Review of Electricity Market Arrangements - response form

The consultation is available at: https://www.gov.uk/government/consultations/review-of-electricity-market-arrangements

The closing date for responses is 10/10/2022

Please return completed forms to: REMA@beis.gov.uk

Please be aware that we intend to publish all responses to this consultation.

Information provided in response to this consultation, including personal information, may be subject to publication or release to other parties or to disclosure in accordance with the access to information regimes. Please see the consultation document for further information.

If you want information, including personal data, that you provide to be treated as confidential, please explain to us below why you regard the information you have provided as confidential. If we receive a request for disclosure of the information, we shall take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on the department.

I want my response	to be treate	ed as confidential	
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Comments: About the IET. The Institution of Engineering and Technology (IET) is one of the world's largest engineering institutions with over 168,000 members in 150 countries. Our aim is to inspire, inform and influence the global engineering community to engineer a better world. We are a diverse home across engineering and technology and share knowledge to engineer solutions to global challenges like climate change. With our roots in electrical engineering, we have been championing engineering solutions and the people who deliver them for 150 years. The IET provides independent, impartial, and expert advice, spanning multiple sectors including Energy, the Built Environment, Transport, Manufacturing and Digital. On behalf of the profession, the IET strives to inform and influence government on a wide range of engineering and technological issues. The organisation's membership spans a broad range of professional knowledge, and regularly offers unbiased, independent, evidence-based advice to policymakers via several channels. We believe that professional guidance, especially in highly technological areas, is critical to good policymaking. The IET welcomes the opportunity to comment on the Review of Electricity Market Arrangements.

Questions

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[Respondents should be asked to check a box from a list of options that best describes them at a respondent. This allows views to be presented by group type. A box for others should always be included and you should tailor the list]

	Respondent type
	Business representative organisation/trade body
	Central government
\boxtimes	Charity or social enterprise
	Individual
	Large business (over 250 staff)
	Legal representative
	Local government
	Medium business (50 to 250 staff)
	Micro business (up to 9 staff)
	Small business (10 to 49 staff)
	Trade union or staff association
	Other (please describe)

et design

1. Do you agree with the vision for the electricity system we have presented?				
⊠ Yes	□ No	☐ Don't know	☐ No opinion	

Please expand on your response here:

We welcome this consultation and broadly agree with the 5 bullet point headings set out in the document. We do believe it is important however to recognise that as the energy system in 2035 will look significantly different – there are some specific issues and outcomes which needed to be addressed explicitly as 'success criteria' with any future market changes. These are:

- Recognition that creation of a market for the right types/mix of flexibility services must be a
 primary outcome of this exercise. Flexibility will be as prominent as low carbon capacity in
 assuring a secure, low cost, low carbon energy system. In order to secure new flexibility
 resources are available, at optimal cost, long term price signals will be needed to
 incentivise investment.
- 2) The growing role of distributed resources (generation, demand response, DSR etc., and smaller participants like community energy) in securing a least-cost energy system and ensuring that we design to optimise their participation.
- 3) A heightened need to ensure security of supply and resilience, given the numerous challenges of:
 - a. Growing societal reliance on electricity for communications, transport, heating, etc.
 - b. An increasingly unpredictable climate and its impact on the system and how it is used.
 - c. A global energy market where energy supply chains are more overtly at risk of hostile political interference.
 - d. Matching flexibility to demand will require significant improvement (and hence investment) in information technology and likewise in operational technology to put into action. (A key inhibitor to flex adoption is complexity and cost outweighing benefit reducing this friction and being able to calculate the true benefit are crucial to drive the lower margin / high volume adoption of flex).
 - e. Different technologies are providing different means to delivering resilience, e.g., storage allows edge resilience.

These issues play out in several practical considerations, a major one being the need to design for a higher implicit value of lost load with more resilience to extremes. Another key area is to consider the future extent to which we can/should reply on interconnection with adjacent markets.

- 4) Aligning the market ambition with the equally significant challenges of building network infrastructure quickly enough to facilitate the scale of change required. In this respect we believe creation of the future FSO remains a critical step to ensure that investors can see a strategic pathway to the future operating environment. Not giving clarity on related issues (such as how offshore networks will be developed, or on streamlining of planning and consenting processes) could lead to investment hiatus and undermine the ambition set out in this consultation
- 5) Noting that locational pricing is an important theme in this consultation, any move to LMP needs to be cognisant of the extent to which price signals are acceptable to customers and stakeholders given the huge social focus on energy bills currently. The issue of 'fairness' is one which cannot be ignored especially when price models are not intuitive to the non-expert.

We also believe there is only value in locational pricing if it drives behaviour. If that is the main reason then timing is a major factor, the kind of decisions that would be impacted (where to live, build a factory etc.) are long term, so any LMP would need to be phased in over a time frame that is in line with people's decision making.

The rest of our responses elaborate on these themes.

We would also reinforce the importance of ensuring a whole-system viewpoint by aligning this work with retail market changes. This is especially important in ensuring local actors can do what is economically efficient and in consumer interests overall, without being overburdened with complexity.

The REMA scope includes all technologies that currently (or could) participate in electricity markets, but the scope excludes new nuclear; first of a kind project; and other markets e.g., natural gas, hydrogen, and policies for demand reduction for example. While these exclusions may cause distortions to electricity market designs, it seems pragmatic and sensible to exclude these more tangential policies and focus on the main requirements for reform. However, while interconnectors are excluded, the future assumptions about interconnector operations have a significant impact on UK electricity markets. It is unclear how these excluded and potentially market distorting factors will be addressed by the reform agenda.

A key issue that we suggest should be included in the scope of REMA is market access barriers. A key barrier is due to transmission and distribution network congestion, which is causing significant delays and investor uncertainty. For example, the ESO TEC register currently lists some 200 GW of new transmission connections in UK with connection dates running through to the mid- 2030's as networks is reinforced. However much of this capacity may not be required and unless some form of prioritisation is established, then the aims of REMA will not be achieved. Similarly, market access for distributed energy may be restricted due to the lack of enabling factors such as network access, metering, or data limitations.

2. Do you agree with our objectives for electricity market reform (decarbonisation, security of supply, and cost-effectiveness)?				
□ Yes	□ No	□ Don't know	☐ No opinion	

Please expand on your response here: Click here to enter text.

At a high-level the stated objectives are sensible. However, the unstated assumption is that markets should do as much as possible with minimal intervention.

We need to recognise the limits of what markets can do, and the need for speed and agility, and strike a balance between designing the market for the end state. Suggestions include:

- Supporting the development of recent technologies outside the market so they can take part in the market sooner.
- Deliver REMA in a way which minimises delay and the negative impacts on the industry.
- Market signals and investment cycles take time and with 10-year project timescales, this
 exercise may need to go faster.
- We also perceive a bias towards supply side in the market (and enabling investment). Whilst this is important, all market designs should start from the customer especially given the growing importance of flexibility and distributed resources.
- Market reform is not a one-off exercise; it must continue to be adaptable to respond to new opportunities – including modern technologies and cross-vector opportunities.

Chapter 2. The case for change

identified? Are there further challenges we should consider? Please provide evidence for additional challenges.					
□ Yes	⊠ No	☐ Don't know	☐ No opinion		
Please expand on your response here: In terms of flexible capacity there should be a more explicit recognition of the need for long-duration energy storage to cater for extended periods (days) where wind generation output is low due to climatic conditions and weather-blocking events (which might become more common with climate change). Flexible capacity measured solely in power (GW) does not convey the need for flexible capacity in energy (TWh). This is particularly relevant to a future system where we seek to be less reliant on gas markets and where the vast majority of electricity generation capacity will be in the form of inflexible low/zero carbon and/or low short-run marginal cost technologies such as nuclear and weather-dependent renewables. The need is therefore for LDES technologies including hydrogen storage and hydrogen-to-power. We should be clear that we need to optimise long term (least cost investment) and short term (least cost operation).					
We would also emphasise that technology changes (digital, power electronics, etc) mean electricity networks of the future will be technically much more dynamic, and we need to ensure that market design is facilitating this and creating space for new services and solutions, not baking in outdated assumptions about operability. Please refer to Energy technologies for net zero (theiet.org) and the Energy Catapult report 'A zero carbon energy system – the operability system' report					
		of current market arrang urpose for delivering our			
⊠ Yes	□ No	☐ Don't know	☐ No opinion		
/ zonal / nodal) might network capacity hea capacity is required. (e.g., marginal cost of renewable generator numerous factors ind wind volumes and so demand needs to be	t in theory incentivise gradroom, they should eq For example, they should additional network can and energy storage (cluding planning constrational irradiance tend to be similarly caveated by the similarly caveated by the additional incentive similarly caveated incentive similarly similarl	We broadly agree, but while I eneration and flexible assets ually reflect locations where apacity). This is particularly imesp. LDES) are locationally eaints and achievable load facte highest). Moreover, the cashe fact that the location of mancluding population, transpor	to locate where there is additional network ent signal for networks aportant given that constrained according to tor (e.g., locations where se for locational pricing for ajor load centres is also		

capital, etc. In terms of flexibility markets, the consultation notes the many uses of flexibility and the need for greater coordination between ESO and DNO/DSOs. Much of this flexibility is currently procured and dispatched independently and hence there is no 'whole system' market, nor is there an optimum dispatch mechanism such that flexibility is providing the maximum whole system benefit at any given time. Instead, the system is dependent on Aggregators / VPP Operators / VLPs whose priority is maximising revenue stacking for their clients. This can lead to loss of synergies and even conflicting dispatch events. This raises a question as to whether there should

be a single platform for trading flexibility (albeit for some applications such as network constraint management, location is critical). And whilst energy retail is not in scope for REMA, the role of dynamic tariffs will be crucial in exploiting BTM flexibility from domestic and SME customers.

MK – Today's market arrangements grew out of privatisation in the 1990s, with various reforms since. Most notably the separation of licenses into generation, supply, and network operators in 2001 and EMR in 2014. The design is based on assumptions, some not even stated, that are no longer fully valid. e.g.

- Switching = competition "is the best guarantee of customer interests." In 32 years, many customers have not switched supplier. Since recent wholesale price rises, all domestic tariffs are now at the price cap and there is no incentive to switch.
- Unit of measure is energy (kWh) and maybe a capacity charge many more signals are needed, hence proliferations of system services, balancing costs etc. Energy alone is insufficient as the unit in which electricity is traded.
- All electricity is the same yet, now location, GHG intensity, etc. are increasingly important
- Assets either generate or consume electricity now customers also generate and storage crosses the boundaries
- The 1990's network was complete, only asset replacement and minor upgrades would be required. This led to tight rules about user commitment and presumptions against anticipatory investment. Now the capacity of the network has to at least double as heat and transport electrify.
- Electricity flows one way. Not anymore.
- Stocks of fossil fuel at power stations decouple electricity generation from gas demand for other uses. However, now the piles of coal are gone.

The new market design for REMA can dispense with these outdated assumptions and the market elements that resulted from them.

Chapter 3: Our Approach

•	• •	tor confidence, whole-sys which to assess options?	
□ Yes	⊠ No	☐ Don't know	☐ No opinion

Please expand on your response here: We broadly agree, but the criteria should be expanded - 'least cost' needs to be in the context of sustainable long-run cost; in other words, the market must be able to efficiently procure full-chain flexibility (including via supply and demand-side arbitrage) and ideally flexibility contracts would be based on 'pay as bid' rather than 'pay as clear' (i.e. marginal cost). Moreover, flexible capacity needs to be measured in energy and not solely power terms – i.e., GWh as well as MW. In terms of criteria, dependability, security, and sustainability are key considerations.

Meeting Net Zero should be another key criterion to assess options. It is important that the review also considers the need for continued growth in the supply of low carbon power and flexibility beyond 2035 in order to meet Net Zero. Options must be appraised against that longer term growth trajectory as well as the commitment to largely decarbonize the power sector by the middle of the next decade.

We believe resilience of market arrangements and impact on system resilience need to be considered alongside the role we expect the markets to perform, and the boundaries imposed (e.g., where FSO or others step in).

In addition, new approaches should consider accessibility and risk – are they accessible to small providers – do they promote competition or make it harder?

p. c					
6. Do you agree w	vith our organisatio	on of the options for reform	n?		
⊠ Yes	□ No	☐ Don't know	☐ No opinion		
Please expand on	your response here:	Click here to enter text.			
secure, least cost, lo complex market desi	w carbon, and flexibili	many of the potential options. ty resources and attract the invente options could add uncertain	vestment needed. The		
7. What should we	e consider when co	onstructing and assessing	packages of options?		
Please provide your response here: A key consideration is risk, how responsive markets might be to signals in practice, and whether there might be unintended consequences (gaming opportunities, etc). This might be particularly critical from a system operability perspective to provision of ancillary services. We would reiterate the importance of a system wide assessment of risk for any options proposed – especially given that the system of 2035 will be very different to what we have today.					
Chapter 4: Cross-cutting questions					
8. Have we identified the key cross-cutting questions and issues which would arise when considering options for electricity market reform?					
□ Yes	□ No	⊠ Don't know	☐ No opinion		
Please expand on your response here: -Chapter 4 correctly notes the need to consider the relative economy-wide and societal benefits of options, including from a regional as well as					

Greater leadership from government and Ofgem is required to deliver the vision for the power system. Existing markets and the self-governance change framework will not be able to deliver

opportunities, including for example where options for hydrogen production and usage (and CCUS)

national perspective. Therefore, it will be essential to establish not only the role of FSO as a national energy system strategic planner, but also the role of regional system planners and operators who will have the necessary place-specific insights into energy challenges and

are particularly viable due to the particular characteristics of the region, including its overall

infrastructure and natural capital.

such change alone. Proactive intervention from government will be needed to ensure that future markets can deliver the objectives. The above statement doesn't detract from our view that competitive markets can bring significant benefits in driving innovation and optimising costs and should be retained wherever possible.

Other issues we consider to be important are:

- 1, Transparency, and ease of entry.
- 2, Market access barriers. A key barrier is due to the transmission and distribution network access queue which far exceeds the likely need for these resources. Similarly, market access for distributed energy may be restricted due to the lack of enabling factors such as metering or data limitations. Risk of market failure.
- 3, Linkage to the development of the transmission system (as this sits outside markets but is central to their operation especially if zonal or nodal).

approaches to resolving these cross-cutting questions and issues?				
□ Yes	□ No	☐ Don't know	x□ No opinion	
Please expand on your response here: Click here to enter text.				

9. Do you agree with our assessment of the trade-offs between the different

10. What is the most effective way of delivering locational signals, to drive efficient investment and dispatch decisions of generators, demand users, and storage? Please provide evidence to support your response.

Please provide your response here: Firstly, it is important to recognise that some aspects of system investment cannot by their nature readily respond to price (e.g.: wholesale, TNUoS, DUoS etc.), for example, the potential for circa. 25GW of offshore generation from the ScotWind programme. Secondly, it is important to understand where location is critical, for example: system balancing services will generally be less locationally critical than network constraint management services. Given that some sources of flexibility will deliver a range of services, it will be important to establish primacy, either through codes or integrated markets. Thirdly, market pricing and network costs are all part of the cost stack and need to be considered holistically. In terms of demand, Ofgem has determined through its SCR to change the connection charge boundary so that connection charges will be entirely shallow for demand, and even more shallow for generation, therefore the locational signal is weakened. As a result, more locational DUoS charging will provide a weaker locational signal for prospective generation and demand customers. In general, we consider that where constraint management services are required, the locational aspects should be covered through contractual arrangements.

Please provide any additional supporting evidence in .pdf or Microsoft Word format.

11. How responsive would market participants be to sharper locational signals? Please provide any evidence, including from other jurisdictions, in your response.

Please provide your response here: It is the general view of our expert members involved in project development, that from a generation investment perspective, other factors such as natural capital, planning and consent considerations, and seabed leases and the like will largely determine location rather than locational market signals. Indeed, there might be a risk that locational market

signals might dissuade investment, leaving a potential shortfall in renewable generation capacity for example. For offshore renewables we would refer the team to our previous publication. Please refer to our report 'Lighthouse Series – Offshore energy reports'

We would suggest that locational price signals will be more important and useful for flexibility and operability assets. For example, the incentivisation of flexibility and operability resources (e.g., long duration storage, electrolyser demand etc.)may be able to free up system capacity in constrained network areas to enable more renewable output and reduce the need for network reinforcement.

Please provide any additional supporting evidence in .pdf or Microsoft Word format.

12. How do you think electricity demand reduction should be rewarded in existing or future electricity markets?

Please provide your response here: Demand shifting (rather than reduction) is best rewarded through contracted service arrangements and tariff price signals. We believe there is scope for auction processes to be designed which can facilitate price discovery and improve investment interest. For domestic and SME customers, dynamic tariffs will reward customers for aligning forecast demand with low carbon generation availability, and for avoiding distribution network red band periods (currently between 1600 and 1900 on weekdays but new demand patterns might change this in future). Essential to this will be completion of the smart meter rollout and half-hourly settlement (and a requirement on energy suppliers to reflect banded DUoS charges in their customer tariffs. Avoiding red band periods (e.g., for EV charging, cooking and electric heating) would confer significant cost savings for domestic customers).

An obvious parallel is capacity – there is a case for long term and short-term flexibility, and demand response/demand reduction products and services, and it should be possible to design market mechanisms to reward each appropriately.

There is also a need to look at these issues alongside network regulation and pricing. For example, we have a relatively low level of demand side participation relative to the northeast US, but in some areas network companies there can generate regulated revenue for incentivising demand response where this is deemed efficient.

Chapter 5: A net zero wholesale market

13. Are we conside chapter?	dering all the credik	ole options for reform in t	he wholesale market	
□ Yes	⊠ No	☐ Don't know	☐ No opinion	
Please expand on your response here:				
A consideration is needed for market set pricing Is there a need for incentives and suppor				

A consideration is needed for market set pricing is there a need for incentives and support for reduction of wasteful energy use, and improved efficiency of energy use, are much needed (and sorely lacking in the Energy Security).

14. Do you agree that we should continue to consider a split wholesale market?

⊠ Yes	□ No	☐ Don't know	☐ No opinion	
Please expand	d on your response	here: Click here to enter text.		

The key aim of market reform should be to deliver long and short-term investment signals for both renewable and flexibility resources, while ensuring competition can drive lowest cost for consumers. The REMA consultation is considering the use of separate markets for firm and variable power.

It seems logical to explore this, especially if flexibility between transitional domestic, commercial, and industrial demand, and long-term storage or other energy conversion (e.g., green hydrogen fuels) is the key value being traded. This might be the case if there is excess low marginal cost supply to meet long term resilience needs supplying the normal market - created using policy-based markets such as a long-term capacity market.

We consider that options for split markets should be further investigated, with the costs and benefits being assessed. We suggest there is merit in seeking to retain the benefits of self-dispatch where appropriate.

We suggest that future market designs for mass low carbon power should seek to retain the benefits from existing arrangements including from self-dispatch, and long-term confidence about revenues and system costs. We suggest it may be useful to consider the benefits of a dedicated market for flexibility resources, where low-carbon flexibility could be prioritised – this may be better suited to a central dispatch regime targeted to meet locational and operability requirements. This should have the benefit of providing a clear price signal for flexibility.

In order to mobilise investment, it will be important that each market delivers long-term price signals for both renewables and flexibility resources, to ensure the required capacity of each resource is available.

15. How might the design issues raised above be overcome for: a) the split markets model, and b) the green power pool? Please consider the role flexible assets should play in a split market or green power pool - which markets should they participate in? - and how system costs could be passed on to green power pool participants.

Please provide your response here: Click here to enter text.

The consultation recognises that there are many design questions still to be addressed in the split markets model, including how prices would be formed, how the two markets would interact, how the system would be balanced, and how operability would be maintained across the two markets. We agree the ability to reveal the price of flexibility will be important, but as experienced today, a market delivering only short-run cost signals is unlikely to provide the necessary long-term revenue certainty needed to invest in these assets.

An alternative model for a voluntary green power pool has been proposed by Grubb and Drummond which would operate alongside the existing wholesale market, with the system operator dispatching renewables based on long-run marginal cost. This assumes that firm power and

flexibility resources will continue to be traded in the wholesale and balancing markets. While this proposal may have the benefit of some decoupling of from gas marginal prices, it is unlikely to provide a clear price signal for flexibility.

16. Do you agredesigns?	ee that we shou	ld continue to consider bot	h nodal and zonal market		
⊠ Yes	□ No	☐ Don't know	☐ No opinion		
Please expand	on your response	here: Click here to enter text			
		ficiency and complexity and at the ficant challenges referred to earl			
has little choice a Potentially the ris	bout where to loca k of higher location	gns do not appear appropriate for te. They already face locational nal costs would jeopardise the victions for the achievement of dec	price signals through TNUoS. ability of existing and planned		
However, locational price signals for flexibility assets could incentivise their location to enable greater utilisation of nearby low carbon generation and free up network capacity. But these price signals would need to be separate from the wholesale market and price/cost signals for low-carbon generation.					
17. How might the challenges and design issues we have identified with nodal and zonal market designs be overcome?					
Please provide your response here: Please refer to question 18					
18. Could noda	al pricing be imp	elemented at a distribution l	evel?		
□ Yes	□ No	☑ Don't know	☐ No opinion		
Please expand	on vaur response	here: In practice this question	could further break-down into		

Please expand on your response here: In practice this question could further break-down into considering different pricing models for generation and demand. For this answer we are assuming the distinction between generation and demand may become blurred as 'prosumers' could potentially encompass both. Hence our response assumes locational pricing would apply to both. Firstly, there would need to be a definition of 'a node' at distribution level. Ofgem's SCR into forward-looking charges is considering whether DNOs' schedule of DUoS charges could be made more zonal (perhaps at BSP or even primary substation level) rather than at licence level which is the current position. At distribution level care is needed not to create a 'post-code lottery' for customers whereby low-carbon technologies such as EVs and heat pumps (as well as energy-intensive applications for low carbon alternatives such as hydrogen) are made less viable due to legacy network capacity constraints and hence high use of system costs; similarly in respect of distributed generators in terms of DUoS credits. Using primary substation distribution areas is particularly challenging as DNOs operate their systems flexibility and shift load around, so pricing

could change seemingly arbitrarily, and it would be entirely possible for two sides of the same street to be paying different prices. There is a fundamental 'fairness' issue here in that hitherto all customers have contributed to distribution network general reinforcement within a given DNO's licensed network through cost-socialisation. It would therefore be unfair for customers who, through no fault of their own, find themselves connected to a highly utilised network with a high long-run marginal cost of reinforcement find themselves paying higher (red band) use of system charges than those fortunate to be connected to an adjacent network with ample capacity headroom. Moreover, there would be major administration challenges as the LRMC of network capacity would need to be constantly under review due to network reinforcements or reconfigurations. It is difficult to see how Energy retailers would be able to manage incorporating these zonal, let alone nodal, prices (i.e., DUoS charges) in their published energy tariffs – and change manage these, over time. In summary, we think trying to apply this generically (as opposed to as part of a flex market or a DSR service) would be too complex to implement and difficult to 'sell' to stakeholders.

national flexibility and operability resources, should be prioritised. Local market development could	change manage these, over time. In summary, we think trying to apply this generically (as opposed to as part of a flex market or a DSR service) would be too complex to implement and difficult to 'sell' to stakeholders.					
Please expand on your response here: Click here to enter text. Yes – we reiterate that bringing distributed resources into the mix is potentially key to building a least cost and resilient system and local markets should be considered if they can be demonstrated to enable better alignment of costs and value. The alternative ideas in the REMA consultation for locally led wholesale markets are at a more conceptual stage and raise many questions about how they will be implemented and co-ordinated effectively with national markets. There is a risk that they add additional complexity and cost, and potentially delay other priority reforms. We suggest that national energy market reform including for national flexibility and operability resources, should be prioritised. Local market development could be encouraged in a complementary and co-ordinated way to address local flexibility and operability needs. Effective interaction between local and national markets is critical if benefits are to be realised. 20. Are there other approaches to developing local markets which we have not considered? Yes No Don't know No opinion Please expand on your response here: Click here to enter text. We believe there should be more exploration of peer-to-peer trading and the potential value it can create. 21. Do you agree that we should continue to consider reforms that move away from marginal pricing?	Please consider th	e relative advantag	es and drawbacks, and lo			
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21. Do you agree that we should continue to consider reforms that move away from marginal pricing?	Please expand on your response here: Click here to enter text.					
marginal pricing?						
☐ Yes ☐ No ☒ Don't know ☐ No opinion						
	□ Yes	□ No	□ Don't know	☐ No opinion		

Please expand on your response here: This depends on context: for example, marginal pricing may make sense for use of system charging (i.e., forward-looking charges based on long-run marginal cost of network capacity) though caution is needed in levelling such charges on a zonal (sub-licensed distribution network) or nodal (however defined) level. For wholesale pricing the fundamental issue is whether this should be based on marginal cost of generation to meet system demand (pay as cleared), or should be reflective of the economic cost of each individual generation (or flexibility) asset (pay as bid). Moving to such a regime would appear to confer cost efficiencies if the market can be designed and regulated sufficiently to avoid manipulation and gaming.

At this stage **nothing** should be discounted – but need to be tested against different market scenarios

The consultation considers that there are benefits from moving away from current arrangements where electricity exchanges operate on a pay as clear basis. Moving to a pay as bid arrangement could reduce the link to the gas price setting the marginal price for electricity. However, we suggest that generators would be incentivised to bid strategically, targeting what they thought was the most expensive offer so marginal prices may be higher as a result. This could eliminate the potential benefits of this approach.

	rent wholesale mar	tinue to consider amendm ket arrangements, includi	
⊠ Yes	□ No	☐ Don't know	☐ No opinion
		Consideration should be giver rmittency of weather-depende	
To meet 2035, it seen	ms that we will need to	make the existing markets w	ork.
	other changes to cu nism we should cor	urrent wholesale market d nsider?	esign and the
□ Yes	□ No	☐ Don't know	x□ No opinion
Please expand on y	our response here:	Click here to enter text.	
Chapter 6: Mass	s low carbon pov	wer	
24. Are we conside power chapter?	ering all the credib	le options for reform in th	e mass low carbon
□ Yes	□ No	☐ Don't know	x□ No opinion
Please expand on y	our response here:	Click here to enter text.	

25. How could electricity markets better value the low carbon and wider system benefits of small-scale, distributed renewables?

Please provide your response here: The question should extend to DERs generally – including demand assets providing flexibility, local storage etc. Ideally, platforms for flexibility services would enable services to be procured and dispatched (and rewarded) according to the maximum wholesystem benefit they would confer at any given time (subject to certain primacy rules recognising services that need to be prioritised from a system security and stability perspective). A single platform which could reconcile all flexibility services could be an option, but consideration would need to be given to ownership and governance of what might then be a monopoly provider – and how ongoing innovation might be ensured. Alternatively, if multiple platforms endure then it will be important to provide sufficient governance to ensure revenue-stacking incentives are aligned with system needs to ensure optimum dispatch, maximisation of synergies, and avoidance of conflicts. In terms of DG (or distribution-connected and/or collocated energy storage) a combination of contracted flexibility services by the DSO and more 'time and location-reflective' DUoS credits should help relieve local network constraints and maximise network utilisation.

26. Do you agree that we should continue to consider supplier obligations?				
☐ Yes	n			
Please expand on your response here: Click here to enter text.				
No. For generation investors, a requirement to negotiate market contracts with suppliers additional counterparty and financing risks. It would increase investment uncertainty, lear reduction in available development capital and an expected increase cost of capital due contract uncertainty and a higher counterparty risk.	ading to a			
27. How would the supplier landscape need to change, if at all, to make a sobligation model effective at bringing forward low carbon investment?	upplier			
Please provide your response here: Click here to enter text.				
Suppliers are not well placed to forecast long term requirements for renewable capacity, or for conducting consistent procurement processes. Including this option risks undermining the benefits achieved from of centrally led procurement of low carbon generation.				
28. How could the financing and delivery risks of a supplier obligation model be overcome?				
Please provide your response here: Click here to enter text.				
This could be overcome by government guaranteeing the obligations of suppliers.				
29. Do you agree that we should continue to consider central contracts with payments based on output?				
	n			

Please expand on your response here: Click here to enter text.

Central CfD contracts with a single strike-price payment based on output remain the most appropriate. This will give greatest certainty to investors as they will drive the optimum project construction and financing cost.

30. Are the benefits of increased market exposure under central contracts with payment based on output likely to outweigh the potential increase in financing cost?

Please provide your response here: Click here to enter text.

The introduction of contracts with variable payments based on output adds uncertainty which would be priced into the strike price bid. Many renewable technologies e.g., wind, are not well placed to provide significant flexibility and the benefits of these price signals may be less valuable compared to other technologies.

31. Do you have any evidence on the relative balance between capital cost and likely balancing costs under different scenarios and support mechanisms?

Please provide your response here: Click here to enter text.

Please provide any additional evidence in .pdf or Microsoft Word format.

The proposal to combine flexibility and renewable resources in a single market instrument may not give the clear investment signal for either. Given that flexibility markets will be increasingly necessary in the future, the potential option for a split market for low-carbon capacity and for flexibility should be explored.

32. Do you agree we should continue to consider central contracts with payment decoupled from output?				
⊠ Yes	□ No	☐ Don't know	☐ No opinion	
Please expand o	on your response	here: Click here to enter text	t.	
Yes, it could be possible to realise this with either a fixed payment, a floor, or a payment based on deemed output. However, as above, we suggest that combining price signals for flexibility and renewable capacity may not give clear investment signals for either resource.				

33. How could a revenue cap be designed to ensure value for money whilst continuing to incentivise valuable behaviour?

Please provide your response here: Click here to enter text.

This could be designed to be similar to the revenue cap and floor regime used for interconnectors. This would essentially provide a regulated minimum return on assets (the floor) and allow participants to operate in the relevant markets up to the cap.

This model would allow investors to be confident of a minimum level of return, with the incentive to participate in alternative markets for additional returns. A profit-sharing mechanism could be established above a cap to ensure that there is a continuing incentive to operate in the relevant markets.

34. How could deemed generation be calculated accurately, and opportunities for gaming be limited?

Please provide your response here: Click here to enter text.

The consultation highlights several challenges to this approach of how generation can be calculated accurately, including how generation would be reliably deemed and measured, and the risk of gaming. This could be a feasible option to introduce. It could essentially represent a capacity payment and could remove output variation risk for a generator, but reduced certainty about resultant revenue stacks could add to investor uncertainty and risk, and consequently increase financing costs.

Chapter 7: Flexibility

35. Are we co	onsidering all the o	redible options for reform	in the flexibility chapter?
⊠ Yes	□ No	☐ Don't know	☐ No opinion

Please expand on your response here: – Generally yes. Flexibility has many important roles to play in the future zero-carbon electricity system and it is important that each role is fully optimised through flexible assets. Of particular importance is need is to recognise not only the overall 'power' capacity requirement of the system for flexible assets (GW) but also the energy capacity requirement (TWh). This is particularly important for a system largely supplied through inflexible weather-dependent generation which might be unable to meet system demand over extended periods due to weather conditions (e.g., low wind volumes extending over several days). In this context, Li Ion batteries will not meet this requirement and alternatives (such as hydrogen storage and hydrogen-to-power) will be essential if we are to avoid retaining fossil-fuel generation capacity in the form of CCGTs and/or building new flexible capacity in the form of OCGTs and gas engines (other than to the extent these might be designed to run on hydrogen).

Flexibility is at the heart of REMA, and to enable investment in flexibility resources, we suggest that each REMA option needs to address the following issues:

- flexibility is not well defined we suggest it should include dispatchable generation or demand, plus dispatchable ancillary services, plus local network congestion flexibility. It should prioritise low-carbon flexibility.
- flexibility resources are not clearly valued long term price signals for flexibility are not being provided by existing wholesale or balancing markets. Short-term flexibility market

- prices are incentivising short duration storage which in turn is cannibalising revenues from lower cost flexibility solutions.
- future renewable capacity is essentially procured by a single buyer on long term contracts but the corresponding need for flexibility capacity is not.
- there are many different barriers to entry for flexibility assets to existing markets e.g., market access costs, complexity, and grid access constraints.

We note that the BEIS definition for flexibility is 'the ability to shift consumption or generation in time or location'. We suggest that more precise definition of the individual flexibility resources is needed such that a market design can be created to procure, monitor, and remunerate these resources.

36. Can strong operational signals through reformed markets bring forward enough flexibility, or is additional support needed to de-risk investment to meet our 2035 commitment? Please consider if this differs between technology types.

Please provide your response here: Probably yes, for day-to-day system balancing, operating reserve, and constraint management. However, LDES (in various forms) will require significant forward de-risked investment (for example through SIF) in terms of design and development due to the relatively immature nature of the associated technologies.

It is unclear what timescales markets are considering – markets will not bring forward flexibility unless there is value. On one hand, flexibility for system operation e.g., battery storage for dynamic containment or frequency response is being supplied by markets. However, as the marginal value of flexibility decreases the more is procured. We believe for security and resilience reasons there may well be a gap between price signals and the actual value which flexibility presents to the system and customers. Unless we accept capacity shortfalls, we believe there is still likely to be a need to procure strategic reserve.

Flexibility considered as part of building optimal new and future capacity is incredibly challenging unless we decide to accept some level of risk of capacity shortfalls. As this is unlikely to be acceptable, we suggest the focus of flexibility procurement should be elsewhere. E.g., helping to manage/facilitate in the shorter or medium term.

We do not consider that existing markets provide the investment signals for the high volume of low carbon flexibility investment that is needed. Indeed, current ambitions for effective flexibility capacity procurement and deployment have significant risks. For example:

- Interconnector flexibility may not be available when common low carbon shortfalls are experienced across interconnectors.
- New flexible low carbon technologies e.g., CCUS, BECCs, hydrogen is not yet proven at scale. The potential for low carbon distributed energy resources is significant but scaling up to any significant level is likely to take time.
- ESO pathfinder tenders for specific system requirements may not identify the optimum flexibility solutions.
- Short term market prices are driving the development of higher cost flexibility solutions such as short-duration batteries, thereby cannibalising revenues for lower cost or more flexible solutions.
- Grid connection constraints and delays may limit market access for flexibility assets.

flexible assets? Ho	37. Do you agree that we should continue to consider a revenue cap and floor for flexible assets? How might your answer change under different wholesale market options considered in chapter 5 or other options considered in this chapter?						
□ Yes	⊠ No	☐ Don't know	☐ No opinion				
Please expand on y	our response here:	Click here to enter text.					
enable investment fur customers. A cap and to provide a regulated	nding in large flexibility I floor regime similar to I return on assets on a	·	ital and a lower cost to mine the revenue needed				
	ld a cap be designe	be designed to ensure valued to ensure valued to ensure assets are in each their cap?					
Please provide your	response here: Clic	k here to enter text.					
A profit-sharing mechanism above the cap would limit returns while still incentivising efficient operation.							
		designed to ensure effect ing small scale flexible as					
Please provide your	response here: Clic	k here to enter text.					
The cap and floor regime could equally be applied to large volumes of smaller flexibility assets though an auction approach, allowing the administration to be simpler.							
40. Do you agree that we should continue to consider each of these options (an optimised capacity market, running flexibility-specific auctions, and introducing multipliers to the clearing price for particular flexible attributes) for reforming the Capacity Market?							
⊠ Yes	□ No	☐ Don't know	☐ No opinion				
Please expand on your response here: Click here to enter text.							

We suggest that capacity market reforms should be considered, including making them fit for Net Zero and flexibility. However, existing capacity markets were designed for the purpose of ensuring

We suggest that the current market design is unlikely to deliver the investment signals needed to develop the flexibility assets needed to enable 2035 commitments. Current plans for flexibility

delivery have significant risks and costs.

peak security of supply conditions could be met. Capacity Market adaptation for a significantly different purpose has major risks and may not deliver either objective. If the flexibility market is delivering appropriate long term price signals, the capacity market may no longer be required.

41. What characteristics of flexibility could be valued within a reformed Capacity Market with flexibility enhancements? How could these enhancements be designed to maximise the value of flexibility while avoiding unintended consequences?

Please provide your response here: In terms of determining value, considerations should include availability, dependency, multiple-services capability, response time, service duration, and marginal cost. A range of services will be required, and the market must ensure each of these is sufficiently incentivised from an investment and operational flexibility perspective.

Over and above this we believe a prudent market design will include the ability to procure strategic assets by exception (e.g., long term storage) where resilience is an over-riding consideration.

42. Do you agree the flexibility?	hat we should con	tinue to consider a supplie	er obligation for	
□ Yes	□ No	☐ Don't know	x□ No opinion	
Please expand on y	our response here:	Click here to enter text.		
43. Should suppliers have a responsibility to bring forward flexibility in the long term and how might the supplier landscape need to change, if at all?				
Please provide your response here: Click here to enter text.				
We suggest this option should not be considered further – supplier contracts for flexibility resources would add counterparty risk and complexity and could deter flexibility resource investment and may result in higher costs to consumers.				

44. For the Clean Peak Standard in particular, how could multipliers be set to value the whole-system benefits of flexible technologies? And how would peak periods be set?

Please provide your response here: Click here to enter text.

Government backed central contracts would be a better means of bringing forward flexibility in the long term. This centralised model is more resilient as it can be implemented independently of any changes or risks to the supplier landscape.

Chapter 8: Capacity Adequacy

45. Are we conside chapter?	ering all the c	redible options for reform in	the capacity adequacy		
⊠ Yes	□ No	☐ Don't know	☐ No opinion		
Please expand on y	our response	here: Click here to enter text.			
each take a centralise as it should ensure the	We believe the three options under consideration are the most credible and appropriate. They each take a centralised approach to procuring capacity adequacy, this will be an important factor as it should ensure that government is leading these decisions and taking account of societal interests to meet Net Zero targets in a secure and least cost manner.				
46. Do you agree t Market?	hat we shoul	d continue to consider optim	nising the Capacity		
⊠ Yes	□ No	☐ Don't know	☐ No opinion		
Please expand on y	our response	here: Click here to enter text.			
	ity and flexibility	er, but it appears that design of a y price signals would be highly co			
	_	eparate Auctions, Multiple Cl o you feel would best meet o	•		
⊠ Separate Auction	าร		☐ Another Route		
☐ Don't know		☐ No opinion			
Please expand on y	our response	here: Click here to enter text.			
These options all have merits but would appear to be difficult to accurately combine the different peak and flexibility market signals and requirements.					
48. Do you consider that an optimised Capacity Market alone will be enough for ensuring capacity adequacy in the future, or will additional measures be needed?					
Please provide you	r response he	re: Click here to enter text.			
It appears unlikely that this would be sufficient, but the existing capacity market provides confidence to investors and should not be discontinued before a reliable alternative is identified.					
49. Are there any o Capacity Market m		eforms we should consider e ectives?	ensuring that the		

50. Do you agree that we should continue to consider a strategic reserve?

Please provide your response here: Click here to enter text.

⊠ Yes	□ No	☐ Don't know	☐ No opinion		
Please expand on y	Please expand on your response here: Click here to enter text.				
reserve needed to me	et system requiremen n needs to be given to	mechanism is capable of provints – if it is significantly larger the how this could be provided by they function.	han normal demand/		
	ould be important to er	ng-term requirement for flexibl sure a strategic reserve is cor			
51. What other opt to meet flexibility a		vould work best alongsiden objectives?	a strategic reserve		
Please provide your	response here: Clic	k here to enter text.			
It may be appropriate strategic reserve.	to target the developr	nent of long duration, low carb	on energy storage as a		
52. Do you see any	advantages of a s	trategic reserve under go	vernment ownership?		
□ Yes	□ No	⊠ Don't know	☐ No opinion		
Please expand on y	our response here:	Click here to enter text.			
		etaining this resource under pu contracts with the private sect			
53. Do you agree tl	hat we should cont	inue to consider centralis	ed reliability options?		
⊠ Yes	□ No	☐ Don't know	☐ No opinion		
Please expand on y	our response here:	Click here to enter text.			
Yes, this should be considered further, but flexibility markets may be able to deliver similar interventions.					
54. Are there any advantages centralised reliability options could offer over the existing GB Capacity Market? For example, cost effectiveness or security of supply benefits? Please evidence your answers as much as possible.					
Please provide your response here: Click here to enter text.					
These options could interact with and undermine flexibility market options and the design would need to be carefully considered.					

55. Which other options or market interventions do you consider would be needed alongside centralised reliability options, if any?

56. Do you agree that we should not continue to consider decentralised reliability options / obligations? Please explain your reasoning, whether you agree or disagree.				
□ Yes	⊠ No	☐ Don't know	☐ No opinion	
Please expand on y	our response here:	Click here to enter text.		
counterparty to contra		opliers of other non-governme ase investment risk and highe g capacity adequacy.		
isolate and integra	ite into one of our t Reserve, Centralise	ntralised reliability option hree preferred options (O d Reliability Option)? If so	ptimised Capacity	
Please provide your	r response here: Clic	ck here to enter text.		
		continue to consider a ca ng, whether you agree or c		
⊠ Yes	□ No	☐ Don't know	☐ No opinion	
Please expand on y	our response here:	Click here to enter text.		
	I tender option? Ple	continue to consider a tar ease explain your reasoni		
⊠ Yes	□ No	☐ Don't know	☐ No opinion	
Please expand on your response here: Click here to enter text.				
60. Do you agree with our assessment of the cost effectiveness of a targeted capacity payment / targeted tender option, and the risk of overcompensation? If not, why not?				
⊠ Yes	□ No	☐ Don't know	☐ No opinion	
Please expand on y	our response here:	Click here to enter text.		

61. Are we considering all the credible options for reform in the operability chapter?

Please provide your response here: Click here to enter text.

☐ Yes	⊠ No	☐ Don't know	☐ No opinion	
Please expand on y	our response here: (Click here to enter text.		
Overall, we consider that insufficient focus is being placed on the long-term price signals needed to attract investment in low carbon operability assets. The key requirement from these options is to provide investors with a sufficiently strong long-term price signal and revenue certainty. This would enable efficient financing of these flexibility investments, including the option to secure debt finance, and reduce costs to customers.				
Roadmap, are suff	icient to ensure op	s, including those set out erability of the electricity being cost effective and	system that meets	
□ Yes	⊠ No	☐ Don't know	☐ No opinion	
Please expand on y	our response here: (Click here to enter text.		
Specifically, the signal sufficient investment to not provide adequate	lls for future plans for c to displace fossil plant signals for investment	to address the scale of the fut operability and flexibility needs operability resources. The curin flexibility resources. Short at with short deployment times	s are not attracting rrent market roadmaps do term market signals are	
Progress by ESO and DNO led initiatives is slower than needed. The ESO markets roadmap appears to be based upon the development of highly liquid short-term markets for operability services, assuming that these real-time price signals provide suitable investment signals for high value investments. They do not provide the necessary long-term revenue certainty that investors are seeking – and will likely lead to cannibalisation of revenues by alternative higher cost providers of these services.				
63. Do you support any of the measures outlined for enhancing existing policies? Please state your reasons.				
⊠ Yes	□ No	☐ Don't know	☐ No opinion	
Please expand on y	our response here: (Click here to enter text.		
The proposal for the ESO to prioritise low carbon procurement for ancillary services and flexibility				

The proposal for the ESO to prioritise low carbon procurement for ancillary services and flexibility would be a significant improvement to current arrangements. A common Net Zero flexibility obligation for ESO, Ofgem and BEIS would be needed for consistency. The Net Zero flexibility obligation would still need to provide consistent long and short-term pricing signals to trigger investment.

64. To what extent do you think that existing and planned coordination activity between ESO and DNOs ensures optimal operability?

Please provide your response here: Overall - much better interoperability and transparency is needed, and this will be a key consideration for the FSO. It is worth noting that the ENA Open Networks project has attempted to achieve coordination between ESO sand DNOs for procurement and dispatch of ancillary services (essentially network constraint management services for DNOs and operating reserve and system balancing for ESO). ESO's need for an increasing level of dynamic frequency response services (regulation, moderation and containment) will require further consideration in terms of coordination (for example the extent to which EV charging and V2G might provide frequency response as well as distribution network constraint management services and the extn to which they might otherwise conflict).

65. What is the scope, if any, for distribution level institutions to play a greater role in maintaining operability and facilitating markets than what is already planned, and how could this be taken forward?

Please provide your response here: In this context, the potential role of local area energy planning and operation through IDNOs and potentially RSPOs needs to be given consideration. Responses to Ofgem's call for input into the future of local energy institutions and governance also needs to be given careful consideration. Liaison between the FSO and IDNOs/RSPOs will be essential to achieving optimum place-specific investment in the energy system that aligns with national strategic objectives. A particular consideration in this regard will be local opportunities for hydrogen production and infrastructure (including CCUS).

We suggest that co-optimisation between ESO and DSOs is essential to optimise the system flexibility resources in both planning and operational timescales. But the ESO should be responsible for the procurement of national ancillary services e.g., frequency response, reserve, inertia, voltage, and transmission congestion. DNOs should be responsible for procurement of local services e.g., for local distribution network congestion, local voltage.

_		rrent form discourages p the scheme? If so, how c	_
⊠ Yes	□ No	☐ Don't know	☐ No opinion
Please expand on y	our response here:	Click here to enter text.	

We agree that the CfD in its current form discourages the provision of ancillary services. At present, the CfD regime has limited incentives for flexibility provision. It is questionable whether ancillary service market signals could be strong enough to change the behaviour of renewable generation to participate in these markets.

The adaptation of the CfD scheme may add additional complexity as it would have to address flexibility assets that may have very different requirements. For example, storage would be both buying and selling power for use in ancillary service markets and this may be difficult to incentivise on a long-term basis. There is also a disincentive for developers to include complementary system operability services and flexibility technologies in their projects. Higher Capex will reduce competitiveness in the CfD auctions.

While we agree this option should be considered further, we suggest that the primary purpose of the CfD is to deliver growth in renewables. While renewables could deliver ancillary services, we suggest it may be more appropriate for a separate price signal to drive the inclusion of these services, so renewables can determine whether they can provide these services competitively.

67. Do you think it would be useful to modify the Capacity Market so that it requires or incentivises the provision of ancillary services? If so, how could this be achieved?				
⊠ Yes	□ No	☐ Don't know	☐ No opinion	
Please expand on y	our response here:	Click here to enter text.		
We agree this should be explored further. However, similar to CfD arrangements, implementation is likely to be complex. At present, the CM is over-supplied and is essentially a 'top-up' revenue stream for generation and flexibility assets. In theory, changes could be made to add operability services e.g., voltage control, and these could be auctioned against locational or temporal criteria. It would need to prioritise low-carbon flexibility resources.				
		vill add additional complexity a requirements and may then fa		
68. Do you think the dispatch model?	nat co-optimisation	would be effective in the	UK under a central	
⊠ Yes	□ No	☐ Don't know	☐ No opinion	
Please expand on y	our response here:	Click here to enter text.		
If there was a separate market for dispatchable flexibility services, then this could potentially be operated by the ESO under central dispatch. The ESO would be in the best position to decide on the optimum future and operational requirements for locations, volumes, and timing of flexibility resource needs.				
Chapter 10: Options across multiple market elements				
69. Do you agree that we should not continue to consider a payment on carbon avoided for mass low carbon power?				
⊠ Yes	□ No	☐ Don't know	☐ No opinion	
Please expand on your response here: Click here to enter text.				

Yes, this should not be considered further – it will be complex to measure and administer.

70. Do you agree that we should continue to consider a payment on carbon avoided subsidy for flexibility?			
⊠ Yes	□ No	☐ Don't know	☐ No opinion
Please expand on your response here: Click here to enter text.			
Yes, this should not b	oe considered further -	- it will be complex to measure	e and administer.
71. Could the Dutch Subsidy scheme be amended to send appropriate signals to both renewables and supply and demand side flexible assets?			
Please provide your response here: Click here to enter text.			
No, this should not be considered further – it will be complex to measure and administer.			
72. Are there other advantages to the Dutch Subsidy scheme we have not identified?			
□ Yes	□ No	☐ Don't know	x□ No opinion
Please expand on your response here: Click here to enter text.			
73. Do you agree that we should continue to consider an Equivalent Firm Power auction?			
□ Yes	⊠ No	☐ Don't know	☐ No opinion
Please expand on your response here: Click here to enter text.			
No, this should not be	e considered further –	it will be complex to measure	and administer.
74. How could the challenges identified with the Equivalent Firm Power auction be overcome? Please provide supporting evidence.			
Please provide your response here: No comment.			
Please provide any supporting evidence in .pdf or Microsoft Word format.			
Do you have any owhole?	other comments that	at might aid the consultat	ion process as a

Please use this space for any general comments that you may have, comments on the layout of this consultation would also be welcomed.
Click here to enter text.
Thank you for your views on this consultation. However, as part of the BEIS wider customer survey plans, we would appreciate your views on x, y and z below.
Thank you for taking the time to let us have your views. We do not intend to acknowledge receipt of individual responses unless you tick the box below.
Please acknowledge this reply ⊠
(Respondents should be thanked for their views and we should say whether we will acknowledge individual responses. Acknowledging responses can help foster good relations with new partners, however, most of the department's stakeholders are regular

contributors to consultations and would probably consider acknowledgements to be an unnecessary expense. Current practice is to acknowledge on request only, actioned by a

At BEIS we carry out our research on many different topics and consultations. As your views are valuable to us, would it be okay if we were to contact you again from time to time

tick on the questionnaire using letter, postcards or emails)

 \square No

⊠Yes

either for research or to send through consultation documents?