Department for Energy Security & Net Zero

Capacity Market

Consultation on proposals to maintain security of supply and enable flexible capacity to decarbonise

Closing date: 10 December 2024

October 2024

Any enquiries regarding this publication should be sent to us at:
futureelectricitysecurity@energysecurity.gov.uk

Contents

1. General information

1.1 Why we are consulting

The security of our electricity supply is key to successful delivery of the Clean Energy Superpower Mission and one of its key pillars - clean power by 2030. In this consultation we are seeking views on proposed changes to the Capacity Market to retain the flexible generation capacity required for the security of our electricity supply and to support the conversion of unabated gas plants to low carbon technology. These proposed changes complement the broader strategic questions considered through the Review of Electricity Market Arrangements (REMA).

1.2 Consultation details

Issued:	15 October 2024
Respond by:	10 December 2024
Enquiries to:	Electricity & Market Arrangements Future Electricity Security Team Department for Energy Security and Net Zero 3-8 Whitehall Place London SW1A 2EG Email: futureelectricitysecurity@energysecurity.gov.uk
Consultation reference:	Capacity Market: Consultation on proposals to maintain security of supply and enable flexible capacity to decarbonise
Audiences:	We are seeking the views of the energy industry, consumer groups, academia, think tanks and other organisations who have an interest in security of supply and decarbonisation.
Territorial extent:	Great Britain. The Capacity Market is in place across Great Britain. Energy is a devolved matter for Northern Ireland.

1.3 How to respond

We strongly encourage respondents to make use of the online platform wherever possible when submitting responses as this is the government's preferred method. This method also allows you to submit a single, combined response to both this consultation and the associated Call for Evidence referred to below, should you wish to respond to both. Alternatively, responses in writing or via email will also be accepted.

To ensure your response is most effective in aiding government policy development, it is crucial that responses are framed as direct responses to the questions posed, supported by evidence where possible.

When responding, please state whether you are responding as an individual or representing the views of an organisation.

Respond online at: https://energygovuk.citizenspace.com/energy-security/capacity-market-security-supply-flexible-capacity

1.4 Confidentiality and data protection

Information you provide in response to this consultation, including personal information, may be disclosed in accordance with UK legislation (the Freedom of Information Act 2000, the Data Protection Act 2018 and the Environmental Information Regulations 2004).

If you want the information that you provide to be treated as confidential, please tell us, but be aware that we cannot guarantee confidentiality in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not be regarded by us as a confidentiality request.

We will process your personal data in accordance with all applicable data protection laws. See our privacy policy.

We will summarise all responses and publish this summary on GOV.UK. The summary will include a list of names or organisations that responded, but not respondent's personal names, addresses or other contact details.

1.5 Quality assurance

This consultation has been carried out in accordance with the government's consultation principles.

If you have any complaints about the way this consultation has been conducted, please email: bru@energysecurity.gov.uk.

2. Executive Summary

Making Britain a Clean Energy Superpower is one of the Prime Minister's five defining missions. There are two parts to this mission: delivering clean power by 2030 and accelerating delivery of net zero. The security of our electricity supply will be key to delivering this mission.

Achieving clean power by 2030 will mean we will rely increasingly on a renewables-led system as a foundation for a decarbonised grid. The government will work with the private sector to accelerate the deployment of low carbon technologies. We will invest in clean generation technology and ensure the country has the energy storage it needs. Investing in clean energy at speed and scale can help tackle the climate crisis, create good jobs and is the only route to protect billpayers and ensure energy security.

The government has also set up Great British Energy, a publicly-owned energy company, designed to drive clean energy deployment, boost energy independence, create jobs and ensure UK taxpayers, billpayers and communities reap the benefits of clean, secure, home-grown energy.

Delivering clean power by 2030 will mean that unabated gas generation will phase down. Long duration flexible capacity (capacity that can be increased or decreased so that supply matches demand and which is able to run for prolonged periods) will remain vital for security of supply. The National Energy System Operator (NESO, which replaced the National Grid Electricity System Operator on 1 October 2024) estimates that the GB electricity system could require 40 to 50GW of long duration flexible capacity in 2030.[1] NESO's modelling was commenced prior to the general election and does not assume the delivery of clean power by 2030, however, these results are still likely to be informative of the level of flexible capacity the GB system could need at this time.

Low carbon flexible technologies – power with Carbon Capture, Usage and Storage (power CCUS), hydrogen to power (H2P), and Long Duration Electricity Storage (LDES) – will be deployed as quickly as possible to deliver long duration flexibility. However, during the transition period we will continue to utilise unabated gas generating capacity, which will move to a backup role to maintain security of supply.

We are therefore seeking views on a series of changes to the Capacity Market (CM) that aim to retain the flexible generation capacity required to maintain the security of our electricity supply in the short-term and to support the conversion of unabated gas plants to low carbon technology. Specifically, we are consulting on proposed changes that would:

- Lower the capital expenditure threshold for "refurbishing" three-year CM agreements to support the economic case for investment to extend the life of ageing plants. This is important to mitigate short-term risks to electricity security whilst we focus on scaling up low carbon flexible capacity and supporting infrastructure.
- Ensure that all substantially refurbishing or new combustion power plants participating in the 2026 T-4 CM auction have a credible plan in place to decarbonise through converting to either H2P or power CCUS before they become operational.

[1] Capacity estimates for long duration flexible technologies include H2P, gas with and without CCUS, and LDES. All figures come from NESO's 2024 Future Energy Scenarios and are given in terms of installed capacity. See NESO, 'Future Energy Scenarios 2024', July 2024

- Introduce an exit pathway ("managed exits") to enable unabated gas generators to decarbonise by allowing multi-year CM agreement holders to exit and transfer to a Dispatchable Power Agreement (DPA), enabling conversion to power CCUS.

Alongside this consultation, we are simultaneously conducting a Call for Evidence[2] (CfE) to inform future changes to the CM that are also intended to support investment in, and decarbonisation of, flexible capacity. This CfE specifically seeks evidence on:

- Additional managed exits pathways that could be implemented in the future to enable decarbonisation of unabated gas.
- Future options for developing NESO's modelling of longer-term capacity needs to include indicative future capacity targets out to the T-8 delivery year (2032/33).

These proposed changes will complement existing programmes to support the development and deployment of low carbon flexible capacity. This includes:

- The publication of a government response to the Decarbonisation Readiness Consultation alongside this consultation, and the laying of associated enabling legislation in Parliament in October 2024 to ensure new build and substantially refurbished combustion power plants are built ready to convert to hydrogen-firing or retrofit carbon capture technology within the plant's lifetime;[3]
- The publication of a policy update in October 2024, alongside this consultation, on plans to strengthen security of supply and accelerate investment in low carbon technologies through the CM Phase 2 Reforms;[4]
- The continued deployment of power CCUS through the CCUS cluster sequencing process supported by the DPA, and the development of competitive allocation for CCUS as outlined in the CCUS Vision;[5]
- The publication of a consultation in December 2023 by the previous government on the need and design for a H2P market intervention, setting out the minded-to position that a H2P business model (H2PBM), based on elements of the power CCUS DPA and adapted for H2P, could mitigate the identified barriers through de-risking investment;[6]
- The publication of a consultation response in October 2024, setting out plans to develop a cap and floor scheme to provide greater revenue certainty for investors in LDES. Ofgem has agreed to act as LDES regulator following the government's request; this was the approach favoured by industry.[7]

[2] DESNZ, 'Capacity Market: Call for Evidence on proposals to maintain security of supply and enable flexible capacity to decarbonise', Oct 2024
[3] DESNZ, 'Decarbonisation readiness: updates to the 2009 Carbon Capture Readiness requirements', Oct 2024
[4] DESNZ, 'Capacity Market 2023: Phase 2 proposals and 10 year review', Oct 2024
[5] DESNZ, 'Carbon capture, usage and storage: a vision to establish a competitive market', Dec 2023
[6] DESNZ, 'Hydrogen to power: market intervention need and design', Dec 2023
[7] DESNZ, 'New scheme to attract investment in renewable energy storage', Oct 2024

3. Introduction

Reliable energy supplies are fundamental for the economy, society and public services. Since its introduction in 2014, the CM has secured sufficient capacity to ensure consistent and reliable electricity generation. The CM has complemented the deployment of renewable and low-carbon energy by ensuring electricity security of supply in Great Britain.

As we seek to deliver the Clean Energy Mission and - as a core part of this mission - clean power by 2030, renewables will make up a larger proportion of total capacity. The variable nature of renewables makes it critical that there is a significant amount of flexible capacity available to be deployed when renewable generation is reduced (for instance, on still, dark winter days). NESO estimates that the GB electricity system could require 30 to 40GW of short duration flexible capacity and 40 to 50GW of long duration flexible capacity in 2030 to ensure security of supply.[8] NESO's modelling was commenced prior to the general election and does not assume the delivery of clean power by 2030, however, these results are likely to be informative of the level of flexible capacity the GB system could need at this time.

Low carbon flexible technologies, including power CCUS, H2P and LDES, will be deployed as quickly as possible to fulfil this role, but deployment still requires time. Whilst we focus on scaling up low carbon flexible capacity and supporting infrastructure, there is still a need to provide sufficient flexible capacity to ensure a secure electricity supply. We will need to rely on existing mature technologies, including unabated gas, which will move to a backup role.

We are consulting on proposed changes to the CM that are intended to support investment in, and decarbonisation of, flexible capacity. Depending on the responses received to this consultation, we intend to implement these proposals before prequalification in 2025.

Lifetime extensions

- We are aware that older plants reaching the end of their life might currently be unable to access multi-year CM agreements. These agreements could provide greater commercial certainty to underpin the upfront capital cost of work to extend the plant's operating life. We are consulting on a proposal to lower the capex threshold for three-year CM agreements to support the retention of existing Capacity Market Units (CMUs) that have a role to play in ensuring security of supply.

Decarbonisation Readiness (DR)

- Alongside this consultation, we have published a DR government response[9] setting out requirements for substantially refurbishing or new build combustion power plants, including unabated gas, biomass, energy from waste and combined heat and power plants (CHP). These plants will need to demonstrate a credible pathway to decarbonise by ensuring that they can easily convert to hydrogen-firing or retrofit carbon capture technology within the plant's lifetime. The associated legislation is provisionally

[8] Capacity estimates for long duration flexible technologies include H2P, gas with and without CCS, and LDES. Capacity estimates for short duration flexible technologies include batteries and demand-side response. All figures come from NESO's 2024 Future Energy Scenarios and are given in terms of installed capacity.

[9] DESNZ, 'Decarbonisation readiness: updates to the 2009 Carbon Capture Readiness requirements', Oct 2024

expected to come into force from 28 February 2026. The proposal we are consulting here on aims to ensure CM applicants prequalifying ahead of the DR legislation being implemented but falling within the scope of it, demonstrate compliance.

Providing clear and viable routes to decarbonisation

- At present there is no route to enable unabated gas plants with existing multi-year CM agreements to decarbonise should they wish to once decarbonisation options are available. This is because Capacity Providers remain locked into their existing CM agreements, some not ending until the 2040s. The government is committed to creating pathways to ensure unabated gas plants can decarbonise as and when the enabling low carbon infrastructure expands.
- In this consultation, we propose to introduce an initial version of managed exits to enable unabated gas plants to decarbonise by allowing multi-year CM agreement holders to exit and transfer to a DPA, enabling conversion to power CCUS.

Alongside this consultation, we are simultaneously conducting a CfE to inform future changes to the CM (see Capacity Market: Call for Evidence on proposals to maintain security of supply and enable flexible capacity to decarbonise).[10] The CfE includes the following:

Additional routes to decarbonisation

- The government recognises that the decarbonisation pathway best suited to a particular unabated plant could be dependent on a variety of factors. We are calling for evidence to inform the policy development of other potential decarbonisation pathways.

Creating a longer-term view of future capacity supply and demand

- As the grid decarbonises, it is particularly important to ensure we have as much clarity regarding future capacity needs as possible. In the CfE, we are seeking views and evidence to inform the development of a longer-term view of future capacity requirements and supply. This includes potential legislative changes to the scope of information required in NESO's annual Electricity Capacity Report (ECR).

We encourage respondents to review both the consultation and the CfE in tandem (a single, combined response can be made using the online platform). Please note that the executive summary and introductions of both are duplicative, so when reading the CfE you can skip forward to section 4 if you have already read this document.

Progress in reducing connection timelines

Delays in obtaining grid connections are a known constraint on the delivery of new energy generation facilities, including low carbon flexible technologies and unabated gas generation. New projects entering the connections queue are routinely offered connection dates in the mid to late 2030s, which is a major challenge to address as part of delivering clean power by 2030.

The Connections Action Plan set out a package of reforms to the connections process that has led to 19GW of projects being offered earlier connection dates (by an average of 6 years) while a further 51GW may also receive accelerated connection dates throughout 2024. Further

[10] DESNZ, 'Capacity Market: Call for Evidence on proposals to maintain security of supply and enable flexible capacity to decarbonise', Oct 2024

reforms are being developed by NESO in consultation with stakeholders to raise requirements to obtain and retain a connection agreement. These reforms are currently being progressed via modifications to industry codes and licences, with a decision by Ofgem expected in early 2025. Subject to approval of these changes within that timescale, improved connection offers (for those able to accelerate their connections) could be issued by late 2025.

Alongside the standard route for connections, these changes would also give NESO the power to offer accelerated connections to projects it designates as critical for system operation or security of supply. Further details on these changes can be found within the code modification consultations recently published by NESO.

4. Lifetime extensions

4.1 Context

Since its introduction in 2014, the landscape in which the CM operates has shifted significantly. As Great Britain transitions towards an increasingly renewables-based power system, a significant amount of flexible capacity will continue to be needed to ensure the system remains secure and reliable.

Whilst long duration low carbon flexible alternatives (such as power CCUS, H2P and LDES) are scaling up, we will continue to rely on existing mature technologies, notably unabated gas, which are vital to provide flexible capacity and ensure security of supply during the transition.

A pressing challenge for maintaining security of supply is the risk of a significant amount of existing capacity going offline before low carbon flexible alternatives are available at scale. This creates risk in the near future where there is insufficient firm, flexible capacity on the system to ensure security of supply in the event of high peak demand, periods of low wind or unexpected outages.

One component of the retirement risk is the age of much of our existing gas and nuclear fleet. A significant proportion of the Combined Cycle Gas Turbine (CCGT) assets currently providing long-term flexible capacity are already close to or have exceeded their design lifetimes, typically around 25 years. Research published alongside the second REMA consultation suggests that under current market conditions, 4 to 8GW of CCGTs could retire by 2030, and around 15GW could retire by 2035.[11] Retirement is also increasingly likely for other ageing flexible capacity plants.

Keeping ageing plants running for longer requires capital expenditure (capex) to enable refurbishment and replacement of components to extend the operating life of the plant. These refurbishments might not meet the required threshold to qualify for a multi-year CM agreement (see below). Whether this investment is commercially justifiable is influenced by the degree of certainty operators have over future revenues.

Greater certainty of revenue could be provided by enabling **plants to access multi-year "refurbishing" agreements if they meet a lower capex threshold than at present.** This would help mitigate the security of supply risk.

CM agreement types and capex thresholds

The capex thresholds determine eligibility for longer CM agreements for Generating CMUs – one-year generally for existing units, three-year for refurbishing units and 15-year for major refurbishment or new build units.

As outlined in the CM Phase 2 Policy Update, published in October 2024,[12] and as consulted on in January and October 2023,[13] the government intends to make changes to capex

[11] Baringa Partners, 'Assessing the deployment potential of flexible capacity in Great Britain – an interim report', DESNZ research paper number: 2023/051, Feb 2024
[12] DESNZ, 'Capacity Market 2023: Phase 2 proposals and 10 year review', Oct 2024
[13] DESNZ, 'Capacity Market 2023: Phase 2 proposals and 10 year review', Oct 2024

thresholds to enable new build low-carbon technologies and unproven Demand Side Response (DSR) to access three-year agreements with a capex threshold of £0/kW. Likewise, new build and refurbishing low-carbon technologies will be able to access nine-year agreements with a capex threshold of a mean average of the three- and 15-year capex thresholds. Currently, however:

- One-year Capacity Agreements are available to existing CMUs in recognition that they do not require capex investment that requires the certainty of long-term agreements.
- Capacity Agreements of up to three years are available to existing CMUs that can demonstrate that they require an improvements programme (Refurbishing CMUs) and qualify for the requisite capex threshold.[14]
- New plants or those with certain new build elements (New Build CMUs), as well as Refurbishing CMUs that meet the higher capex threshold, can access agreements up to a maximum of 15 years.[15]

Each capex threshold is intended to allow substantial capital investment projects to come forward at a CM price that is competitive by providing greater revenue certainty over more of the project lifespan.

These thresholds are revised regularly to ensure they strike an appropriate balance between revenue certainty underpinning investment decisions and offering unnecessary levels of forward commitment which reduce liquidity and competition in CM auctions and could ultimately represent poor value for money for consumers.

As plants age, refurbishment works beyond normal maintenance may be needed to maintain the integrity of plant structures and ensure safe operation. The type of refurbishing work required to extend the life of an ageing plant can vary significantly but may involve major examination work and component replacement without necessarily incurring capex investment as large as required for a full turbine replacement (for example).

An independent study conducted for the government by Baringa,[16] and the government's engagement with generators, suggests that one-year CM agreements for existing CMUs may not be sufficient to provide the revenue certainty required to make lifetime extension investment decisions. The study concluded that the lack of a good economic case is one of the key barriers to continued availability of existing assets and suggests that market arrangements could be adjusted to facilitate investment decisions.

Lowering the capex threshold for three-year agreements would remove a barrier to life-extension of existing CMUs, contributing to ensuring capacity adequacy.

We considered an alternative option of introducing a new "lifetime extension" agreement for CMUs that would be at least twenty-five years old at the start of the relevant delivery year. This new agreement could operate alongside the current "refurbishing" three-year agreements, but

[14] Currently set at £165/kW (originally set at £125/kW but adjusted for inflation).
[15] Originally £280/ kW, increased to £325/kW in the 27/28 T-4 to adjust for inflation.
[16] Baringa Partners, 'Assessing the deployment potential of flexible capacity in Great Britain – an interim report', DESNZ research paper number: 2023/051, Feb 2024

with a lower capex threshold. We considered whether the age requirement would allow us to target support on older plants that are most likely to need additional assistance in order to remain operational.

We concluded that creating a new type of agreement would add a disproportionate degree of complexity to the CM and that the age requirement would bar many CMUs from applying. Furthermore, it would lack coherence with the proposals on low carbon technologies which the government has consulted on and intends to introduce to the CM.[17]

4.2 Proposal

The government proposes to lower the three-year £/kW threshold, making it easier for CMUs to access multi-year agreements of up to three years. As outlined in the Capital Expenditure Thresholds section of the CM Phase 2 Policy Update (pages 9 and 10),[18] the government will reduce the capex threshold for three-year CM agreements to £135/kW to reflect changes in the technology mix of the CM and developments in the power sector. However, this consultation proposes to further lower the capex threshold to enable a wider range of life-extending capex investment to be supported by multi-year agreements.

Stakeholder engagement conducted as part of the Baringa study in summer 2023 suggests a lifetime extension project which would typically enable a five-year lifetime extension is around £50/kW.[19] As such it could be appropriate to reduce the capex threshold for Refurbishing CMUs to access three-year agreements to £50/kW.

Lowering the threshold in this way would apply across the board, without distinguishing between older and younger assets. We are aware that this could potentially result in assets of any age being eligible for longer agreements for works which would have been carried out anyway. This potential gaming risk could result in poor value for money, and reduced liquidity for future auctions relative to a possible counterfactual scenario where plants would have undertaken the same work without securing a multi-year agreement.

There are already robust requirements in the CM to determine whether capacity can prequalify as a Refurbishing CMU.[20] However, additional prequalification criteria could help ensure access to these agreements is a necessary and proportionate response to a CMU's investment needs. Specifically, the criteria could require that works will demonstrably contribute to the life extension of the plant through technical improvements or through improvements in efficiency that enable the plant to remain economically viable, in a way which could not be achieved through an existing CMU one-year agreement.

In line with the existing requirement under Rule 3.8 that Refurbishing CMUs submit a "declaration about refurbishing works",[21] we propose that Refurbishing CMU applicants be

[17] DESNZ, 'Capacity Market 2023: Phase 2 proposals and 10 year review', Oct 2024
[18] DESNZ, 'Capacity Market 2023: Phase 2 proposals and 10 year review', Oct 2024
[19] Baringa Partners, 'Assessing the deployment potential of flexible capacity in Great Britain – an interim report', DESNZ research paper number: 2023/051, Feb 2024
[20] Additional obligations attached to Extended Years Criteria (EYC) are not relevant here as they only apply to capacity providers with a Prospective CMU awarded a Capacity Agreement with a duration of more than three delivery years.
[21] An application in relation to a Refurbishing CMU states that the Qualifying £/kW Capital Expenditure is equal to or greater than the Three Year Minimum £/kW Threshold and less than the Fifteen Year Minimum £/kW Threshold.

required to submit a certificate from an Independent Technical Expert. This would confirm that the improvements programme is necessary to extend the operational life of the CMU for at least the full term of the agreement. As with current Rules on multi-year agreements, CMUs would need to show that they had met relevant milestones prior to the first delivery year.

This consultation seeks views on the desirability of lowering the threshold in this way, an appropriate level at which the threshold could be set and two proposed approaches to implement this change.

Question 1: Do you support the proposal of changing the CM to reduce capacity risks by facilitating investment to extend the lifetime of CMUs? Can you tell us what you would do differently if the proposal is implemented?

Question 2: Do you agree that lowering the capex threshold in this way would achieve the desired outcome? Please provide detail with your answer.

Question 3: Do you agree with the proposed reference cost level underpinning the new capex threshold? Do you have any evidence that this specific cost level would overcome existing barriers? If you disagree, please provide evidence for an alternative reference cost level.

Question 4: In your opinion, would this proposal result in a gaming risk; and would the proposed Independent Technical Expert certification be sufficient to mitigate the risk? If not, what other safeguards do you think should be put in place?

Question 5: Do you have any views on how the proposed Independent Technical Expert certification should be implemented in a way that is proportionate and reasonable?

Question 6: Are there any potential unintended consequences or risks that you think the government should consider?

5. Decarbonisation Readiness (DR)

5.1 Context

Since 2009, new build combustion power plants[22] in Great Britain sized at or above 300MW[23] have been subject to the Carbon Capture Readiness (Electricity Generating) Regulations 2013[24] (CCR). These requirements were intended to ensure that planning consent is only granted to combustion power plants for which it will be technically and economically feasible to retrofit CCUS.[25] However, the 300MW threshold created an unintended market distortion by disincentivising the deployment of combustion plants of 300MW and above. This has been demonstrated by several new gas-fired plants being consented in the last few years at a size of 299MW. Furthermore, the CCR requirements do not reflect recent technological advances, such as hydrogen-fired generation.

Subject to the enabling legislation, CCR will be replaced in England by DR, which will remove the 300MW minimum capacity threshold and expand the electrical generation technologies in scope to include biomass, energy from waste and CHP plants. It will also enable combustion power plants to demonstrate DR through conversion to H2P or retrofitting CCUS. Finally, it will extend the requirements to include "substantially refurbished" combustion power plants which, for the purposes of DR, is where the cost of refurbishing a combustion plant exceeds 50% of the investment cost for a comparable new build combustion plant.

In addition, DR will move the requirements from the planning consent process to environmental permitting. With the removal of the 300MW threshold, this will avoid a significant burden being placed on local authorities to assess the DR requirements for smaller plants. Moving the requirements to the environmental permitting regime will also prevent the creation of a loophole whereby plant operators could avoid the requirements by returning to projects which have already been through planning consent but have since been abandoned – of which there are a large number. This would have the potential to significantly reduce the decarbonisation impact of the policy and create distortions in the market.

The DR legislation is provisionally expected to come into effect from 28 February 2026 and the new requirements will therefore be applied to all relevant environmental permitting applications submitted after that date. This, however, would mean that new combustion plants not subject to the existing CCR requirements and which are prequalifying for the 2026 T-4 CM auction (2029/30 delivery year) could obtain 15-year CM agreements without having plans or the ability to decarbonise.

To mitigate this risk, and to support the transition away from unabated gas, we are proposing to amend the CM Rules[26] to ensure that all plants securing agreements in the 2026 T-4 auction (2029/30 delivery year) that would be captured under the new DR legislation, and which are not captured under the existing CCR requirements, will comply with the new DR requirements.

[22] "Combustion plant" means any technical apparatus in which fuels are oxidised in order to use the heat thus generated.
[23] Carbon Capture Readiness applies specifically to combustion plants producing electricity (i.e. not heat) so the size of a plant is measured in megawatts electrical (MWe).
[24] 'The Carbon Capture Readiness (Electricity Generating Stations) Regulations 2013', Oct 2013
[25] Both the Carbon Capture Readiness and Decarbonisation Readiness requirements are for Carbon Capture and Storage (CCS) but do not preclude CCUS.
[26] DESNZ, 'Capacity Market Rules', July 2024

This will provide assurance from the earliest practicable date that plants receiving multi-year CM agreements will be able to decarbonise, while allowing reasonable time after DR legislation comes into force for environmental permit applications to be submitted and processed.

When considering the proposed options, it should be noted that the DR legislation, along with the government response to the DR consultation, will have been published. In addition, we expect that the EA will have published a version of its guidance on DR for consultation in advance of the prequalification window in 2025. This will enable participants to have sight of how the requirements will be implemented.

5.2 Proposal

The proposal would affect the following scope of CM applicants developing plants in England:[27]

- Applicants prequalifying in 2025 for the T-4 CM auction for the 2029/30 delivery year.
- Applicants targeting CM agreements over three years in length.
- Applicants which are within scope of the future DR legislation **and** are **not** required to meet CCR under the terms of their existing planning consent. [28]

There are three options that we are seeking views on in this consultation:

Option A: Introduce a requirement at Rule 3.7 for relevant applicants to commit to applying for an environmental permitting regulations (EPR) permit, which includes DR requirements, ahead of their first delivery year.

This "light touch" approach would be the most straightforward to implement and be the least burdensome by limiting the requirements to a commitment at prequalification. However, this approach would not provide any further assurance that a prospective CMU will meet the DR requirements.

Option B:
Introduce a requirement at Rule 3.7.1 for relevant applicants to commit to applying for an EPR permit which includes DR requirements and declare that they will provide evidence of having secured it no later than 10 working days prior to the T-4 auction opening round taking place in the calendar year prior to the start of the relevant delivery year (2029/30). This will result in a deadline around February 2028. Failure to secure a DR permit by this point would result in termination under Rule 6.10.1(o).

This approach would ensure that prospective CMUs meet the DR requirements while allowing them approximately 2 years post-auction to obtain the relevant permit. The proposed timings will ensure sufficient time for NESO consider any adjustments to auction target setting required should applicants fail to secure a DR permit.

[27] In line with the application of the DR legislation, the CM Rules amendments will apply to plants in England only.
[28] DESNZ, 'Carbon Capture Readiness (CCR): a guide on consent applications', Nov 2009

Option C:

The requirement to obtain a DR permit is included in the existing Extended Years Criteria (EYC) provision in rule 8.3.6B[29]. This would mean the prospective CMU would need to provide evidence of having acquired an EPR permit, which includes DR requirements, no later than the deadline specified in rule 8.3.6(zaa). The requirement to provide evidence of a secured DR permit would also be tied into the agreement reduction penalties under 8.3.6D. In particular, failure to provide evidence of a DR permit will trigger rule 8.3.6D(c)(ii)(aa), resulting in the agreement being shortened to three delivery years.

As with Option B, this approach would be robust enough to ensure that prospective CMUs meet the DR requirements. The greater length of time in which to obtain the relevant permit would reduce the risk of CMUs being penalised for failing to meet the milestone, and it would also avoid the outright termination of capacity.

5.3 Additional considerations

The proposal aims to ensure plants prequalifying ahead of the DR legislation being implemented, but falling within the scope of it, demonstrate compliance. To achieve this aim, the options set out above would only need to apply to plants which prequalify in 2025 for the 2029/30 delivery year. The government recognises however that there could also be value in monitoring EPR compliance on an ongoing basis to ensure an even playing field amongst CM applicants. As such we are seeking views on whether, if option B or C are progressed, they should be a permanent CM requirement which would apply to all future CM applicants.

The government seeks views on how this proposal would impact Capacity Providers and any issues that would need to be taken account of in implementing it.

Question 7: What impact does a proposal for plants in England to demonstrate compliance with upcoming DR requirements have on plant participation in prequalification in 2025 and the early 2026 T-4 auction?

Question 8: Do you foresee any difficulties in prospective plants being able to comply with the proposed requirements under Option A? If so, please say what they are.

Question 9: Do you foresee any difficulties in prospective plants being able to comply with the proposed requirements under Option B? If so, please say what they are.

Question 10: Do you foresee any difficulties in prospective plants being able to comply with the proposed requirements under Option C? If so, please say what they are.

Question 11: Which option do you prefer? Please explain why.

Question 12: If Option B or C are implemented, what are your views on whether they should be a permanent measure which applies to all future CM applicants?

[29] We have previously announced an intention to amend the EYC criteria in the Capacity Market Phase 2 Consultation Response, in relation to clarifying the requirement to replace a turbine. Any changes made as a result of this new consultation will be made to the Rules as amended.

6. Providing clear and viable routes to decarbonisation

Converting existing unabated gas to power CCUS or H2P could support the roll-out of low carbon flexible generation. The government is committed to setting out clear and viable routes for unabated gas to decarbonise.

In January 2023, the previous government called for evidence on barriers to decarbonising existing CMUs, inviting views on enabling Capacity Providers to leave their multi-year agreements early to decarbonise, subject to security of supply considerations.[30] The responses highlighted the need for clarity on decarbonisation pathways and specifically for allowing unabated gas generators to exit their CM agreements to access bespoke support or to secure new CM agreements after converting to low carbon.[31] Currently, unabated gas capacity is unable to permanently leave a CM agreement without penalty. This acts as a disincentive for Capacity Providers to decarbonise prior to the completion of their CM agreements, which could be as late as the 2040s.

We have developed the Dispatchable Power Agreement (DPA), a business model which will incentivise the mobilisation of private finance to enable power CCUS to play a valuable mid-merit role in our generation mix, publishing initial proposals in December 2020.[32] This consultation invites views on an initial managed exit pathway and the required changes to the CM to allow unabated gas plants to exit their multi-year CM agreements to transfer to a DPA. This will enable unabated gas to retrofit carbon capture equipment to convert to power CCUS without penalty. Alongside this consultation, we have published a Capacity Market CfE on proposals to maintain security of supply and enable flexible capacity to decarbonise[33]. This will inform the development of additional managed exits pathways that could be implemented in the future.

6.1 Managed exit pathways for CMUs

To ensure security of supply, Capacity Agreements can only be ended by termination. CMUs can only permanently leave their capacity obligation without being subject to termination fees in very specific circumstances. This includes the route for CMUs to be terminated from the CM in order to be eligible to bid into a Contracts for Difference (CfD) Allocation Round.[34] There is currently no route to enable unabated gas CMUs in multi-year agreements to take immediate steps to decarbonise should they wish to once decarbonisation options are available. The following sections set out the government's proposal for a first managed exit pathway:

- **Pathway A:** Exiting a multi-year CM agreement and transferring to a DPA (enabling conversion to power CCUS).

[30] DESNZ, 'Capacity Market 2023 Consultation: strengthening security of supply and alignment with net zero', Jan 2023
[31] DESNZ, 'Capacity Market 2023 Consultation government response: strengthening security of supply and alignment with net zero', June 2023
[32] DESNZ, 'Carbon capture, usage and storage (CCUS): business models', Dec 2020
[33] DESNZ, 'Capacity Market: Call for Evidence on proposals to maintain security of supply and enable flexible capacity to decarbonise', Oct 2024
[34] DESNZ, 'Capacity Market 2023 Consultation: strengthening security of supply and alignment with net zero', Jan 2023

Alongside consulting on pathway A with the aim of implementing through changes to the CM before January 2026, simultaneously we have published a Capacity Market CfE[35] to inform development of pathways B-D. The government recognises that the decarbonisation pathway best suited to a particular unabated gas plant could be dependent on a variety of factors including the length of the CM agreement it holds, as well as the plant's size, age, configuration, location and access to transport and storage (T&S) infrastructure. We are therefore seeking evidence and views on enabling decarbonisation through the CM for plants which are not able to use pathway A and intend to develop more detailed proposals on pathways B-D for consultation in due course.

- **Pathway B:** Exiting a multi-year CM agreement and transferring to a H2PBM, enabling conversion to H2P. This should not be considered to reflect any finalised decision on a H2P market intervention and business model design.
- **Pathway C:** Exiting a multi-year CM agreement to transfer to a new multi-year refurbishment agreement after decarbonising, potentially with an extended outage.
- **Pathway D:** Decarbonising during a CM agreement, converting to a new technology class and derating factor, potentially with an extended outage.

6.2 Proposal

The managed exit process for pathway A, where possible, will align with Regulation 34 of the Electricity Capacity Regulations 2014 and CM Rule 6.10.4 for voluntary termination of Generating CMUs transferring to CfD or Renewables Obligation (RO) schemes. However, there are key differences which are set out below.

A Capacity Provider seeking to leave a multi-year agreement via managed exit will be required to notify of their intention to exit during a designated notification window. We propose that the deadline for notification will be 10 working days prior to the T-4 auction opening round, taking place during the Capacity Provider's penultimate delivery year prior to planned exit, with the window opening six weeks ahead of this (Figure 1). This will ensure sufficient time for NESO to assess the flow of capacity from the CM to bespoke support and consider any adjustments to auction target setting required.

Based on the current auction cycle, Capacity Providers will be required to provide notification of intention to use a managed exit to the CM Delivery Body no later than 19 months before the start of the delivery year in which the CMU will exit. We are consulting on pathway A with the aim of implementing through changes to the CM before January 2026, therefore following the sequencing set out, the window to notify would be available from January 2026, enabling a managed exit from 30th September 2027.

The T-4 auction will be a time anchor for the notification window and therefore the precise timings may vary slightly depending on when the T-4 auction takes place in each specific year. The government will continue to review this in line with any changes to the CM auction cycle.

[35] DESNZ, 'Capacity Market: Call for Evidence on proposals to maintain security of supply and enable flexible capacity to decarbonise', Oct 2024

Figure 1: Example managed exit process timings for pathway A (actual timeframes may vary depending on when the T-4 auction takes place in each specific year). The government will continue to review this in line with any changes to the CM auction cycle.

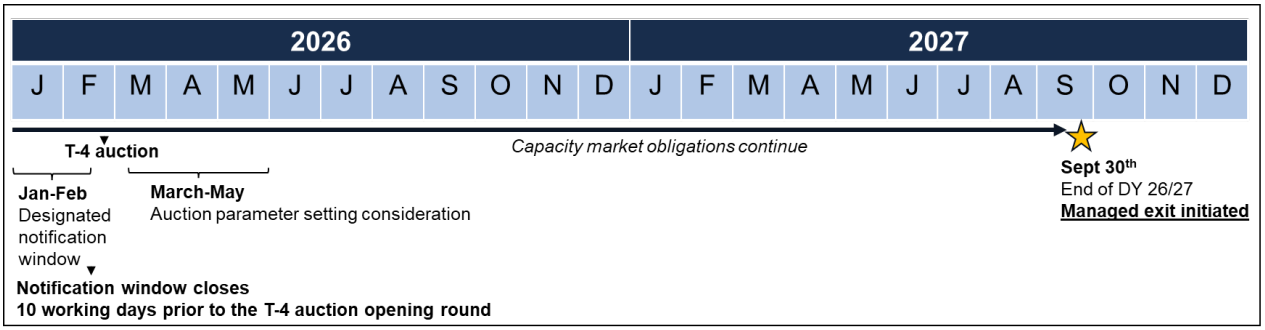

Table 1 sets out the proposed criteria to be eligible for pathway A which will be implemented by way of changes to the Rules so that the Delivery Body can ensure the criteria are met. Outside of the CM, separate criteria would apply in relation to a project's eligibility to be offered a DPA agreement. To be eligible for a managed exit, we propose that a Capacity Provider must submit to the Delivery Body evidence of the Capacity Provider being party to a DPA, accompanied by a declaration signed by Directors. This evidence could include a summary of the DPA key terms being published in the public register by the Low Carbon Contracts Company. Once this is received, the Delivery Body will confirm the CMU's exit date, which will be the last day of the following delivery year, allowing for a minimum of 19 months' notice to the Delivery Body (the exact amount of notice is dependent on when the notification is received and the exact timing of the notification window is dependent on when the T-4 auction takes place in each specific year). Upon receiving the notice, the Delivery Body will, within a reasonable timeframe, notify the Capacity Provider that the Capacity Agreement is terminated with immediate effect on the last date of the following delivery year when the CMU will transfer to the DPA.

Table 1: Proposed eligibility criteria for pathway A

#	Eligibility Criteria	Description
1	CM agreement length	The CMU must hold and be exiting from a multi-year capacity obligation of up to 15 years.
2	Intended Post-Conversion Technology	Power CCUS
3	DPA application status	The Capacity Provider must have evidence of being party to a DPA when notifying intent to use a managed exit. This evidence could include a summary of the DPA key terms being published in the public register by the Low Carbon Contracts Company. The evidence will be accompanied by a declaration signed by Directors and submitted to the CM Delivery Body.

Capacity moving out of the CM via managed exits will be accounted for in the same way as capacity terminated via a CfD Transfer Notice. This will minimise costs to consumers as capacity moving to different schemes will not be wholly replaced via the CM, with any potential replacement capacity procurement being linked to security of supply considerations such as changes in capacity associated with conversion to low carbon generation.

As outlined above, a managed exit will be initiated by way of voluntary termination, akin to rule 6.10.4. However, there are differences between the existing CfD Transfer Notice process and our proposal for managed exits where government will need to consider changes to the CM Rules and/or Regulations. For example, under a CfD Transfer Notice, a CMU withdraws from the CM without any certainty of being successful in the relevant CfD Allocation Round. The key difference for managed exits is that to ensure security of supply, we propose that a CMU will only be allowed to leave their CM agreement if they can provide appropriate evidence of being party to a DPA. The government is aware that first-of-a-kind conversions of unabated gas to power CCUS are particularly prone to risks of delay both due to the nascency of the technology and the enabling T&S infrastructure. As such it will be important for Capacity Providers to only notify their intent to use a managed exit when they are confident that they will be able to convert in time, and/or that they can manage the risk of delay, to ensure they can smoothly transition between the CM and the DPA.

The managed exits process will be designed to enable the transition between the CM and the DPA, allowing Capacity Providers to apply for DPA support during their CM agreements. We will consider whether amendments to existing declarations in the CM Rules are necessary, and we will ensure this proposal is designed in line with the UK subsidy control regime.

Once the managed exit has been confirmed by the Delivery Body:

- The Capacity Provider will be held to the timelines set out and the Capacity Agreement will be terminated on the last day of the relevant delivery year.

- We do not propose any Rules that will enable a Capacity Provider to withdraw from the managed exits process after the Delivery Body has received evidence of the Capacity Provider being party to a DPA and confirmed the termination date. This is to avoid Capacity Providers serving speculative notices.
- Once the CMU has been terminated, in the event of a delay to the start of generation under the DPA, amendments to the CM Rules will ensure the Capacity Provider will not be allowed to enter the CMU and its component generating units back into the CM or secondary trade for other CM capacity. This is to manage potential gaming risks where a CMU might leave the CM in order to access more financially beneficial CM agreements, defeating the purpose of introducing managed exit pathways to enable decarbonisation.
- Once the CMU has exited its CM agreement, the responsibility sits with the Capacity Provider to manage, mitigate and insure against delays.

6.3 Proposed generation outage management

The conversion from unabated gas to low carbon generation is technically challenging and capex-intensive, especially for first-of-a-kind low carbon generation technologies. Parts of the conversion work may require the CMU to take planned outages from generation during their CM agreements and the government is aware that conversion work is plant specific. The government expects Capacity Providers to complete conversion work in line with meeting their obligation to deliver under a system stress event and Satisfactory Performance Days (SPDs) and make their own decisions regarding outages, recognising that individual plants will have different preferences and outage requirements. If the Capacity Provider is unable to meet its SPDs it will be terminated, and non-delivery penalties will apply if they are unable to meet their obligations during a system stress event. Capacity Providers should take this into account when making decisions about outages.

The government is seeking views on how Capacity Providers would prefer and/or plan to manage their outages when converting their CMUs. This information will feed into future iterations of the managed exits policy. Consideration has been given to how these outages could be managed and the options are set out below:

1) Outages could take place in the final months of the CM agreement prior to exit. The CMU would still be subject to CM obligations and would not be able to generate within the same agreement post conversion to a different generating class.
2) CMUs could choose to replace their capacity through secondary trading away their capacity obligations if an outage period is significantly longer than a typical outage period.
3) If the CMU is unable to convert whilst meeting its CM obligations, then the work could take place after the CMU has exited its CM agreement. The plant would therefore have an outage after the completion of their final CM delivery year and prior to commencing delivery through the DPA. The precise timing of conversion and outage would be a commercial decision.

We are aware that, at present, converting to a low carbon technology whilst receiving CM payments may be in breach of Rule 4.4.4 if the configuration of the Generating Units comprising a CMU is changed. We are considering a carve out from this Rule in order to support decarbonisation.

The government seeks views on a managed exit pathway that will enable unabated gas generators to exit their multi-year CM agreements to transfer to a DPA, enabling conversion to power CCUS (pathway A).

Question 13: Please indicate whether you would consider using pathway A and provide details to support your answer.

Question 14: Do you agree with the managed exit process timings for pathway A, as set out in Figure 1?

Question 15: Do you agree with the proposed eligibility criteria set out in Table 1? Do you see any barriers to providing evidence of being party to a DPA at the required time? Please provide details to support your answer, including sharing your views on the nature of the evidence we suggest providing.

Question 16: Can you identify any unforeseen consequences in the CM that could arise from a managed exit via pathway A? Please give details with your answer.

Question 17: If you were a multi-year agreement holder for an unabated gas CMU that you planned to convert to power CCUS, how would you prefer to manage the outages associated with the conversion process? Please provide details of your answer with reference to the options stated in the proposed generation outage management section and any supporting information, including the conversion type, capacity size, and generation outage period.

Question 18: Are there any additional barriers, whether under the CM or not, which would prevent you from using pathway A?

Question 19: What are your views on whether a decision to refuse a notice of intent to use a managed exit should be a Delivery Body reviewable decision under Regulation 68 of the Electricity Capacity Regulations 2014?

Question 20: What wider changes to the CM and other policy would you expect to be needed to enable unabated gas CMUs to decarbonise?

7. Assessment of Impact

The assessment covers the proposals set out in this consultation.

7.1 Lifetime extensions

The proposed option would entail reducing the capex threshold for Refurbishing CMUs to £50/kW. This aims to enable a wider range of life-extending capital expenditure investments to gain access to multi-year agreements (up to three years). In line with the existing requirement under Rule 3.8 that Refurbishing CMUs submit a "declaration about refurbishing works",[36] Refurbishing CMU Applicants will be required to submit a certificate from an Independent Technical Expert confirming that the improvement work is necessary to extend the operational life of the CMU for at least the full term of the agreement. CMUs would also need to show that they had met relevant milestones prior to the first delivery year.

While other technologies are likely to utilise the changes in this proposal, we anticipate a large majority of capacity will be existing gas CCGTs.

The government has heard from stakeholders that one-year agreements are a particular barrier to investing in maintenance work. The proposal will provide greater revenue certainty by increasing access to multi-year agreements for eligible projects. CM payments are typically used to cover some of the fixed costs of the participants and multi-year agreements allow participants to spread the repayment of these costs across multiple years, thereby reducing their auction bid prices. It is expected that participation of existing assets in the CM will increase relative to a scenario without the proposal. Encouraging refurbishing activity will reduce the likelihood of older existing plants retiring and dropping off the system, reducing capacity adequacy risks.

The proposal is therefore likely to increase the volume of existing capacity participating in future years compared to the counterfactual where more retirements occur, thereby increasing auction liquidity. In turn, this may place downward pressure on the CM auction clearing prices and overall auction costs.

Conversely, the proposal also has the potential to reduce liquidity in future auctions as we lock-in multi-year agreements of up to three years for existing assets. The positive security and value for money impact will therefore depend on the extent to which the proposed capex threshold level and requirements for accessing multi-year agreements are effective in reducing deadweight[37] and minimise any negative impact on liquidity. Whilst we cannot forecast the increase in take up of multi-year agreements, we expect this element of the proposal to have negligible cost pressure on the CM given tight market conditions.

[36] An application in relation to a Refurbishing CMU states that the Qualifying £/kW Capital Expenditure is equal to or greater than the Three Year Minimum £/kW Threshold and less than the Fifteen Year Minimum £/kW Threshold.

[37] Where plants would have undertaken the same work with a single year contract.

7.2 Decarbonisation Readiness

The proposed option would ensure that all new build or substantially refurbishing combustion capacity seeking to enter the 2026 T-4 CM auction would be built ready to decarbonise in line with DR legislation due to come into effect from 28 February 2026. The option will require relevant plants applying for prequalification for the 2026 auction in summer 2025 to declare that they will obtain the required DR permit once the DR legislation is in effect.

The proposal will remove the risk that new unabated gas plants receive support from the CM without having a built-in route to decarbonise.

The proposal could potentially reduce liquidity by deterring some plants from entering the 2026 T-4 auction if they had already secured an environmental permit under the existing rules and deem the addition of a new requirement to be too onerous. However, this risk is regarded as negligible.

7.3 Providing clear and viable routes to decarbonisation (Pathway A)

We propose to introduce a decarbonisation pathway (“managed exit”) for unabated gas generators with multi-year CM agreements to leave the CM to transfer to bespoke support, enabling conversion to power CCUS through the DPA.

The proposed measure will help accelerate the rollout of low carbon flexible technologies by enabling gas generators to convert once decarbonisation options are available. This will have a positive impact on decarbonisation. The size of the impact will depend on wider factors outside the CM, in particular by how quickly CCUS technology develops and the pace their enabling infrastructure is rolled out.

The proposal recognises that as unabated gas generation remains the only long duration flexible technology to have been deployed at scale in GB to date, it is reasonable to expect it to continue to play a key role in ensuring capacity adequacy whilst low carbon alternatives reach maturity. The proposal is expected to encourage the participation of gas assets in the CM by offering more options and pathways to convert later. This will increase auction liquidity and improve the value for money of CM auctions. The proposal also has the potential to bring forward new build gas capacity which might have otherwise been deterred by a lack of decarbonisation routes in the CM. The proposal is therefore expected to have a positive impact on the CM’s capacity adequacy objective.

Question 20: Do you agree with the consideration of impacts set out in this consultation? Are there any additional impacts of the policies we are consulting on which the government has not considered? Please provide supporting evidence where possible.

Consultation questions list

Question 1: Do you support the proposal of changing the CM to reduce capacity risks by facilitating investment to extend the lifetime of CMUs? Can you tell us what you would do differently if the proposal is implemented?

Question 2: Do you agree that lowering the capex threshold in this way would achieve the desired outcome? Please provide detail with your answer.

Question 3: Do you agree with the proposed reference cost level underpinning the new capex threshold? Do you have any evidence that this specific cost level would overcome existing barriers? If you disagree, please provide evidence for an alternative reference cost level.

Question 4: In your opinion, would this proposal result in a gaming risk; and would the proposed Independent Technical Expert certification be sufficient to mitigate the risk? If not, what other safeguards do you think should be put in place?

Question 5: Do you have any views on how the proposed Independent Technical Expert certification should be implemented in a way that is proportionate and reasonable?

Question 6: Are there any potential unintended consequences or risks that you think the government should consider?

Question 7: What impact does a proposal for plants in England to demonstrate compliance with upcoming DR requirements have on plant participation in prequalification in 2025 and the early 2026 T-4 auction?

Question 8: Do you foresee any difficulties in prospective plants being able to comply with the proposed requirements under Option A? If so, please say what they are.

Question 9: Do you foresee any difficulties in prospective plants being able to comply with the proposed requirements under Option B? If so, please say what they are.

Question 10: Do you foresee any difficulties in prospective plants being able to comply with the proposed requirements under Option C? If so, please say what they are.

Question 11: Which option do you prefer? Please explain why.

Question 12: If Option B or C are implemented, what are your views on whether they should be a permanent measure which applies to all future CM applicants?

Question 13: Please indicate whether you would consider using pathway A and provide details to support your answer.

Question 14: Do you agree with the managed exit process timings for pathway A, as set out in Figure 1?

Question 15: Do you agree with the proposed eligibility criteria set out in Table 1? Do you see any barriers to providing evidence of being party to a DPA at the required time?

Please provide details to support your answer, including sharing your views on the nature of the evidence we suggest providing.

Question 16: Can you identify any unforeseen consequences in the CM that could arise from a managed exit via pathway A? Please give details with your answer.

Question 17: If you were a multi-year agreement holder for an unabated gas CMU that you planned to convert to power CCUS, how would you prefer to manage the outages associated with the conversion process? Please provide details of your answer with reference to the options stated in the proposed generation outage management section and any supporting information, including the conversion type, capacity size, and generation outage period.

Question 18: Are there any additional barriers, whether under the CM or not, which would prevent you from using pathway A?

Question 19: What are your views on whether a decision to refuse a notice of intent to use a managed exit should be a Delivery Body reviewable decision under Regulation 68 of the Electricity Capacity Regulations 2014?

Question 20: What wider changes to the CM and other policy would you expect to be needed to enable unabated gas CMUs to decarbonise?

Question 21: Do you agree with the consideration of impacts set out in this consultation? Are there any additional impacts of the policies we are consulting on which the government has not considered? Please provide supporting evidence where possible.

8. Next steps

This consultation will remain open to written responses for 8 weeks from 15 October 2024, closing on 10 December 2024. The government will analyse all responses to inform further policy development. We expect to respond in early 2025, outlining the proposals the government intends to implement. These proposals will be informed by the range of responses the government receive, by further stakeholder engagement and by additional analysis.

The government has historically made changes to the CM through legislative changes for the following delivery year, however – as in every year – this is subject to when parliamentary time allows. Implementation will also be subject to ensuring the proposed changes are compliant with the requirements of the UK's domestic subsidy control regime.

The government has undertaken analysis as part of the public sector equality duty (PSED) process, and we do not believe that any groups are likely to be disproportionately impacted by the policies. The impact on consumer bills is expected to be negligible, and we do not foresee any impacts on protected groups. We will continue to assess the equality implications of these options and will keep the PSED closely under review. If you have any views on how the policies may impact equality, please indicate this in your response.

9. Glossary

Abbreviation/term	Definition
Capacity Agreement	The rights and obligations accruing to a Capacity Provider under the Regulations and the Rules in relation to a CMU for one or more delivery years.
Capacity Auction	An auction held under Part 4 of the Regulations, as a result of which successful bidders are awarded Capacity Agreements.
Capital Expenditure (capex)	Money spent by a business or organisation on acquiring or maintaining fixed assets, such as land, buildings, and equipment.
Capital Expenditure Thresholds	Auction parameters that determine whether a CMU can access a multi-year agreement (either as a refurbished CMU or a new build CMU) based on their amount of capital expenditure (in £/kW).
Capacity Market (CM)	A mechanism to contract reliable sources of capacity, and ensure they respond when needed, to help support security of supply. This results in payment to any Capacity Provider who can respond when called on by NESO in times of system stress. Auctions for this capacity take place both four years (T-4) and one year (T-1) ahead of delivery, and agreements generally last for one year.
Capacity Market Rules (“the Rules”)	The CM Rules provide the technical detail for implementing the operating framework set out in the Regulations.
Capacity Market Rules/The Electricity Capacity Regulations (“the Regulations)	This refers to the Electricity Capacity Regulations 2014, S.I. 2014/2043, the principal regulations underpinning the CM.
Capacity Market Unit (CMU)	A unit of electricity generation capacity or DSR capacity that can be put forward in a capacity auction. It is the product that forms the capacity to be purchased through the CM.
Capacity Provider	A person who holds a Capacity Agreement or a transferred part in respect of a Capacity Agreement.
Carbon Capture Readiness (CCR)	Requirements under Section 36 of the Electricity Act 1989 consent applications relating to the planning of new combustion plants, at or over 300 MWe capacity, and covered by the EU Large

	Combustion Plant Directive, that such plants should be built “carbon capture ready”.
Carbon Capture, Usage and Storage (CCUS)	A technology for capturing carbon dioxide that would otherwise be emitted from a process (e.g. electricity generation) and either using it (often in industrial processes) or permanently storing it.
Combined-Cycle Gas Turbine (CCGT)	An electricity generation technology in which a gas turbine and a steam turbine are used in combination to achieve greater efficiency.
Contracts for Difference (CfD)	15-year private law contracts between low carbon electricity generators and the Low Carbon Contracts Company. Contracts are awarded in a series of competitive auctions. Generators receive revenue from selling their electricity into the wholesale market. When the market reference price is below the strike price, generators receive a top-up payment for the additional amount. If the reference price is above the strike price, the generator must pay back the difference.
Decarbonisation Readiness (DR)	Relates to requirements expected to come into effect from 28 February 2026 for new and substantially refurbishing combustion power plants to be built ready to decarbonise. These requirements will replace the existing Carbon Capture Readiness (CCR) requirements.
Delivery Body	National Energy System Operator (NESO).
Delivery Year	In relation to a capacity auction, this means the year for which a 1-year Capacity Obligation is awarded, or the first year of the period for which a multi-year Capacity Obligation is awarded. Delivery years run 1 October- 30 September of each calendar year.
Demand Side Response (DSR)	DSR is a method of reducing electricity demand. This can be achieved by either reducing demand by switching off assets or by starting up on-site generators to provide electricity in place of drawing it from the distribution network or transmission network.
De-rated Capacity	The capacity that a CMU is likely to be technically available to provide at times of peak demand, which is specific to the CMU’s technology type and individual characteristics.
De-rating Factor	De-rating factors are applied to all forms of electricity generation in the CM to reflect that 100%

	of capacity will not be available 100% of the time. This is because generating plants can break down from time to time, and wind and solar output varies day to day.
Dispatchable Power Agreement (DPA)	A private law contract between a carbon emitting electricity generator and the government which sets out the terms for capturing and storing carbon and the compensation which the generator will receive in return.
National Energy System Operator (NESO)	NESO is an independent, public corporation responsible for planning Britain's electricity, gas and hydrogen networks, as well as operating the electricity system. In the GB electricity system, NESO performs several important functions, from second-by-second balancing of electricity supply and demand, to developing markets and advising on network investments. NESO replaced the National Grid Electricity System Operator on 1 October 2024.
Flexibility	The ability to shift the consumption or generation of energy in time or location. Flexibility is critical for balancing supply and demand, integrating renewables, and maintaining the stability of the system. Flexibility technologies include power CCUS, H2P, LDES, flexible demand and interconnectors.
Generator	(i) Any equipment that produces electricity, including equipment which produces electricity from storage; and (ii) A business which operates such equipment.
Generating Technology Classes (GTC)	Means a class of Generating Unit, defined by the technology used to generate electricity, for which the Secretary of State requires the Delivery Body to publish a De-Rating Factor.
Gigawatt (GW)	A unit of capacity (1000 megawatts)
Hydrogen to power (H2P)	The conversion of low carbon hydrogen to produce low carbon electricity.
Independent Technical Expert (ITE)	A person who is independent of the relevant Capacity Provider and is engaged by the relevant Capacity Provider to prepare the technical assessment, report, certificate or commentary required by the Rules to the Required Technical Standard.
Inertia	Inertia refers to kinetic energy 'stored' in the electricity system that acts as a cushion against

	sudden changes in frequency that is caused by faults or changes in demand and supply. Inertia has historically been provided by coal and gas-fired generators, as they contain large synchronous rotating masses. As we move towards a fully decarbonised electricity system, inertia will increasingly need to be managed through new low carbon technologies.
Long Duration Electricity Storage (LDES)	Encompasses a group of conventional and novel technologies, storing and releasing energy through mechanical, electrochemical, and chemical means. LDES will be pivotal in delivering a smart and flexible energy system that can integrate high volumes of low carbon power, heat, and transport.
Panel of Technical Experts (PTE)	An advisory group of independent consultants who were appointed by the government to perform a specific and technical function as part of the first Electricity Market Reform delivery plan process.
Power Carbon Capture Usage and Storage (power CCUS)	Gas-fired power generation with CCUS technology.
Refurbishing Capacity Market Unit (CMU)	An existing CMU which is the subject of an application as a Prospective CMU by virtue of an improvements programme that will be completed prior to the commencement of the first relevant delivery year.
Renewables Obligation (RO)	The Renewables Obligation (RO) scheme was designed to encourage generation of electricity from eligible renewable sources in the UK. The RO scheme closed to all new generating capacity 1 April 2017.
Review of Electricity Market Arrangements (REMA)	The government launched the Review of Electricity Market Arrangements (REMA) following a commitment in the British Energy Security Strategy. REMA is a major review into Britain's electricity market design to radically enhance energy security and to help deliver our world-leading climate targets whilst reducing exposure to international gas markets.
Satisfactory Performance Days (SPDs)	Days within the delivery year in which Capacity Providers must demonstrate that they are able to deliver their Capacity Obligation.
Unabated (gas) generation	Electricity generation where carbon dioxide from burning natural gas is not captured and stored.

This consultation is available from: www.gov.uk/government/consultations/capacity-market-proposals-to-maintain-security-of-supply-and-enable-flexible-capacity-to-decarbonise

If you need a version of this document in a more accessible format, please email alt.formats@energysecurity.gov.uk. Please tell us what format you need. It will help us if you say what assistive technology you use.