



## PLMR Insights

# Review of Electricity Market Arrangements (REMA)

## Summary

The government released the [second consultation on REMA - Review of Electricity Market Arrangements](#) on 12<sup>th</sup> March 2024.

Building on the first consultation released in July 2022 which sought views on the case for change and a wide range of proposals, this inquiry significantly narrows down the options, setting out a clearer view of the potential design of future electricity market arrangements.

Reforming electricity markets through the REMA programme is seen as vital to the delivery of the government's plan to secure a fully decarbonised electricity system by 2035. The purpose of the programme is to create the market arrangements to complete the transition to a low-carbon technology-based system, managing a smooth and low-cost move away from remaining unabated fossil fuel generation capacity whilst maintaining security of supply.

This consultation is structured around four key challenges. These are:

1. Passing through the value of a renewables-based system to consumers.
2. Investing to create a renewables-based system at pace.
3. Transitioning away from an unabated gas-based system to a flexible, resilient, decarbonised electricity system.
4. Operating and optimising a renewables-based system cost-effectively.

The government have assessed proposals to take forward within these four challenges against five criteria – value for money, deliverability, investor confidence, whole-system flexibility and adaptability. **Below, we have provided summary and analysis of the proposals being put forward and discounted within the four sections.**

**The consultation closes on 7<sup>th</sup> May 2024.**

**The REMA team welcomes engagement outside of final consultation responses** throughout the coming months, and recommends contacting [remamailbox@energysecurity.gov.uk](mailto:remamailbox@energysecurity.gov.uk) to organise bilateral discussions regarding the proposals put forward.

By the summer, the government expects to have provided a summary of responses. The policy development phase of the programme is intended to be completed by mid-2025, and moved into full-scale implementation from 2025 onwards.

A visual summary of the status of the initial proposals can be found in an appendix at the end of this document. The full consultation document can be found [here](#).

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## Challenge 1: Passing through the value of a renewables-based system to consumers

This part of the consultation explores how to best decouple gas and electricity prices to pass through the benefits of renewables to consumers; the role of marginal pricing; the benefit of CPPAs; and how to incentivise electricity demand reduction.

The preferred proposal within this section is to **continue accelerating the deployment of renewables through a future-proofed CfD and maintaining a unified wholesale market for all technologies** – to ensure that electricity is decarbonised in a cost-effective manner and the benefits of renewables are efficiently passed through to consumers.

Large consumers are encouraged to take additional steps to insulate themselves from price volatility by purchasing renewable power in current market structures, including through CPPAs.

Alternative market structures, such as a Green Power Pool or a Split Market, have been discounted, due to unresolvable design, deliverability and timescale challenges. Direct intervention in upstream electricity markets has also been discounted, due to the risk of introducing further complexity and distortions into markets.

The government suggests that the current approach of accelerating renewable rollout through a CfD-type support mechanism will:

- Reduce the proportion of time that unabated gas is setting prices.
- Ensure prolonged periods of low wholesale market prices in the future due to the low short-run marginal costs of renewables.
- Ensure consumers are protected during potential periods of high wholesale prices due to a higher proportion of generation on schemes which provide a limitation on inframarginal rent.

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## **Challenge 2: Investing to create a renewables-based system at pace**

Challenge 2 explores how to de-risk investment in renewables while increasing operational risk exposure to deliver the lowest overall system cost.

**This section commits to a future-proofed CfD type scheme as the government's main mechanism for supporting investment in renewable generation.**

**They are not currently putting forward a preferred version of the future CfD, as determining the best reforms will depend on decisions made elsewhere in REMA – particularly on locational pricing.**

Introducing a strike price range and a revenue cap and floor has been discounted.

A reform being considered is delinking CfD payments, through either deemed payments or a capacity payment. Both options aim to resolve operational distortions associated with the current CfD, since assets should be incentivised to participate in whichever markets give the greatest returns and to reduce their output when the market is oversupplied. Both options would only apply to CfDs awarded in future auctions.

They are also considering a partial CfD, where only a percentage of an asset's total capacity would be covered by a CfD for all new projects. Further work is being undertaken to model whether it would result in system benefits through the two parts of the site responding differently to market signals, thus reducing the opportunity cost associated with operating flexibly that normally exists within the CfD.

A further consideration is changing the reference price in order to change the risk profile of CfD-backed assets and broaden exposure to market signals, prompting generators to be more responsive to market needs.

**In terms of next steps, the next phase of REMA will shift to a narrower assessment of the remaining CfD reform options.**

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## Challenge 3: Transitioning away from an unabated gas-based system to a flexible, resilient, decarbonised electricity system

This section of the consultation explores how to maintain security of supply in a future electricity system dominated by intermittent renewable generation, and how to manage the transition from unabated gas to low carbon flexible technologies.

The challenges of deploying low-carbon flexibility include a lack of sufficiently granular time and location based-operational signals to incentivise the operation of assets in response to system needs; higher investment costs in FOAK technologies; low-carbon flexibility not being sufficiently valued in market arrangements; reliance on infrastructure which isn't yet in place, e.g. a hydrogen network.

To address these challenges, the proposed reforms look to design the market in a way which sends sharper operational signals demonstrating when and where valuable flexibility is needed, and sufficient investment signals to bring forward these technologies.

### Capacity Market

The government intends to **retain the Capacity Market as the capacity adequacy mechanism**. This section sets out potential options to evolve the CM to meet future capacity adequacy challenges.

The consultation proposes to introduce a minimum procurement target into the CM. This is being called the '**Optimised CM**' design, and aims to introduce changes to the auction design which will procure the optimal technology mix to support a future fully decarbonised electricity system.

**The key design option being taken forward to optimise the CM is a single auction with multiple clearing prices, with a focus on introducing a minimum procurement target for desirable characteristics.** This allows all technologies to compete in the same auction, but introduces a mechanism rewarding flexibility capabilities/low-carbon capacity. **The consultation is seeking views on the unintended consequences or barriers to success to introducing minimum procurement targets into the CM, and whether an Optimised CM will sufficiently incentivise the deployment and utilisation of low-carbon flex.**

Other CM reforms progressing include providing greater clarity on auction targets beyond four years ahead; strengthening CM rules to protect consumers; ensuring the reliability standard is fit for purpose.

The January 2023 CM consultation sought views on introducing lower emissions limits for new build and refurbishing CMUs. Whilst the government remains committed to introducing lower emission limits, they have reflected concerns about the replacement of unabated gas capacity and the impact on security of supply, and **will therefore not implement the limits until the 2026 CM auctions at the earliest.**

### Deploying low-carbon flex

Hydrogen to Power, Power CCUS, electricity storage, interconnectors and demand-side response are identified as key to decarbonising unabated gas generation and securing flexible capacity for the future. It acknowledges the separate consultations recently released and the bespoke mechanisms needed to initiate the deployment of these technologies – however, it

states that in the long-term, the Optimised CM should be the primary scheme used to deploy a competitive mix of low-carbon flex.

The government has also updated their expectations of the amount of flexibility needed on the future electricity system. For long-duration flexibility including H2P, unabated gas, CCUS and LDES, it is estimated that between 30-50GW will be required. 55GW of short-duration flexibility such as batteries and DSR is predicted to be needed.

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## **Challenge 4: Operating and optimising a renewables-based system cost-effectively**

Challenge 4 explores how to ensure sufficient price signals are sent in the wholesale market, how to improve balancing markets and mechanisms, and how to maintain sufficient liquidity in the future.

**The government has continued to consider locational pricing in the form of zonal pricing, but has discounted nodal pricing on the grounds of investor confidence and deliverability of 2035 targets.**

This section aims to address five challenges;

1. Improving locational signals
2. Improving temporal signals
3. Improving balancing and ancillary services
4. Improving local and national market coordination
5. Improving market liquidity

### Zonal pricing:

The government acknowledges the level of risk associated with implementing zonal pricing, but states that ‘there is a clear case for continuing to assess locational pricing’. They identify ‘several major benefits of locational pricing which no other options are likely to provide’:

- A more efficient system with generators only dispatching when the market requires and there is sufficient network capacity.
- A net benefit for consumer bills due to the reduction in inframarginal rent.
- A reduction of volume traded in the Balancing Mechanism, improving operation of the system.
- More granular locational signals helping to maximise whole-system flexibility.
- Encouraging demand-side flexibility.

Risks identified include:

- Potential increases in the cost of capital as some assets are less able to respond to locational signals.
- Heightened risk for investors in terms of price (if generators are located in a lower wholesale revenue zone or if their revenues are less predictable due to changing local supply and demand), and volume (if generators are not dispatched as often).
- Complexity of implementation.
- A lack of certainty as to how a zonal model could impact liquidity.

- Debate over zonal boundaries creating risks and uncertainties.

**The government states that their intention is to ‘engage extensively with market participants in the next phase of the programme to design a viable zonal model which strikes the balance between delivering effective operational signals and maintaining investor confidence’.**

**It is yet to be decided whether consumers should be exposed to differential prices due to locational pricing.**

#### Alternatives to locational pricing:

Alternative options to locational pricing which carry less risk but can be used to send a locational investment signal include:

- Using Ofgem’s pre-existing network charging reform programme.
- Reviewing Ofgem’s transmission network access arrangements.
- Expanding measures for constraint management.
- Optimising the use of cross-border interconnectors.
- Introducing a locational element to the CfD.

These would likely be combined into a package.

**The government is seeking views on the efficacy of these options.**

#### Temporal signals:

The government is continuing to consider shortening settlement periods to encourage greater market participation and move volumes out of the Balancing Mechanism.

#### Balancing and ancillary services:

The government is continuing to consider different designs of central dispatch as part of the next phase of REMA. It acknowledges that any transition to centralised dispatch would entail significant implementation costs, challenges and risks for market participants.

In terms of operability, the government has concluded that existing and planned policies will need to be strengthened irrespective of broader wholesale market reform. They are consulting on creating an electricity system operability strategy for 2035, improving the forecasting of medium to long-term operability needs, and improving greenhouse gas emissions reporting. They are also exploring the alignment of longer-term ancillary services with CfD and CM auctions.

#### Local and national market coordination

The consultation discounts the option of reorienting the wholesale market around local, distribution-level markets.

It commits to continuing to consider the impacts of REMA reform on market liquidity.

#### Next steps on market design

In the next phase of REMA, the government will work closely with Ofgem, ESO/NESO and industry to develop market designs under both national and zonal pricing scenarios, assessing and comparing the benefits of each design.

As set out in Challenge 2, the chosen wholesale market arrangements will have to work in line with future CfD reform options. A particular focus for the next phase of REMA will therefore be to consider how CfD and wholesale market reforms might act in combination to distribute in different ways risks, benefits, and costs across market participants and technologies.

## PLMR recommendations

This is a crucial time for those operating in the electricity sector to engage with both government and opposition.

With the consultation response due in May and implementation commencing in 2025, it will be the next government taking forward these reforms – which may well be under a different administration. Organisations need to be engaging with decision-makers on both sides of the political spectrum now.

PLMR frequently assists organisations in formulating consultation responses, and we are well-placed to help you position yourself for success during this highly transformative time. If you would like our support, or further information, please contact [amy.colwell@plmr.co.uk](mailto:amy.colwell@plmr.co.uk).

## Appendix

### Status of initial REMA proposals

