THE ASSOCIATION FOR RENEWABLE ENERGY & CLEAN TECHNOLOGY

REA Members Townhall:
Review of Electricity Market Arrangements (REMA)

25th August 2022

Kindly hosted by CMS,

Cannon Place, 78 Cannon Street, London, EC4N 6AF

REA Competition Law Policy

- REA's compliance with all aspects of UK Competition Law applies to all activities of REA including its subsidiaries Member Forums, committees, working groups, technical groups, and sub-groups and any other such meeting:

  - Members are not permitted to discuss competitively sensitive information, or to use REA as a conduit for such discussions

  - Competitively sensitive information covers any non-public strategic information about a business's commercial policy. It includes, but is not limited to, future pricing and output plans

  - Please note this session is being recorded for note taking purposes.

Agenda

1) Welcome from CMS – Dalia Majumder-Russell,
Partner, Energy & Climate Change Team CMS

2) REMA Overview

- REA Approach to REMA – **Mark Sommerfeld (REA)**
- Overview of REMA – **Daniel Tindsley and Brianna May Mills (BEIS)**
- Locational Pricing Assessment – **Heather Stewart (Ofgem)**

3) Discussion 1: Wholesale Market Reforms and Options for Regional Pricing

Break 15 Min (Around 15.05)

4) Discussion 2: REMA Focus Areas

- Low Carbon Investment
- Flexibility and Capacity Adequacy
- Operability

5) REA Next Steps

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Welcome from CMS

Dalia Majumder-Russell,
Partner, Energy & Climate Change
Team CMS

REA Approach to REMA

The REA have welcomed the Review of Electricity Market Arrangements, highlighting the need for market reform to:

1) Expediate deployment of renewable energy systems
2) Deliver flexibility to the energy market
3) Provide Energy Security
4) Realise cost benefits of renewable generation.

To respond to REMA The REA have:

- Developed a chapter-by-chapter summary for members to break down proposals
- Established a Task and Finish working group to develop intial positions and draft response.
- Holding cross membership meetings to get further feedback.
- Looking to develop thought leadership series
- Engaged directly with relevant government teams.
- Develop a first draft by early September to provide opportunities for further member feedback.
- Exploring options for post-consultation engagement to continue to influence the REMA process, including exploring possibility of an event.

"Reforms, once agreed, will be vital to the target of a Net Zero electricity system by 2035, and will emphasise the need to protect existing renewables investments alongside any wider changes. We will now work with our members to fully analyse the proposals and their possible impacts."

Frank Gordon, Director of Policy at the Association for Renewable Energy and Clean Technology (REA)

Membership Engagement is Crucial

We are keen to hear directly from members on what they would like to see happen through REMA.

Today's session is just one of many ways to engage with the REA on REMA.

In today's sessions you will be able to feed in through:

- Live discussion
- Slido Polls
- Chat box on the MS Teams call

After this session, please continue to feed in via:

- Response to the initial draft
- Feedback to power@r-e-a.net
- The policy team are happy to set up bilateral discussions as appropriate
- Further membership discussions as required following 1st draft
- Sponsorship of thought leadership pieces

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Overview of REMA

Daniel Tindsley and Brianna May Mills

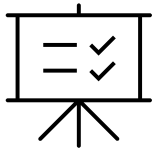
REMA Team, BEIS

Review of Electricity Market Arrangements (REMA) Overview

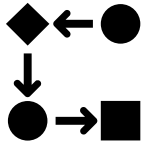
Thursday 25th August 2022

Department for Business, Energy & Industrial Strategy

Consultation Document Overview

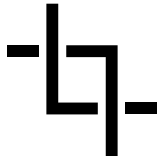


Objectives for electricity market reform – the context for this work; our vision for the future; and policy objectives

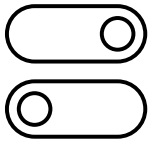


Case for change – our analysis of the challenges a future electricity system needs to address and our case for change

Our approach – detailing our timelines for work, core outcomes and how REMA will link with the wider UK energy package



Cross cutting questions – exploring cross-cutting questions about our overall approach to market reform

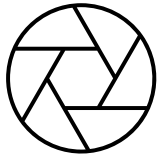


Initial assessment of options – exploring the options for reform organised around core workstreams

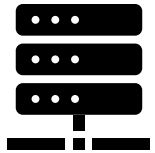
Department for Business, Energy & Industrial Strategy

There are cross-cutting questions and issues arising from our consideration of options for market reform, which will need to be addressed as part of this Review

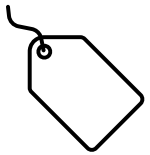
Role of the market



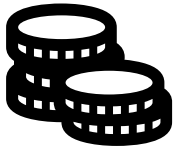
Extent of competition between technologies



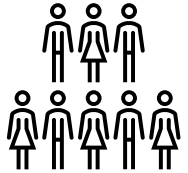
Extent of decentralisation: where decisions are made



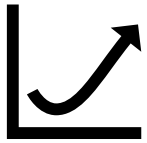
Role of marginal pricing



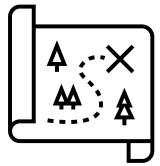
Minimising financing cost and maximising operational signals



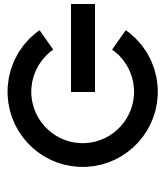
More accurate price signals and the benefits for consumers



The scale of change: delivering our objectives throughout the transition



Delivering more accurate locational signals

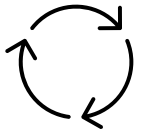


Electricity demand reduction

Department for Business, Energy & Industrial Strategy

The REMA team has organised work around five core workstreams which will be used to assess the options for reform:

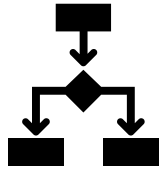
Wholesale market



Capacity Adequacy

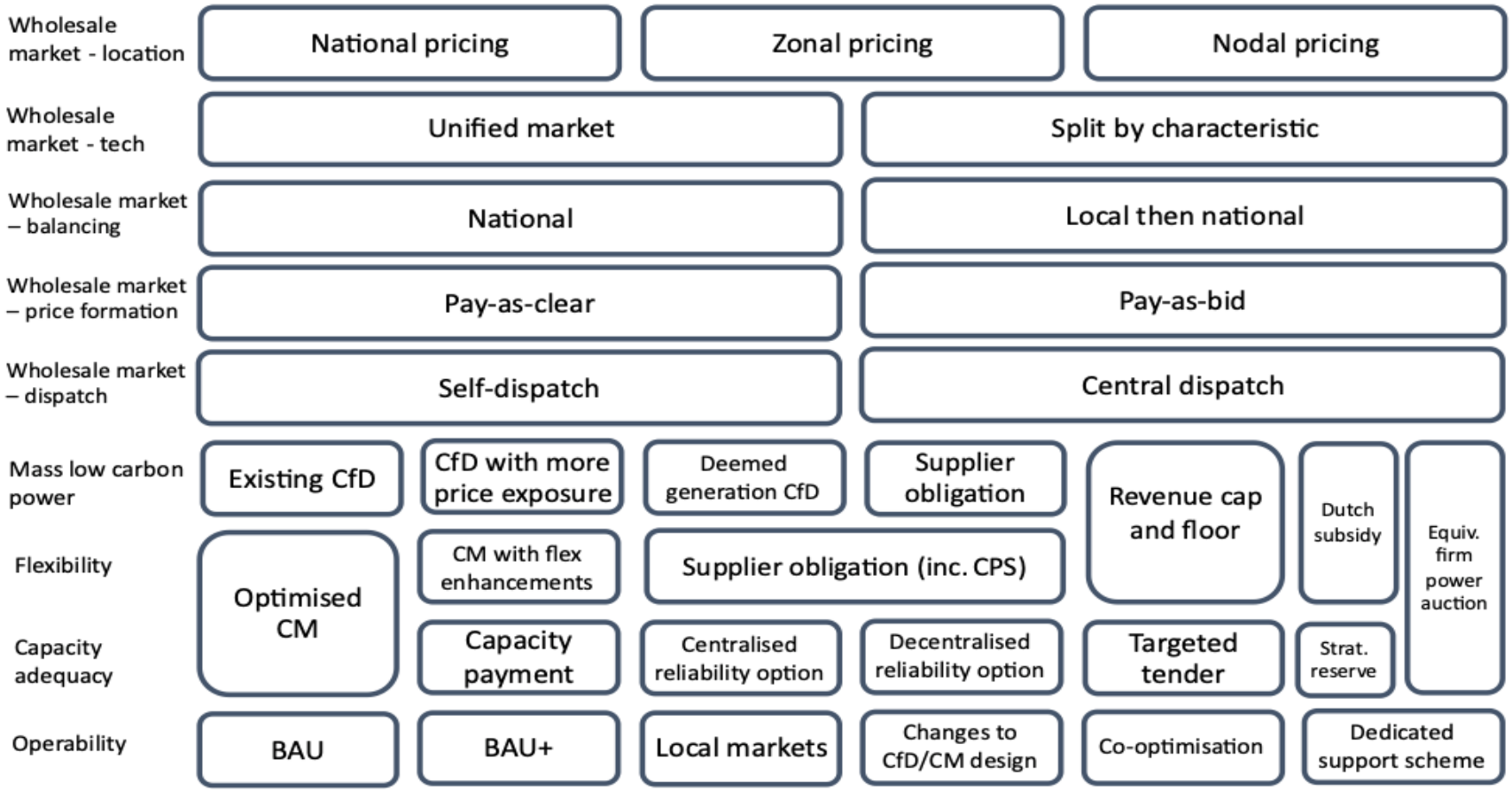
Flexibility

Low carbon investment



Operability

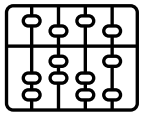
Policy packages will need to select at least one option from each row



Consultation Responses

We want to ensure that responses as are effective as possible to build our evidence base and prepare for our policy development process. We want content that can support us on:

Approach / case for change – have we identified the right issues; which ones would you prioritise (supported by evidence); do you agree with approach / objectives / scope?



Reform options - do you have evidence on key risks and opportunities (including international examples), including consumer, system and sectoral/commercial impacts? Have we missed any key ideas that would be more effective?

Engagement – can you point us to expertise, or groups that might be affected by different options that we should be talking to?

Responses should be provided online at https://beisgovuk.citizenspace.com/cleanelectricity/review-electricity-market-arrangements wherever possible, or alternatively use the response template and email **REMA@beis.gov.uk. Please provide responses question by question.**

Engagement Programme

Engagement type	Description	Proposed dates
Regular communication	Calls or newsletters	July onwards
Chapter specific events	Focused seminars on the consultation chapters	August – September
Strategic REMA wide events	Day-long in-person event in Sept/Oct followed by further events	September/October onwards
Attending industry events	Representing the REMA programme at your events	July onwards
Bilaterals	Small scale engagement with groups or individuals	July onwards
Focused engagement	Workstream-led workshop series	October onwards
	In-depth interviews / focus groups	October onwards

If you would like to be involved in our stakeholder engagement plans going forward, please email REMA@beis.gov.uk with the subject ‘Request to participate in future REMA Engagement’.

Set dates

	What?	Where?	Link to register/ sign up	When?
Chapter Seminars	A series of five sessions, one for each workstream chapter, where the team will introduce their workstream, highlight key information from the chapter and facilitate discussion with attendees.	Virtually: Microsoft Teams	Demand Reduction Low Carbon Investment **Mass low carbon investment survey**	Mon 22nd August Tues 23rd August
			Operability	Fri 26th August 10:00 – 12:00
			Flexibility	Tues 30th August 14:00 – 16:00
			Wholesale Market	Mon 5th September 15:00 – 17:00
			Capacity Adequacy	Thurs 8th September 10:00 – 12:00
REMA Conference	A one day in-person conference, ran twice over consecutive days, to discuss cross-cutting and more complex REMA issues through a number of interactive breakout sessions.	In-person: St Martin-in-the-Fields, Trafalgar Square, London WC2N 4JJ (Eventbrite sign up)	REMA Conference Please note, because of venue capacity we must restrict tickets to allow only one person per organisation to attend across the two days.	2 day event: Monday 12th September 10:00 – 17:00 Tuesday 13th September 10:00 – 17:00

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Locational Pricing Assessment

Heather Stewart

Ofgem, Head of Wholesale Market Reform
Energy Systems Management and Security

Overview

The UK Government is undertaking a Review of Electricity Market Arrangements. This will consider a wide range of options for updating GB electricity market arrangements to meet out 2035 target – decarbonisation of our power sector by 2035.

Alongside providing advice on the case for change and full suite of options, we are undertaking an assessment of zonal and nodal market design for GB.

Approach

1. Identify (i) simplified market designs to model and (ii) how these markets could operate in GB
2. Economic modelling to provide a quantitative benefits analysis of different market designs
3. Assess likely implementation requirements and costs
4. Distributional impact assessment and potential mitigations (and impact on benefits)

Outcomes

System modelling and analysis:

1. Supports BEIS decision-making on whether zonal and nodal market design should be short-listed for further consideration
2. Advances sector-wide market reform debate and capability in considering reform options

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Discussion 1: Wholesale Market Reforms and Options for Regional Pricing

Wholesale Market Reform: Proposals

Split Market
- Splitting generation into separate markets of variable, 'as available' and firm, 'on demand' power
- Consumers able to participate in both but the greater their flexibility, the more they purchase from the variable market. Consumers in the firm market pay a premium

Status quo reform
- With incremental reforms such as those to gate closure

Green Power Pool
- The SO would run a renewable power pool alongside the existing market with voluntary participation

Locational pricing
- Zonal pricing – clearly defined zones with boundaries drawn where transmission constraints occur. Suppliers pay the difference between the price where electricity was generated to where it was supplied, where there is a difference.
- Nodal pricing – each location in the transmission network has a value. Could be applied to both demand and supply, or just generation, with consumer opt-in. Central dispatch.
- Local markets options – 1) separate markets (pool, balancing, ancillary) at each connection between transmission and distribution networks. DNOs responsible for balancing local markets. 2) locational imbalance pricing, with suppliers facing regional based imbalance charges between demand and supply points

Pay as bid
- Participants receive the prices of their bids/offers rather than the bid of the highest price supplier selected to provide supply (decoupling gas from electricity price)

Wholesale Market Reform: Slido Poll

https://www.slido.com/

Slido code: # 4230427

slido

What is your preferred model of Wholesale Market design?

What level of locational pricing would you prefer?

Wholesale Market Reform: REA Initial Positions

- We welcome further exploration of the split market option, with careful design to prevent an investment hiatus
- The Green Power Pool's voluntary nature may mean that generators are not sufficiently incentivised to participate
- Shortening gate closure time could be help to provide effective price signals
- We would like to see a proposed timetable for delivery of the chosen options to demonstrate how it will enable Net Zero 2035
- We need to see more analysis on the proposed benefits of nodal and/or zonal pricing. There are significant concerns in industry about investment deterrence, increased complexity for smaller participants, access rights and interaction with other areas such as Queue Management reform. May not have the desired effect of incentivising generation at demand location.
- Neither of the local markets options has ever been implemented before, we think this is likely to mean they would take longer to design and implement and may deter investors
- We support the decoupling of the gas price from electricity price. Additional incentives to support flexibility may be necessary

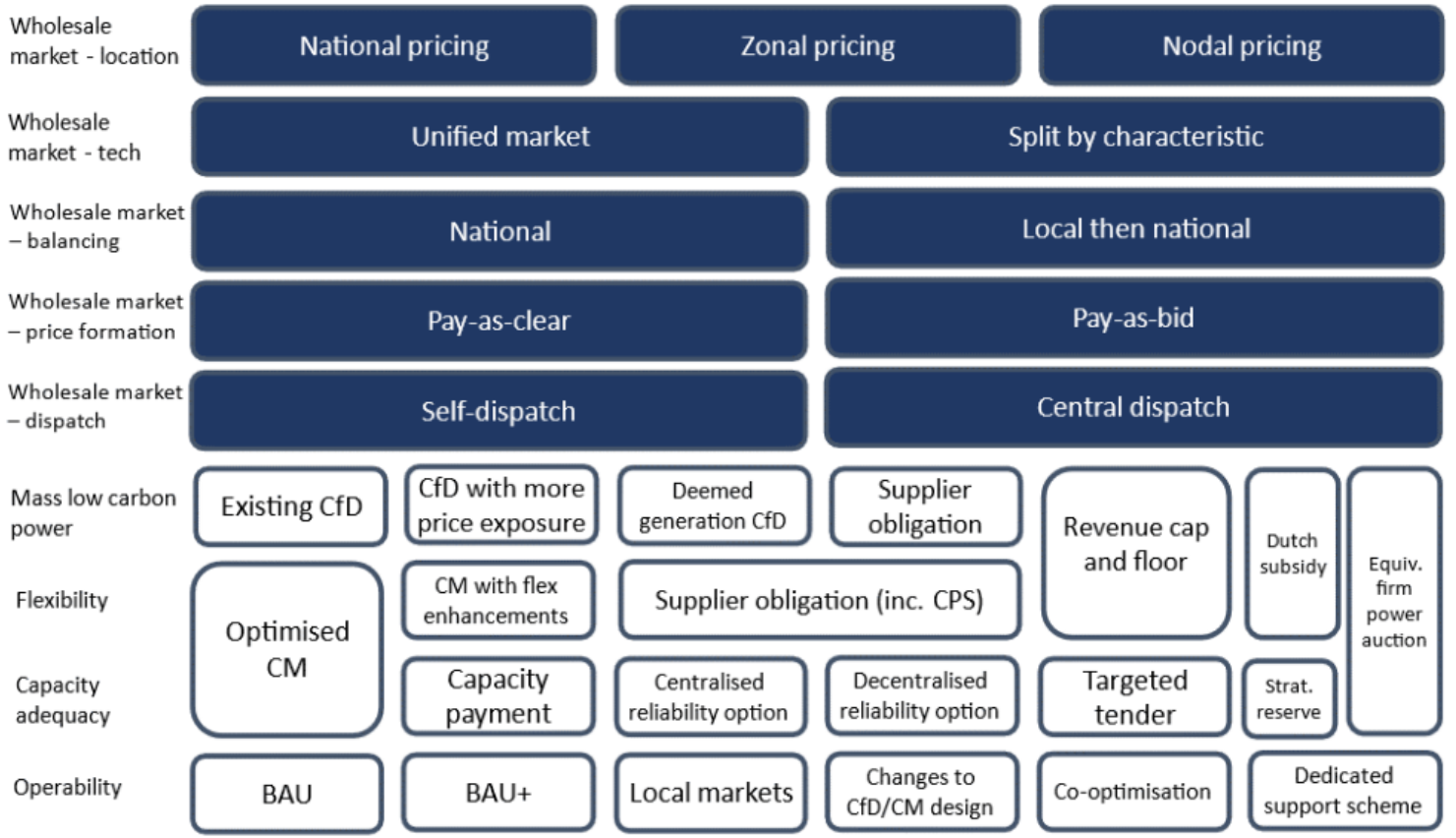
Wholesale Market Reform: Discussion

1. **Should there be a split market for generation, with separate markets of variable and firm power?**

2. **Should locational price signals be introduced? How could the challenges of nodal pricing be mitigated? What is the balance between potential benefits and problems with locational pricing?**

3. **Could the Green Power Pool work?**

4. **Would a 'pay as bid system' be sufficient to lower prices and meet decarbonisation objectives?**



Wholesale Market Reform: Slido Poll

https://www.slido.com/

Slido code: # 4230427

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How quickly should the Wholesale Market be reformed?

A) Urgently (<6 months – 1 year)

B) Short term (1-2 years)

C) Medium term (2-5 years)

D) Long term (5 + years)

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Break

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Discussion 2: REMA Focus Areas

- Low Carbon Investment
- Flexibility and Capacity Adequacy
- Operability

Low Carbon Investment: Proposals

BEIS are considering the following options to increase low carbon power deployment:

Supplier obligation

- Govt set an obligated trajectory of carbon intensity of electricity that suppliers can sell to customers.

CfD Variations

Develop the CfD so that generators are more exposed to price signals. Options:

- A *strike range.*
- Changes to the *reference price methodology.*
- Plants *paid on potential to generate* rather then output.

Revenue Cap & Floor

- Intended for all assets, possibly designed on £/MW basis.
- Would support flexibility and provide investor confidence.

Low Carbon Investment: REA Initial Positions

Our initial positions have been formed from the REA strategy, previous work with members, and meetings with the REA REMA task & finish group.

- We recognise the role of the CfD in maintaining investor and developer confidence, and support more frequent auctions. We note some variations have benefits, such as scaling CfD pricing to match demand.

- We believe a supplier obligation may be useful but it is difficult to assess before the conclusion of retail market reforms. We also have concerns over how this may favour mature technologies.

- In relation to the cap and floor, we would like to see detailed plans on how generation plants and storage facilities would be incentivised to offer maximum value to the system.

- The risk with the Equivalent Firm Power Auction is its untested nature, and with the Dutch Subsidy Scheme that it would rely on CCCS.

Low Carbon Investment: Slido Survey

https://www.slido.com/

Slido code: # 4230427

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Please rate the options for CfD reform outlined by BEIS:

A) Strike Range

B) Reform to Reference Price Methodology

C) Payment by potential to generate rather than output

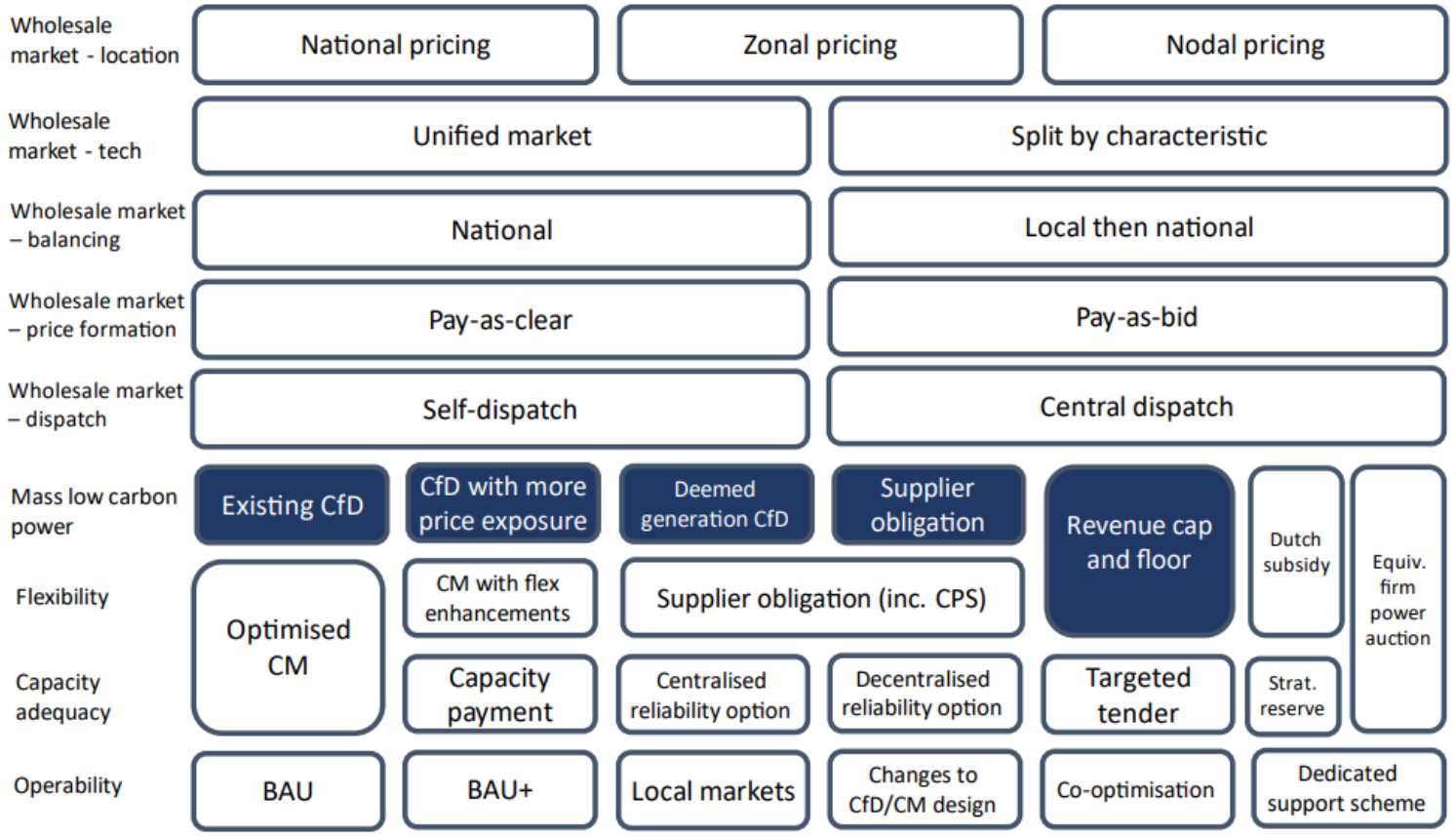
Low Carbon Investment: Discussion

1. **Should the CfD be reformed as is set out in REMA?**

2. **Should a revenue cap & floor be introduced for all renewable generation assets?**

3. **Would a supplier obligation mechanism deliver sufficient investment in low carbon technologies?**

4. **How can investor confidence in renewables be maintained during a period of market reform?**



Flexibility and Capacity Adequacy

Flexibility

BEIS outline the following options for increasing flexibility:

Supplier Obligation
- Flexibility-focused supplier obligation could provide strong investment signal for flexibility.
- Would likely not be standalone but could deliver smaller scale flexibility like demand side response.

Cap and Floor
- Flexibility assets compete for guaranteed minimum revenue floor from the government each period.
- A Cap could also be designed to maximise competition.

Capacity Market Reform
- Flexible auctions – introduce auctions open to all carbon technologies which meet agreed set of flex criteria.
- Introduce Multipliers to the clearing price to value flexibility characteristics.

Capacity Adequacy

Need to secure investment in sufficient capacity to enable system balancing at all times.

Centralised Reliability Options
The TSO determines the amount of capacity to be auctioned (sufficient to meet peak demand) and, in return for a reliability premium (determined through the auction process), secures the right to buy electricity from the assets on the wholesale market at a 'strike price'.

Strategic Reserve
Central authority auctions reserve capacity on top of what the market is expected to provide. Successful providers receive payment at their bid price which includes a payment for being available and a separate activation payment.

Capacity Market Optimisation:
- Separate Auctions for low carbon generation.
- Introduce multipliers to clearing prices valuing flex characteristics – response time, duration, location.

Flexibility and Capacity Adequacy: REA Initial Positions

Our initial positions have been formed from the REA's previous Long Duration Energy Storage Report, previous work with members, and meetings with the REA REMA task & finish group.

Flexibility

- The REA continues to push for a cap and floor mechanism to support long duration energy storage in particular, in order to get those sectors established.
- Such a mechanism could possibly be expanded, but there could be concerns over unintended consequences to the rest of the market.
- In the longer term, this would be moving towards a more market-based mechanism, as such competitive capacity market reforms are likely preferable.

Capacity Adequacy

- Reforms to the Capacity Market are likely to be the easiest for the market to respond to as well as the best for prioritising low carbon generation and rewarding ability to respond to smooth peaks and troughs.

Flexibility: Slido Poll

https://www.slido.com/

Slido code: # 4230427

Which mechanism would best facilitate flexibility deployment?

A) Cap & Floor

B) Supplier Obligation

C) CM: Flex Auctions

D) CM: Introduce Multipliers

E) Other

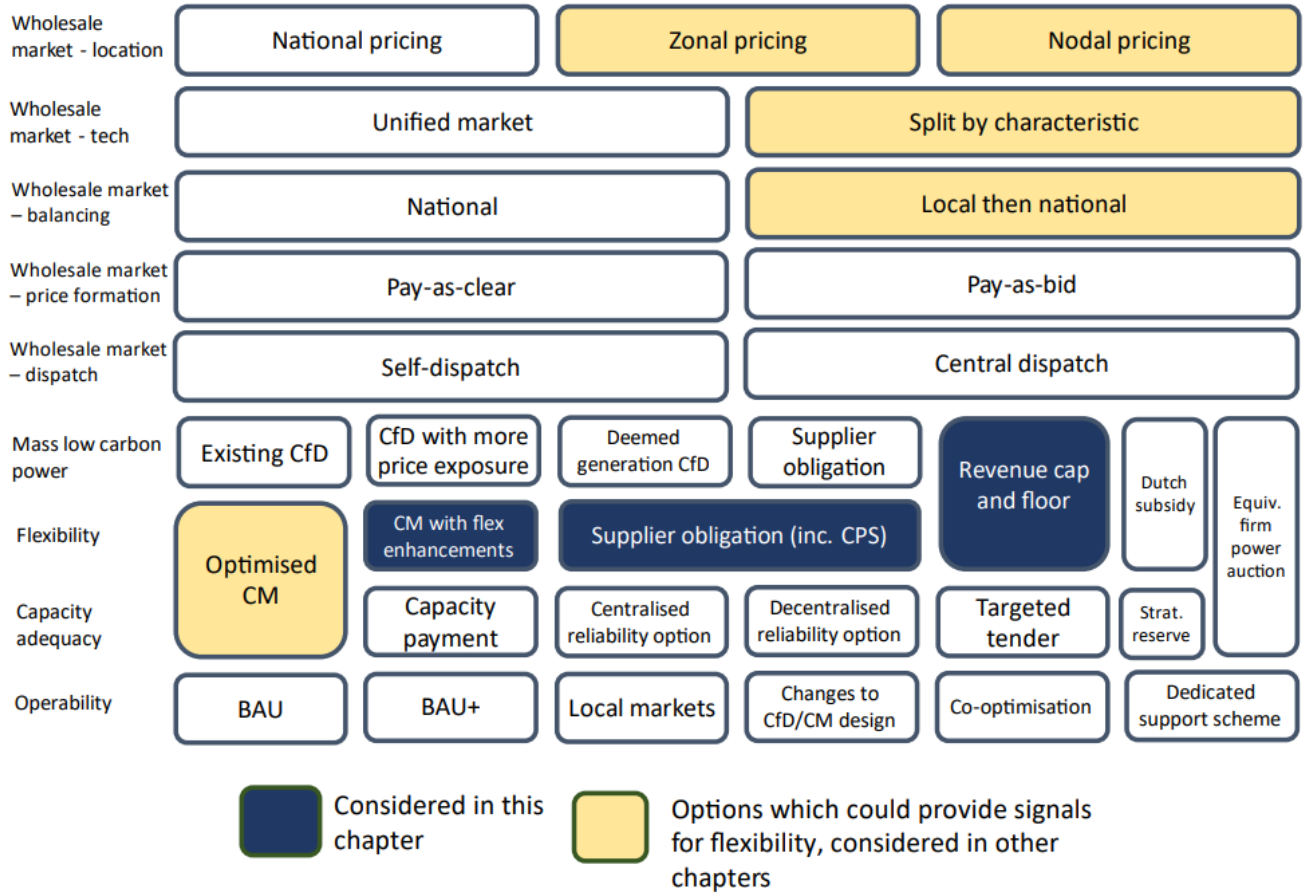
Flexibility and Capacity Adequacy: Discussion

Flexibility

- Should a cap and floor be introduced to support all flexible assets, or just for Longer Duration Energy Storage?
- Is there value to a supplier obligation?
- Would flexible auctions in the Capacity Market provide sufficient support to flexible technologies?
- Should the Capacity Market introduce multipliers to the clearing price to value flexible characteristics?

Capacity Adequacy

- Will changes to the Capacity Market alone be enough to ensure capacity adequacy in the future, or will additional measures be needed?
- Would any other major reforms to the Capacity Market be useful?
- Should the government consider a strategic reserve?



Operability: Proposals

Options

- Maintaining the status quo
- Enhance the existing: Give the ESO (or FSO) an obligation to prioritise zero/low carbon procurement, ensure an optimal balance between long and short contracts, align CfD & CM tenders with ancillary services, introduce a matrix approach
- Developing local ancillary services markets: DNOs take on greater role in managing operability
- Co-optimisation of ancillary services: with broader wholesale market changes using central dispatch. Short timeframes; more whole systems approach
- CfD: remove disincentives to ancillary service provision
- CM: modify to include obligations or incentives to ancillary service provision

Summary

- Status quo vs enhancing existing arrangements vs developing local ancillary services markets
- Co-optimisation of ancillary services, changes to CfD, changes to CM also considered

Operability: REA Initial Positions

- Distribution grid relies on transmission grid for back-up, so transmission grid needs to have sufficient back-up. Therefore it is currently dependent on centralised back-up
- Local balancing at distribution level will become increasingly important, so greater coordination is needed between ESO/FSO and DNOs, but ESO/FSO needs to maintain central control and a coordination role
- ESO/FSO should prioritise zero and low-carbon services because it's harder for them to compete at the moment
- FSO needs to be looking at both transmission and distribution due to the interaction

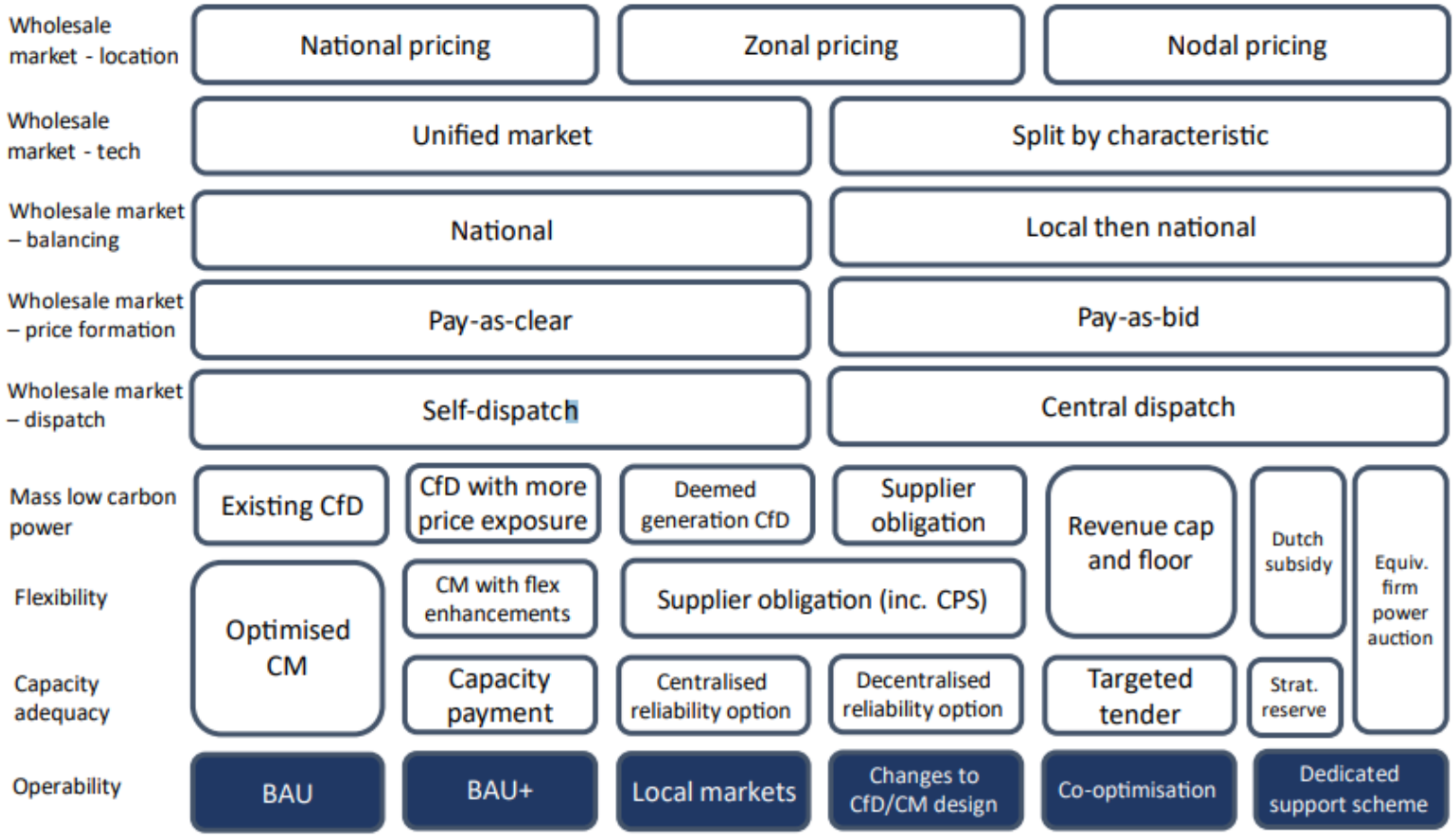
Operability: Discussion

1. **Are existing arrangements sufficient to ensure operability?**

2. **Does the CfD discourage ancillary services' provision in its current form? Would it be useful to modify the CM so that it facilitates ancillary services' provision?**

3. **Should DNOs take on a greater role in managing operability and how?**

4. **How should low carbon procurement be prioritised? Does the FSO have an ability (or obligation) to prioritise zero/low carbon tech?**



REA Next Steps

The REA will distribute a draft consultation response to all members for feedback in early September. This may be followed by further, more detailed online sessions open to the full membership.

We are actively engaging with the BEIS REMA team and will continue to do so throughout the consultation period and after the consultation closes.

The REA intend to develop a series of industry-leading policy papers to shape the debate on key areas of the REMA consultation, published in September. We are exploring options for an industry REMA conference post-consultation. **Sponsorship opportunities are available** (contact gjoseph@r-e-a.net for details).

Further influencing opportunities also being explored.

Please contact power@r-e-a.net with any feedback concerning the consultation. The REA policy team are also happy to arrange bilateral calls for specific feedback where appropriate.

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Frank Gordon
Director of Policy
fgordon@r-e-a.net

Amy MacConnachie
Director of External Affairs
amacconnachie@r-e-a.net

Mark Sommerfeld
Head of Power and Flexibility
msommerfeld@r-e-a.net

Callum Coleman
Solar and Storage, Policy Analyst
ccoleman@r-e-a.net

Isobel Morris
Senior Policy Analyst
imorris@r-e-a.net