale for the action plan and its impact on various stakeholders.
Based on evidenced-based emissions reduction trajectories		<p>The Department for Energy Security and Net Zero (DESNZ) has developed a 'Clean Power Capacity Range' based on the use of National Energy System Operator (NESO) scenarios and an evaluation of feasible deployment based on knowledge of the project pipeline.</p> <p>Sets ranges for deployment of each technology by 2030 and will maintain some optionality until more clarity on which scenario is most likely is available. Notes that there may be technologies not included in these scenarios that could have a role to play e.g. biomethane.</p>

Cover emissions for all material greenhouse gases		Mention of efforts to improve monitoring of methane emissions from imported gas, though tracking methane emissions remains a work in progress. There is also no reference to SF6, which is a potent GHG used in network equipment.
Cover relevant upstream and downstream emissions		Cites DESNZ work with industry to decarbonise upstream emissions of natural gas production. Through the North Sea Transition Deal, industry is committed to extending the overall emissions reduction to 50% from 2018 to 2030.
Set a clear deadline for the relevant sector's decarbonisation, underpinned by interim targets and milestones		Sets a clear target that needs to be met by 2030 with no interim targets given the timeline stretches up to 2030.
Take into account the interactions between sectors		There is not enough analysis of the interaction between delivering clean power and the electrification of heat in buildings, transport and industry. Although the plan states that delivering Clean Power 2030 also paves the way to decarbonising the wider economy by 2050, it does not provide any detail on how this will be met.
Set out key interdependencies and potential trade-offs		Chapter dedicated to supply chains and workforce that sets out interdependencies and links them to existing policy processes e.g. Industrial Strategy. It explains that lowering barriers to investment into resilient supply chains and workforce development is vital to ensuring the clean power target is met and proposes some actions that can support this. However, it does not sufficiently consider the potential impacts of growing power demand from electrification after 2030.
Account transparently for a sector's 'locked-in' future emissions		Stresses the need to reduce unabated gas generation but that should be balanced with the need to have sufficient unabated gas capacity on the system to maintain security of electricity supply. This means retaining sufficient unabated gas capacity until well beyond 2030, when it can be safely replaced by low carbon technologies that can provide the amount of long-duration flexibility necessary to keep the system always balanced.
Informed by stakeholder dialogue		The government has worked with industry to develop the plan and will work alongside industry to deliver it. It states that a new programme of activity will emerge, relying on the work of a wide range of businesses, many parts of government at central, regional and local level across England and the Devolved governments, the third sector, communities, and individuals. The CPAP also outlines various consultations over the course of 2025 which shows a deep programme of industry engagement.
Reviewed on a regular basis and updated as necessary		Short delivery timeframe so not necessary to review before 2030 but it will be important to look at what happens beyond 2030, where demand is expected to increase. The document notes that Clean Power 2030 is the first part of a longer journey.
Provides transparency on underpinning data		Latest publicly available data from the NESO.

3. Policy mechanisms

Principle	Rating	Commentary
Overview of current anticipated policy mix impacting the sector's decarbonisation, including how policies support key decarbonisation levers.		Comprehensive breakdown of policy actions across multiple areas (e.g. removing roadblocks; planning and consenting; electricity networks and connections; etc.), including setting out the challenges in each area and proposed actions to tackle them. The CPAP also covers actions taken by the Devolved Administrations.
Overview of policy, regulatory market barriers		Overview of barriers that explain the challenges with each area e.g., planning and consenting.
Details on the fiscal and market incentives and policies that will make decarbonisation cost-competitive		Clear explanation of policies that create financial incentives to reduce emissions: e.g. reference to Contract for Difference (CfD) auctions, GBE development, market reforms to provide batteries and consumer-led flexibility with access to relevant markets.
Assessments of the maturity of relevant technologies and their capacity to be scaled		This is done with specific figures attached e.g. 43-50 GW of offshore wind, 27-29 GW of onshore wind, and 45-47 GW of solar power. This would be complemented by flexible capacity, including 23-27 GW of battery capacity, 4-6 GW of long-duration energy storage, and the development of flexibility technologies.
Phase-out dates for environmentally harmful policies and incentives		No date for phase out of unabated gas given need to rely on firm power (35 GW of unabated gas reserve capacity). The CPAP notes this is aligned with the Climate Change Committee (CCC)'s advice that maintaining gas capacity to use as backup is consistent with a fully decarbonised power system. However, it does not discuss the relative taxation burden on electricity vs gas which can be viewed as a misaligned policy.
Consideration of wider macroeconomic context		Overview of steps to shore up supply chains and detailed assessments of impacts for communities to ensure local and community power generation can contribute to the prosperity of local areas.
Quantification of anticipated impact of policies on sectoral decarbonisation		No quantitative assessments of the impact of policy initiatives on technology deployment or emissions reductions, but the quantification of the anticipated impact of policies is clear: 100% emissions reductions (i.e. NZ) by 2030 - the point about residual gas generation being balanced against clean power exports across the year aside.
Transparent explanations of policy processes		Outline of relevant policy processes, underpinned by necessary detail across all key areas identified and backed by the Mission Board, the Secretary of State and the Prime Minister.
Transparency over data underpinning policy development		The Clean Power 2030 Unit will continue to develop data capability and envisages an expert team across all necessary fields, supported by strong data.

4. Financing mechanisms

Principle	Rating	Commentary
Assessment of total public and private investment needs		£40 billion of investment on average per year between 2025–2030. The document mentions that much of this will come from private investment, though it is not quantified.
Breakdown of investment need by sub-sector and technology		There is granular detail on the types of technologies that need to be deployed and reference to financing instruments to finance technologies. There is a clarification that out of £40 billion/year, 30 billion is needed for generation assets and £10 billion for electricity transmission network investment. However, there is no further breakdown of finance needed across each technology.
Prioritisation of investments based on impact on emissions reductions		Does not provide a sense of prioritising investments based on emissions reductions – priorities are set out but not in relation to investments.
Mapping of investment needs to most relevant sources of finance		States that the private sector will account for most investment and mentions financing instruments to support decarbonisation. Yet, it does not map out investment needs against relevant sources of finance in more detail. A potential way forward would be to map key areas, investment needs, top projects, maturity of area, and potential format of funding.
Transparency over relevant public and private financial instruments to support decarbonisation		Sets out types of public financing tools to support the financing of projects and activities from earlier stage innovation to later stage scaling up, e.g. the British Business Bank, the National Wealth Fund, Great British Energy, in addition to other financing models including Contracts for Difference and the hydrogen-to-power business model.
Tracking of investment flows		No inclusion of measures to track investment flows.
Engagement with stakeholders to identify investment opportunities and relevant sources of finance		Identifies opportunities to support investment in clean power through stakeholder engagement, e.g. hydrogen-to-power business model, Ofgem cap-and-floor scheme to support investment in long-duration electricity storage.

Conclusion

The Clean Power 2030 Action Plan provides a strong and actionable roadmap that offers institutional investors greater confidence and clarity on how to finance projects aligned with the UK's 2030 power sector decarbonisation goal. As a government-led strategy, it outlines a coherent view of how current and anticipated government policies will help meet the overarching target and provides clear detail on policy implementation. It also sets out transparent financing strategies, with many of the enabling tools already being deployed.

However, it would benefit from further detail on the financing component. While the Plan outlines total investment needs and potential financing mechanisms, there needs to be more granularity on funding models for key sub-areas and ways to engage stakeholders on financing opportunities.

Further, a critical next step would be to consider embedding the CPAP more deeply into the regulatory framework. This includes strengthening links with documents such as the UK's NDC and examining clean power delivery connects with the electrification of heat in buildings, transport and industry over a timeline that extends beyond 2030. This would ensure the roadmap is better embedded in the wider policy and regulatory framework.

Overall, we recommend replicating the Plan's core elements across other significant sectors to give investors clearer insight into decarbonisation pathways and an intended plan of action to accelerate investment opportunities.

We look forward to the development of sectoral roadmaps that exhibit similar strengths, particularly for high-impact sectors. The production of decision-useful roadmaps for these sectors will enable investors to assess investment opportunities and have the greatest impact on real economy emissions reductions.



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