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DONG Energy response to a smart, flexible energy system: Call for Evidence

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DONG Energy is one of the leading energy groups in Northern Europe. Headquartered in Denmark, we have an interest in several European markets and cover a wide range of energy sector activities. In the UK, we are the market leading developer and operator of offshore wind farms, as well as a supplier focussed on flexibility and demand side response.

Our ref. BEIS/Ofgem Response - Smart
Flexible CfE

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We appreciate the opportunity to respond to the Department for Business, Energy and Industrial Strategy (BEIS) and Ofgem's Call for Evidence on a Smart, Flexible Energy System. We have responded to the specific questions where our views may help inform you.

Enabling Storage

1. Have we identified and correctly assessed the main policy and regulatory barriers to the development of storage?

Please provide evidence to support your views.

We agree that you have identified the main policy and regulatory barriers, although further barriers will need to be identified and overcome. Many of these will be in the details of the contractual frameworks that underpin the GB electricity system.

Overall, we would highlight that there is an established framework for storage that exists in GB – under gas. Our view is that where appropriate, the electricity frameworks should build upon and use the experience we have gained from gas storage.

5. Do you agree with our assessment of the regulatory approaches available to provide greater clarity for storage?

Please provide evidence to support your views, including any alternative regulatory approaches that you believe we should consider, and your views on how the capacity of a storage installation should be assessed for planning purposes

We support the options you have outlined. In our view, the end goal should be a definition set out in primary legislation, mirroring the approach in gas. This provides certainty and clarity that the other options miss.

One area which the Call for Evidence does not highlight is that the GB regulatory framework has been designed so that industry can work on many of the detailed implementation and contractual issues. Providing a definition through primary legislation will enable industry to carry this work out.

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*6. Do you agree with any of the proposed definitions of storage?
If applicable, how would you amend any of these definitions?
Please provide evidence to support your views.*

We support the definition proposed by the Electricity Storage Network.

Aggregators

7. What are the impacts of the perceived barriers for aggregators and other market participants? Please provide your views on:

- *balancing services;*
- *extracting value from the balancing mechanism and wholesale market;*
- *other market barriers; and*
- *consumer protection*

Do you have evidence of the benefits that could accrue to consumers from removing or reducing them?

In our view there is clear gap between the market for balancing services and the impact on the system, and the balancing market, of the System Operator (SO) calling on these services. Making these services clearer and more transparent will provide market participants with more information on the value they would potentially be able to access.

There is also a clear barrier in the lack of clarity over how the SO tenders for and makes decisions on how different technologies can participate in balancing services. Providing clarity and transparency over the SO's tendering will provide a clear pathway and strategy for DSR customers to enter and participate in the SO's schemes.

8. What are your views on these different approaches to dealing with the barriers set out above?

In our view, we fully support removing barriers for aggregators to participate in providing balancing services. Our views are more cautious on aggregators participating in the balancing market. Where aggregators are not directly supplying to customers or generating electricity, then it may be appropriate for there to be a defined role within the code that enables them to participate in the balancing market – similar to how it works for trading. Where aggregators start taking on the responsibility of supplying customers we would expect them to obtain a supply licence, and ensure they follow the same requirements and standards as suppliers and the rest of industry.

This approach is proportionate. It will ensure that all BM parties operate under the same regulations and standards, ensuring fair competition and that government, regulators and industry bodies can make the appropriate and relevant checks.

There are existing aggregators that have taken this approach successfully and become licenced suppliers. There are also other aggregators who have formed successful collaborations with suppliers through which they have ensured that customers' flexibility can be delivered into both the wholesale market as well as balancing services.

The increasing value from balancing services and the increased awareness amongst customers is driving suppliers to address these markets and engage with flexibility. This is in turn driving collaboration and the integration of customer-driven solutions between aggregators and suppliers.

*10. Do you agree with our assessment of the risks to system stability if aggregators' systems are not robust and secure?
Do you have views on the tools outlined to mitigate this risk?*

If any changes are made, they must be made while ensuring that all parties have to operate under the same guidelines, and all parties can provide their services on an equal footing. The risks of change also need to reflect the changing social and technological developments, and that system stability could be negatively impacted by not making changes.

System value pricing

11. What types of enablers do you think could make accessing flexibility, and seeing a benefit from offering it, easier in future?

Flexibility often needs to be embedded in the design stage for projects, especially for generation projects where there can be significant lead-times and it can be difficult to retrofit projects to become more flexible.

Removing the commercial and regulatory barriers to flexibility, such as making balancing services tendering more transparent, and updating any associated standards and contracts, will provide clarity and foresight to developers across all forms of flexibility. Improving the transparency and governance over the criteria for choosing providers of flexibility will further enable more developers to incorporate flexibility at the design stage, as well as signal to current potential DSR providers the value that can be unlocked through flexibility.

12. If you are a potential or existing provider of flexibility could you provide evidence on the extent to which you are currently able to access and combine different revenue streams? Where do you see the most attractive opportunities for combining revenues and what do you see as the main barriers preventing you from doing so?

We have two different perspectives, as a generator and as a supplier.

As a generator, we are unable to layer revenue streams as we do not have a route to market for our flexible capability and are constrained by the limited set of mandatory services. In this example, with changes to the rules governing balancing services, we will then gain fair access to these markets and be able to layer the revenue streams.

As a supplier, and a provider of price driven flexibility solutions to our customers, we have managed to layer the opportunities available from market signals. This provides them with value from adjusting consumption. However, there is a greater value to the end consumer and to the system from being able to combine this with contracted flexibility with the SO – so that we can provide frequency response and other balancing and local requirements the SO needs.

In the long term a clear, transparent market for contracted flexibility would increase competition and allow both consumers and developers to decide what are the best opportunities for them to bid in their volumes of flexibility. However this will probably require more automation and innovation from the industry to

enable consumers to participate and benefit. Consumers do not have the time to make these decisions every day, and current markets are too complex with too many options making the decision making process difficult.

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13. If you are a potential or existing provider of flexibility are there benefits of your technology which are not currently remunerated or are undervalued? What is preventing you from capturing the full value of these benefits?

Our wind farm fleet is capable of providing flexibility, through frequency response, black start capability and enhanced reactive power. However, while our wind farms can be the most economic choice, they are not used to the full extent of their capability. In our view, there are various reasons for this, including being a relatively new technology and the SO's procurement approach.

The SO's procurement approach suits conventional generators, such as procuring frequency response far ahead of it being required. Further we feel that they do not currently fully understand the capability that renewable generators are able to provide.

14. Can you provide evidence to support any changes to market and regulatory arrangements that you consider necessary to allow the efficient use of flexibility. What might be the Government's, Ofgem's, and System Operator's roles in making these changes?

Market for Flexibility

In our view the SO needs to define, forecast and publish their flexibility requirements so that the market can provide the flexibility required. When the market is able to evaluate the flexibility that is required and its potential value, developers and consumers will be able to evaluate the options available to them and provide that flexibility. The SO's procurement and tendering must be transparent and comparable any bilateral contracts over flexibility should be kept to a minimum.

Governance

The active participants in the GB regulatory framework are dominated by conventional generators and suppliers. It is difficult, and sometimes impossible, for participants to engage actively. For example, many of the parties who are involved in flexibility do not have formal roles within many of the GB codes, and are not able to participate.

We view that the SO needs to proactively find ways of ensuring that new and potential providers of flexibility have their views heard and those views are fed into the GB regulatory frameworks. Our experience is that there has historically been a lack of engagement with these parties. We fully support and appreciate programmes such as Power Responsive but view that more needs to be done. As an example, many smaller parties were not able to properly engage with the recent embedded generation charging modifications CMP264/CMP265.

Specific Regulatory Changes

There are also areas where we view there needs to be specific regulatory changes, based on best practice from other SOs.

- Tenders from the SO should be technology neutral, while reflecting that the nature of these tenders needs to change as we have seen the capability of generation and consumers change.
- Balancing services should only be bundled where appropriate. Currently many services require providers to both be able to respond positively and negatively. Unbundling these services will enable more participants, as we can see from experience in Germany.

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Smart tariffs

18. Do you recognise the reasons we have identified for why suppliers may not offer or why larger non-domestic consumers may not take up, smart tariffs?

If so, please provide details, especially if you have experienced them. Have we missed any?

Many suppliers, including us, offer flexible energy contracts to large non-domestic consumers with pricing based on half-hourly settlement periods. However many businesses still require certainty in their budgets and will instead opt for more fixed prices and costs. Many of those consumers also believe that they do not have any flexibility as they run 24/7 operations with little variation throughout the day.

The key challenge is for consumers to identify where their flexibility exists, and being able to automate the usage of this flexibility. This needs to be done without consumers incurring high costs, or they will not go through these changes. Once this flexibility is available suppliers can use this to either encourage customers to move to half-hourly priced contracts, or deliver cost-reductions on a customer's fixed budget as a reward for providing the supplier with flexibility.

End consumers need support so that they can invest in the automation required to enable more flexible volumes, make these volumes more easily accessible and to prove the value of providing flexibility, especially in small adjustments without impacting operations.

Consumer engagement with DSR

36. Can you provide any evidence demonstrating how large non-domestic consumers currently find out about and provide DSR services?

From our experience large non-domestic consumers find out about DSR from:

- Industry events, where over the past year flexibility has been the hot topic at many events
- Their supplier
- Aggregators approaching consumers
- Industry reports

37. Do you recognise the barriers we have identified to large non-domestic customers providing DSR?

Can you provide evidence of additional barriers that we have not identified?

We agree with the barriers you have identified. An additional barrier we have seen with non-domestic customers is the commitment required upfront to be able to provide balancing services. Many non-domestic customers will not know their site operational requirements until a month, or even a day ahead, and do not want to incur penalties for not being available. Many of our customers will

also not want to invest money when they do not have clear sight of the financial benefit.

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Although these customers understand there needs to be some sort of commitment to receive price/revenue the SO's current procurement processes effectively requirement them to face a significant commitment without a clear indication of what benefit they'll receive. We encourage BEIS and Ofgem to think of ways to enable the SO to ensure that alternative approaches can be developed that overcome this barrier.

38. Do you think that existing initiatives are the best way to engage large non-domestic consumers with DSR? If not, what else do you think we should be doing?

We support existing initiatives, such as Power Responsive, but think that additional action need to be taken to build on the current momentum and awareness that has been raised amongst customers. Overcoming barriers, whether they are perceived or actual takes effort and often requires thinking outside of the box. We view that more needs to be done to reach out to consumers and encourage their participation, whether it's through reforming current schemes to suit their capability or finding innovative ways of engaging them, which could for example include funding mechanisms, such as grants or loans, for making changes to their sites.

39. When does engaging/informing domestic and smaller non-domestic consumers about the transition to a smarter energy system become a top priority and why (i.e. in terms of trigger points)?

Consumers should be engaged once there is automation in place that will allow them to provide flexibility with minimal impact on their business operations. Awareness of flexibility needs to be communicated at an early stage to build interest, and give consumers information and options on how they design and operate their sites.

Roles and responsibilities

46. With regard to further future changes to arrangements:

- (a) Do you consider that further changes to roles and arrangements are likely to be necessary? Please provide reasons. If so, when do you consider they would be needed? Why?*
- (b) What are your views on the different models, including:*
 - (i) whether the models presented illustrate the right range of potential arrangements to act as a basis for further thinking and analysis? Are there any other models/trials we should be aware of?*
 - (ii) which other changes or arrangements might be needed to support the adoption of different models?*
 - (iii) do you have any initial thoughts on the potential benefits, costs and risks of the models?*

In our view there may need to be further changes to the roles and arrangements. We cannot identify and do not think there is a specific time when these changes will be required. Instead if BEIS/Ofgem are late to respond to any necessary future changes, or do not make these changes, the system will be managed inefficiently and ineffectively – but it will still work.

There are two areas where we are concerned the Call for Evidence does not fully consider potential impacts:

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- The drivers on the electricity system in the future will be significantly driven by other sectors – such as heating and transport
- The Call for Evidence sets out piecemeal proposals to improve current arrangements. This may not be sufficient to accommodate the scale of change that the electricity system is currently undergoing.

We currently do not have a position on what the most appropriate roles and responsibilities are. Whatever these are, in our view there are several key principles they must reflect – including independence, transparency and fostering innovation. In our view BEIS and Ofgem need to consider that the right changes to the governance and responsibilities of the system will be significantly more fundamental and broader than the models highlighted within the Call for Evidence.

Innovation

47. Can you give specific examples of types of support that would be most effective in bringing forward innovation in these areas?

There are several innovation mechanisms within the GB framework, and these mechanisms should ensure that consumers have access and are able to participate in these schemes, especially as flexibility providers a clear service to the market and the networks. These mechanisms could cover ways in which IT providers, aggregators, suppliers, DSOs, etc. can work together to unlock flexibility. We would recommend that BEIS/Ofgem should consider whether there would also be any benefit in wider innovation mechanisms, such as supporting the funding utilisation of new trading platforms. However there would need to be clear scrutiny, to ensure that these mechanisms are focussed on the barriers to flexibility, and not on wider market issues.

If you have any questions on our response, please feel free to contact me (020 7811 1055, amos@dongenergy.co.uk).

Yours sincerely

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