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Dear colleague,

Consultation on supplier agent functions under market-wide settlement reform: Ofgem response and decision following stakeholder feedback

On 17 September 2018, we published our consultation on **supplier agent functions under market-wide half-hourly settlement reform (MHHS).**[1] Our proposed position was that our work on MHHS should not include the centralisation of agent functions. Additionally, we thought that there may well be a case for future models where data was not aggregated for submission into central settlement systems, and therefore that the data aggregation role may no longer be required in its current form.

We consulted on our proposed position, asking four questions to stakeholders:

> Question 1: Do you have any comments on our updated analysis and thinking?
> Question 2: Do you agree with our proposed position?
> Question 3: Do you consider that settlement data will still need to be aggregated for submission into central settlement systems in future? In light of this, do you consider that a data aggregation role is required?
> Question 4: Do you agree with our consideration of our proposed position against our assessment principles?

We received 21 initial responses to the consultation, and a further 2 responses, which we have considered together with the initial responses. The 23 non-confidential responses have been published alongside this document, on our website. We are grateful for the range of stakeholders that provided responses, including: supplier agents, suppliers, trade associations and code bodies.

Following the review of the responses, we are confirming our consultation proposals.

We confirm that our decision on MHHS will not include centralisation of data collection.[2] Supplier agents will therefore continue to deliver this role under MHHS.

[1] https://www.ofgem.gov.uk/publications-and-updates/consultation-supplier-agent-functions-under-market-wide-settlement-reform
[2] See Appendix 1 for explanation of the data collector role

In light of our decision not to centralise data collection, **we also confirm that our work on MHHS does not centralise meter operation.**[3] This is in line with our position in the March 2018 working paper.[4]

Following this consultation, and consideration of the responses, we also confirm our consultation proposal that: **we think that there may well be a case for future models where data is not aggregated for submission into central settlement systems.** Therefore the data aggregator[5] role may no longer be required in its current form. We think that holding non-aggregated data in central settlement systems would give rise to benefits for innovation, flexibility and competition, and so should be an option for consideration.The final decision on whether it should happen will need to also take into account other factors including security and privacy considerations, and our Impact Assessment.

In November 2018 we published our least regrets steer[6] (which allowed the progression of the Target Operating Model (TOM) design work), and we are now publishing our decisions on agent functions through this response. It is the role of the Design Working Group[7] to assess the different options and design the most appropriate TOM that will deliver on the objectives set out in the significant code review (SCR).

The development of the TOM is just one area of the SCR and feeds into the Full Business Case (FBC)[8], which will support the final decision on MHHS. To develop the FBC we will carry out a Request for Information, and a consultation on an Impact Assessment. As part of our Impact Assessment we will weigh up the costs and benefits of a TOM where central settlement systems take in non-aggregated data. It is by using the FBC that we will take the decision on the final TOM, and our decision will be informed by all the relevant evidence available to us, including stakeholder responses to the Impact Assessment and advice from the Design Advisory Board.[9]

Finally, we are content that our proposed position aligns with our assessment principles.[10]

In summary, our confirmed position is that our work on MHHS should not include centralisation of agent functions, and we think that there may well be a case for future models where data is not aggregated for submission into central settlement systems. However, it is important to note that Government and Ofgem are reviewing the current retail market design,[11] and are considering what reforms are necessary to ensure the retail market is fit for future consumers. Any fundamental changes to the retail market may have implications for a number of parties, including suppliers and supplier agents. We therefore emphasise that our current proposal is set out in the context of our work on MHHS, and based on the evidence relevant to this project. We are not ruling out any impacts on supplier agents which may flow from any wider reforms. Any wider changes would be based on further analysis, considering all the relevant benefits and drawbacks. This would include a process of consultation with affected stakeholders.

You can find our summary of the responses received to the consultation and the reasons for our decision in Appendix 3, attached.

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[3] See Appendix 1 for explanation of the meter operator role
[4] https://www.ofgem.gov.uk/publications-and-updates/supplier-agent-functions-under-market-wide-half-hourly-settlement
[5] See Appendix 1 for explanation of the data aggregator role
[6] https://www.ofgem.gov.uk/publications-and-updates/policy-decisions-settlement-reform-least-regrets-steer-design-working-group
[7] https://www.elexon.co.uk/group/design-working-group/
[8] See Appendix 2 for explanation of the Business Case process
[9] https://www.ofgem.gov.uk/gas/retail-market/forums-seminars-and-working-groups/design-advisory-board-market-wide-half-hourly-settlement
[10] See Table 1 for our assessment principles.
[11] Current retail market design is often referred to as the 'supplier hub' model. We call this the 'supplier hub' because the supplier is positioned as the primary intermediary between consumers and the energy system. More information on the joint Government-Ofgem review can be found at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/783680/future-energy-retail-market-review.pdf

Yours faithfully,

Anna Stacey
Head of Settlement Reform

Appendix 1: Background to Supplier Agents

Under the Balancing and Settlement Code (BSC), electricity suppliers appoint supplier agents to carry out certain functions in accordance with Section S of the BSC.[12] Some larger business customers contract with their own agents, but it is the supplier who retains responsibility for compliance with the BSC, under the supplier hub principle.

There are currently three supplier agent roles for metered supplies.[13]

Meter Operator (MOP) - responsible for installing, commissioning, testing, maintaining and rectifying faults in respect of metering equipment. Also responsible for maintaining Meter Technical Details and providing such details to the relevant Data Collector.

Data Collector (DC) – responsible for collecting, validating and estimating data (as required). Also responsible for providing reports and maintaining relevant standing data.

Data Aggregator (DA) – responsible for receiving data from the Data Collector, validating and providing reports and maintaining relevant standing data. Also responsible for entering data into the relevant aggregation system and aggregating the metered data into MWh in the relevant aggregator system and providing this to the Supplier Volume Allocation Agent.

Appendix 2: Business Case Process

To develop the Business Case, we are following HM Treasury's Five Case Model approach to major projects, which breaks down each iteration of the Business Case into five individual parts – the strategic, economic, commercial, financial, and management cases.
We are building up information and detail in the Business Case iteratively, constructing the Business Case in three stages, and have published the first two stages:

- **Strategic Outline Case (SOC)[14]:** this focused primarily on the strategic case. It set out our rationale for seeking to reform the existing settlement arrangements and the strategic fit of the project with other concurrent large change projects. It also introduced elements of the other four cases.
- **Outline Business Case (OBC)[15]:** this presented the results of a draft economic assessment of the impact of introducing MHHS.
- **Full Business Case (FBC):** this will outline a detailed economic assessment of the introduction of MHHS to complement the final Target Operating Model. It will use the commercial, financial and management cases to set out arrangements for implementation. It will be informed by a Request for Information and an Impact Assessment.

[12] Full roles and responsibilities of supplier agents can be found in the BSC Section S: https://www.elexon.co.uk/documents/bsc-codes/bsc-sections/bsc-section-s-supplier-volume-allocation/
[13] It is likely that under the new Target Operating Model for MHHS there will be new roles and definitions for functions supplier agents carry out, however the definitions set out the current day arrangements. Note, there are additional roles in relation to unmetered supplies.
[14] https://www.ofgem.gov.uk/publications-and-updates/market-wide-half-hourly-settlement-hhs-strategic-outline-case
[15] https://www.ofgem.gov.uk/publications-and-updates/market-wide-settlement-reform-outline-business-case

Appendix 3: Stakeholder feedback and Ofgem decision following supplier agents consultation

Question 1: Do you have any comments on our updated analysis and thinking?

1.1 In the consultation,[16] we provided additional information on each of the six analytical areas we set out in our March 2018 working paper[17]: Data quality, hand-offs, settlement performance, economies of scale, value-added services and implementing industry changes. This work was based on feedback from stakeholders and further analysis. We then summarised our updated thinking.

Responses

1.2 The majority of responses agreed with our updated analysis and thinking. However, a number of respondents challenged our views, especially on the areas of settlement performance and value-added services. Stakeholders' responses to this question are summarised below.

1.3 Regarding **data quality**, most stakeholders agreed with our analysis and conclusion. One supplier however, thought that data quality issues in future would continue to be significant. They argued that new issues may emerge to replace current ones - for example, there might be fewer exceptions, but also shorter timescales to investigate and resolve them.

1.4 One response noted that the Balance and Settlements Code (BSC) Performance Assurance Framework (PAF) would also need to be revised to ensure it is appropriate for the chosen Target Operating Model (TOM), and therefore ensure that Settlement Performance is improved under half-hourly settlement (HHS).

1.5 Regarding **Hand-offs**, most stakeholders agreed with our analysis and conclusion. One stakeholder however, considered that the decrease in the magnitude and size of issues faced would ultimately depend on the final TOM, and therefore did not agree with our view that standing data for metering will be less important for Market-wide Half-Hourly Settlement (MHHS). Another stakeholder said that, while they agree that there is potential to support better management of data quality, we should expect the same data quality issues to arise over time, because smart meters are being managed using the same processes and data flows as traditional metering.

1.6 Most supplier agents disagreed with our view that **Settlement Performance** is not a particularly important area of differentiation. They thought that performance is a significant element of competition in the market because there are differentiated service levels among supplier agents, and suppliers often consider this when picking a preferred agent. For example, some stakeholders mentioned that low performance is a trigger for a supplier to seek other agents.

1.7 However, one supplier thought that, while it is likely suppliers procure an agent wanting reliable performance, the differentiation of how to achieve this is not necessarily the over-riding reason to procure that service. They said that additional services from an agent which assist with billing and forecasting are more likely to be the differentiator for a value added contract.

[16] https://www.ofgem.gov.uk/publications-and-updates/consultation-supplier-agent-functions-under-market-wide-settlement-reform
[17] https://www.ofgem.gov.uk/publications-and-updates/supplier-agent-functions-under-market-wide-half-hourly-settlement

1.8 Stakeholders were generally supportive of our views on **economies of scale**. One respondent suggested that any economies of scale from developing a central agent might be lost in the high capital costs of setting up such an agent. Another stakeholder, however, considered that we should undertake a more extensive analysis on the scale of economic benefits from centralising a smart data collection/aggregation agent role, suggesting we should do this once the final TOM has been confirmed.

1.9 Supplier agents generally disagreed with our view that **value-added services** are not dependent on carrying out data collection or data aggregation. Many of these responses argued that:

- there are cost synergies between being an agent and being able to offer tailored services to suppliers (such as value-added services);
- access to data from meter to settlement is critical in offering these services; and
- proximity to data collection and data aggregation makes the process more efficient - for example, by allowing for faster exception correction.

They concluded that decoupling core services (such as data collection and data aggregation) from value added services would result in the latter becoming more expensive and less viable.

1.10 Stakeholders generally agreed with the statement that supplier agents are not a source of delay to **industry changes.** Some stakeholders added that not only are supplier agents not a source of delay, but they had been instrumental in delivering industry changes.

Ofgem response and post consultation thinking

1.11 We have considered these representations. The responses further support our view that value-added services act as an important area of differentiation for supplier agents. We acknowledge that settlement performance is considered by a number of stakeholders to be an area of differentiation, though we still believe it to be to a lesser degree then value-added services. On the question of cost synergies between carrying out Data Collector (DC) and Data Aggregator (DA) roles together, and also value-added services, we were not provided with any economic evidence in order for us to assess this. However, as part of developing the economic business case component of our Full Business Case (FBC), we will seek and consider evidence of impact on parties including supplier agents through our Request for Information (RfI) and Impact Assessment (IA).

Question 2: Do you agree with our proposed position?

2.1 In summary, our proposed position was that our work on MHHS should not include centralisation of agent functions, and we thought that there may well be a case for future models where data was not aggregated for submission into central settlement systems. At that stage, we had not seen compelling reasons why a central agent would deliver significant consumer benefits in principle.

2.2 Our position on each of the agent functions were:

- **Data collection**: We proposed that our work on MHHS should not include the centralisation of data collection. Supplier agents would therefore continue to deliver this role under MHHS. This includes both smart and advanced meters.

- **Meter operation:** In light of our proposal not to centralise data collection, we proposed that our work on MHHS would not centralise meter operation.
- **Data aggregation:** We thought that there may well be a case for future models where data was not aggregated for submission into central settlement systems, and so the data aggregator role may no longer be required in its current form. We thought that holding non-aggregated data in central settlement systems could provide more flexibility to implement future changes, such as developing new aggregations of data, and that this could be a way of "future-proofing" the TOM. We also noted that this would enable a single database of consumption data within central systems.

Stakeholder Responses

2.3 The great majority of responses to this consultation were supportive of our proposed position of not including centralisation of agent functions in MHHS. However, most of the responses from supplier agents were strongly opposed to our view that there may be a case for submitting data that has not been aggregated into central settlement systems. The majority of respondents that were not supplier agents agreed in principle that the DA role might no longer be required and/or agreed that this question is best examined in detail by the DWG as part of their work future-proofing the TOM. The data aggregation question is addressed in Question 3, below.

2.4 **Centralisation of agent functions:** Responses agreed with us that while there may be potential for some economies of scale from a central agent, introducing a monopoly provider is likely to be detrimental to innovation and costly (in terms of both set-up and administrative costs), likely off-setting any potential benefits. They also argued that, once a monopoly has been established, it is difficult to reverse should the conditions that gave rise to its implementation change. Therefore, they argued, any move to centralisation should have to satisfy a high threshold to show that it has clear benefits which outweigh the costs.

2.5 Respondents also pointed out the benefits of competition over centralisation for the DC and MOP roles, such as innovation and specialisation.

2.6 One supplier, while supportive of our proposal not to centralise MOP, suggested that there may be a case for a centralised DC role for smart metered customers, and prompted us to consider this further.

2.7 ***Ofgem response*:** With the exception of the feedback provided on the DA aspects of agent functions (which has been explored further under question 3), we note that stakeholders were on the whole in agreement with our analysis and proposed position on DC and MOP roles. We have not been presented with further evidence through this consultation that would make us re-consider our position on DC or MOP, therefore, we think that our analysis is still valid.

2.8 **Decision to be reviewed once the final TOM has been agreed:** A number of stakeholders said that while they agreed with our position at this stage, the decision should be reviewed once the final TOM design had been agreed, to ensure the decision remains the most effective. For example, if it becomes evident that the decision not to centralise supplier agent functions is leading to higher costs or complexity than we had assumed in making this policy decision.

2.9 ***Ofgem response*:** We think it is important to provide certainty to stakeholders. We have considered the evidence on centralisation, and as set out above, we do not think we have seen evidence that the centralisation of DC and MOP roles would be beneficial for consumers. We agree with stakeholders that any move to centralise these functions would require clear benefits that outweighed the costs. Following our

analysis of the evidence received, we do not think that this is the case. We also do not think that such a case would likely be present in the context of the recommended TOM presented to us by the Design Working Group (DWG). As part of developing the economic business case component of our FBC, and therefore our final decision, we will be consulting on an IA and will carefully consider any evidence stakeholders submit to us and assess whether it impacts our position. However, based on the evidence we have seen so far, we do not think it is likely that we would re-open our decision not to centralise DC and MOP functions as part of the MHHS project. For our decision on DA functions see question 3.

2.10 **Central database for meter asset information:** Some respondents said that we should consider a centralised data repository for meter asset information (such as meter technical details) noting that this would not need to involve the centralisation of any current role in the market. This, they argued, would allow industry to benefit from a centralised single source of the truth, simplified data-flow requirements, a reduced number of data exceptions and potentially a singular accountability for stewardship of meter asset data.

2.11 ***Ofgem response*:** This proposal will be considered as part of the wider system design.

2.12 **Central database for half-hourly (HH) consumption:** Some responses suggested that we should consider the merits of creating a central database for HH consumption data, which they thought would allow third parties to use the data in provision of innovative services, such as demand-side response solutions, innovative tariffs and local balancing.

2.13 ***Ofgem response*:** These responses feed into our consideration of whether to allow for the possibility that suppliers could be required to submit non-aggregated data into central settlement systems. This is explored further under question 3.

Post Consultation Decision

2.14 **Our decision is that our work on MHHS will not include centralisation of data collection**. This role will continue to be provided on a competitive basis in the market under market-wide settlement reform

2.15 In light of our decision not to centralise data collection, **we have decided that our work on MHHS will not centralise meter operation**.

2.16 This decision confirms our proposed position in our September 2018 consultation. However, it is important to note that Government and Ofgem are reviewing the current retail market design,[18] and are considering what reforms are necessary to ensure the retail market is fit for future consumers. Any fundamental changes to the retail market may have implications on a number of parties, including suppliers and supplier agents. We therefore emphasise that our current proposal is set out in the context of our work on MHHS, and based on the evidence relevant to this project. We are not ruling out any impacts on supplier agents which may flow from any wider reforms. Any wider changes would be based on further analysis, considering all the relevant benefits and drawbacks. This would include a process of consultation with affected stakeholders.

2.17 Our decision in relation to data aggregation is set out in Question 3.

[18] Current retail market design is often referred to as the 'supplier hub' model. We call this the 'supplier hub' because the supplier is positioned as the primary intermediary between consumers and the energy system. More information on the joint Government-Ofgem review can be found at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/783680/future-energy-retail-market-review.pdf

Question 3: Do you consider that settlement data will still need to be aggregated for submission into central settlement systems in future? In light of this, do you consider that a data aggregation role is required?

3.1 The majority of respondents that were not supplier agents agreed in principle that the DA role might no longer be required and/or agreed that this question is best examined in detail by the DWG as part of their work future-proofing the TOM. However, most of the responses from supplier agents strongly disagreed with our view and thought that the current DA role is required. Below, we have set out the main themes of responses received and have included our response under each section.

Economic considerations

3.2 **The value of aggregating the data**: One supplier argued that because data aggregation is currently undertaken using strict rules, and in many cases using the same non-half hourly data aggregation software provided by the Balancing and Settlement Code Company (BSCCo), there is no added value to be gained from the act of aggregating data, and therefore, no reason that supplier agents would need to retain this function in the future.

3.3 Some supplier agents thought that there is value in aggregating data before its submission to central settlement systems, and as an example said that Half-Hourly Data Aggregators (HHDA) are more flexible and innovative than Non Half-Hourly Data Aggregators. They argued that this was because in that market, competition drives different HHDAs to innovate their in-house systems for efficiency gains, for example providing additional aggregations outside the usual settlement calendar.

3.4 ***Ofgem response*:** We received no evidence to contradict our view that the actual act of aggregating numbers is of low value and a simple task. This view is especially pertinent in the NHH market when data aggregation is undertaken using strict rules and often using software that is provided by the BSCCo. Where additional data aggregation runs are being provided outside of the usual settlement calendar we believe this would fall into the category of value-added services. As we do not propose the central settlement system undertakes value-added services, we would therefore still expect supplier agents to be able to undertake these functions competitively, as they do now. This is discussed further below.

3.5 **Value-added services:** It was noted by different categories of stakeholders (including both suppliers and supplier agents), that some tasks currently carried out by the DA role would still need to take place. These tasks would be:

- Data validation and reporting
- Other value-added services

3.6 One supplier said that most suppliers use the data held in the current data aggregation systems to monitor and manage their settlement performance, which allows corrective action. They explained that suppliers are able to use this data for purposes beyond settlement, such as forecasting. It was also noted that in order to make sure that these tasks are still provided and settlement performance (and therefore accuracy), is not adversely impacted, market participants should have access to a reporting and monitoring capability that provides them with the same level of data access they have currently.

3.7 As stated under Question 1, most supplier agents thought that value added services are dependent on carrying out DC and DA roles, due to synergies between both

roles and data needs. For example, it was stated that certain activities are inherent to the DA role and cannot be transferred to other roles such as DC, eg some data validation. They also thought that critical services for suppliers of additional quality/validation check for settlement data (eg suppliers use of DA data to check settlement bills) had to remain independent from central settlement systems.

3.8 One supplier agent said that while they believe settlement performance services were better where a single organisation performs both DC and DA roles (due to the ability of DAs being able to identify and investigate missing and duplicate settlement data), this analysis could still be done, if access to the right level of data was provided.

3.9 One code administrator thought that the value-added services currently offered by DAs would still be provided on a commercial basis outside the settlement processes, given that there would be competitive retrieval and processing of data.

3.10 ***Ofgem response*:** We are not proposing to centralise the value-added services currently offered by DAs, and it is important to note that we are not proposing to remove the ability of supplier agents to aggregate data for their own purposes. We believe supplier agents would be able to offer the value-added services they currently carry out, and given the expertise of supplier agents and the synergies between DC and these services, we would expect supplier agents to be in a very good position to offer them.

3.11 **Economic impact on supplier agents**: As noted above, in general supplier agents said that services offered by DAs are not directly transferable to DCs and that there are synergies from providing the DA role alongside the DC role. Therefore, they argued, submission of non-aggregated data would undermine existing business models to the point that it might affect their ability or willingness to continue providing MOP or DC services. For example, some supplier agents bundle their services (eg offering DC and DA together). Removing the DA function from their operations would mean realigning contracts with end customers, including negotiating the value (and price) of the remaining services. This could lead to a situation where providing these services is no longer viable for a number of supplier agents, forcing them to exit the market (although they say that the outcome is difficult to predict).

3.12 Other economic impacts suggested are: significantly higher data transfer costs of transmitting meter level information to a centralised system, which would fall on supplier agents, and the security of employment of the staff employed to service the DA function.

3.13 ***Ofgem response:*** We recognise that there could be economic impacts on the supplier agents arising from the removal of the DA role (with data aggregation being carried out in central settlement system, and other parts of the current role carried out elsewhere, eg alongside data collection). However, although we requested economic evidence of the impact of the removal of the DA role, to date we have not been presented with enough detailed evidence to show a significant economic value in comparison to the other tasks the supplier agent carries out (bearing in mind that we have said that aspects of the DA role relating to data quality checks and value added services would still need to be carried out within the market, for example by data processors). Nevertheless, stakeholders will have the opportunity to provide us with more information on the potential economic impact on their organisations if data is no longer required to be aggregated prior to submission to central settlement systems. This will be through the RfI that will be issued to inform the IA. The economic impact on market participants will be considered as part of the IA, and the overall economic assessment will be carried out as part of the FBC.[19]

[19] Paragraph 3.15 of Supplier agent functions consultation

3.14 As we said above, we think that given the synergies and expertise within supplier agents, they would be in a very good position to continue to offer value-added services. Therefore, we fail to see why supplier agents would not be able to offer any of the value-added services currently provided by the DA role.

3.15 **Economic benefits**: One code administrator thought that there could be economies of scale to be achieved by submitting non-aggregated data into central settlement systems. They also thought that there are efficiencies and benefits in innovation, flexibility and competition from moving from the existing data aggregation agent model which tends to silo meter data by supplier, and is a barrier to aggregation of data across suppliers for non-settlement purposes.

3.16 ***Ofgem response*:** We agree that there is a good economic case in principle for submitting non-aggregated data into central settlement systems. This includes:

- potential economies of scale,
- efficiency gains:
  - in settlement (eg no need to aggregate data both outside and inside central settlement systems), and
  - in non-settlement services (eg benefits of holding the data in a central database, such as the benefits of data consistency),
- enabling innovation and flexibility and,
- opening further the market to competition.

3.17 We further consider the benefits of innovation and flexibility, and of competition in the following subheadings. The economic implications of the final TOM – both costs and benefits – will be considered in the IA, and the refined economic assessment which will be carried out as part of the FBC.

Technology

3.18 **Innovation and flexibility:** One code administrator noted the benefits of non-aggregated meter data being provided to the central settlement process in terms of innovation and flexibility:

- The current DA approach gives rise to data-siloing. Submission of non-aggregated data would eliminate this barrier to innovation and flexibility. For example, they thought it would facilitate the adoption of new technologies such as peer-to-peer trading (P2P) or community energy schemes,
- Implementing industry changes, including settlement, should be easier as changes to calculation rules would be simple and timely to implement.

3.19 Other responses noted advances in technology and the movement to smart meters as reasons why the DA role would not be as important in the future and so may no longer be required in its current form.

3.20 In addition, some respondents also noted that a central database base of non-aggregated HH consumption data would provide industry with a single source of truth, as well as allowing innovation.

3.21 In general, supplier agents thought that central systems are less receptive to innovation and change, as well as less receptive to customer needs and to managing their issues, relative to competition. Therefore, they do not agree with our view that sending non-aggregated consumption data into settlement systems would promote innovation.

***Ofgem response*:**

Flexibility

3.22 Holding non-aggregated data in central settlement systems would be a way of future proofing the TOM. It could provide more flexibility to implement future changes, such as developing new aggregations of data without the need for repeated changes to the data transferred between parties. This TOM design choice could also facilitate and support changes that could occur in the evolving retail market. Ensuring energy regulation is responsive to opportunities and risks that arise during the energy transition is an important focus for the government-Ofgem Future Energy Retail Market Review which is looking into future retail market reforms.

3.23 Implementing industry changes, including to settlement, should be easier as changes to calculation rules would be simple and timely to implement.

3.24 A move to requiring non-aggregated data to be submitted to central settlement systems would align with the joint future energy retail market review's[20] view that energy regulation should be responsive to opportunities that emerge in future. We consider that submitting this data to central settlement systems would help optimise the energy system and consumer outcomes by improving data transparency and access. Holding non-aggregated data centrally would be the most flexible approach at this time given the extent of retail market development expected over the coming years as smart meter data benefits unfold. It could also have value in enabling potential future network access and forward-looking charging reforms, which are under consideration in our Access and Forward-looking Charging SCR.[21] This could also enhance the consumer benefits enabled through MHHS.

Innovation and access to data

3.25 We have identified the lack of access to consumption data as a key potential barrier to innovation in the energy market,[22] and we also noted in our consultation that access to consumption data is key for the provision of value-added services by supplier agents and third parties beyond settlement[23] - which would promote innovation and competition in this market. We think this would in turn lead to some of the expected benefits from MHHS. In addition, we agree that the current DA approach gives rise to data-siloing and there is a risk it could place incentives on suppliers or their agents to hinder access to the data they hold, making it difficult for any party in the market to have access to market-level data. For example, in their response to the working paper one innovator said that they find it difficult to deal with multiple agents, especially to get data from them.[24]

3.26 Submission of non-aggregated data would eliminate a barrier to innovation and flexibility for non-settlement purposes by allowing the possibility for the final TOM to include (subject to our IA and decisions on design) a database of non-aggregated consumption data within central settlement systems. We would expect this to make meter data easier to access (subject to the right governance and privacy considerations), facilitating the adoption of new technologies and business models such as demand side response solutions, innovative tariffs, P2P trading or local balancing.

[20] https://www.gov.uk/government/publications/future-energy-retail-market-review
[21] https://www.ofgem.gov.uk/electricity/transmission-networks/charging/reform-network-access-and-forward-looking-charges
[22] Page 10 of Future supply market arrangements – response to our call for evidence
[23] Paragraph 2.56 of Supplier agent functions consultation
[24] Paragraph 2.66 of Supplier agent functions consultation

3.27 Other benefits of providing central access to market-level consumption data (again, subject to governance and privacy considerations), which have previously been identified by stakeholders[25]:

- Help open the market to a wider range of players and potential entrants who may be looking to assess the market opportunities.
- Encourage the provision of flexibility services by non-traditional players.
- Benefit public interest purposes such as research, supporting policy-making or support beneficial innovation.

3.28 **Alternative ways to achieve benefits:** Some supplier agents thought that there were alternative ways of providing the benefits of making data openly available to other market participants in the energy services supply chain. They argued that the proposed solution is disproportionate as the outcome could easily be achieved through the existing competitive DA model. For example, they propose the use of distributed ledger technology to allow the competitive provision of aggregation services whilst providing the benefits of making data openly available to other market participants in the energy services supply chain.

3.29 ***Ofgem response*:** When we looked at the access to consumption data issue in the consultation, we concluded that there are various possible options to prevent any party from taking advantage of privileged access to settlement data, which stop short of setting up a central supplier agent[26]. We have not seen evidence to suggest that any of the other options considered in the consultation or proposed by stakeholders are more effective than our proposal. We remain of the view that opening up the possibility of submitting non-aggregated data into central settlement, and for this to be accessed by the market (subject to privacy considerations and governance), is a cost effective and balanced approach to promote innovation and flexibility.

3.30 The DWG has been tasked to deliver options and recommendations on the design aspects of the TOM and to come up with the most appropriate design that realises the objective and design principles developed by us. The Design Advisory Board (DAB) also provides expert advice and considers whether the TOM design recommendations promote innovation and competition and facilitate a smart, flexible energy system.

3.31 The appropriate place to weigh up the costs and benefits of different ways to achieve the SCR objectives[27] is through an IA, which will feed into our consideration of the TOM. Stakeholders will have the opportunity to provide us with relevant economic evidence through our consultation on the IA, and we will take this into consideration in reaching our final decision on the TOM.

3.32 **Technology limitations:** One code administrator thought that one of the drivers that led to the current aggregation role (the limited IT systems capabilities in the late 90's) no longer applies. This, they said, is due to changes in technology, which would allow central settlement systems to cope easily with the required data volume.

3.33 Most supplier agents disputed the argument that the technology was not present 20 years ago to centralise data aggregation, and said that the only reason the DA role was not centralised was Ofgem's drive at the time to move away from centralisation and monopoly.

[25] As identified in the responses to the Consultation on access to half-hourly electricity data for settlement purposes
[26] Para 2.56 to 2.73 in our Supplier Agent functions consultation
[27] As set out in the significant Code Review Launch Statement: https://www.ofgem.gov.uk/system/files/docs/2017/07/electricity_settlement_reform_significant_code_review_launch_statement.pdf

3.34 ***Ofgem response*:** There may have been a specific historical reason for the current DA role, however this does not preclude us from considering a design where data is not aggregated for submission into central settlement systems. This is particularly so where there would be benefits of having non-aggregated data, and the technological capabilities are now available for this.

Competition

3.35 **The current DA model and competition in DA services:** One respondent thought that the existing DA model does not really provide competition in data aggregation as a service, as they thought that the DA role became a *de facto* part of the DC role (although not formally joined as a defined market role) due to the data dependency between DAs and DCs. Therefore, it was suggested that it is the competition in DCs, rather than DAs that is the key driver for competition in the supplier agent market.

3.36 ***Ofgem response*:** As we have noted above,[28] the DA role comprises of more functions than just the role of aggregating the data, for example: data validation, settlement reporting and other value-added services.

3.37 We have not seen any evidence to suggest that there is a competitive market for DAs as a standalone service. Rather, we understand that DA services are typically offered bundled up with other supplier agents' services, such as DC. Likewise, we have not been presented with any evidence that suggests that the aggregation of data itself is a driver for competition in the supplier agent market.

3.38 In addition, as stated in our September 2018 consultation we think that both supplier agents and third parties will want to provide value-added services beyond settlement, and that access to consumption data is key for this.[29] Therefore, we consider that by holding non-aggregated data in central settlement systems and facilitating access to it, we would be increasing competition in the market for value-added services, including aggregation services outside settlement if the market sees value in it, for example for forecasting or settlement validation.

3.39 **Efficiency and cost issues for monopoly systems**: Supplier agents thought that by requiring non-aggregated data to be submitted to central settlement systems we would be creating a monopoly for data aggregation because data would still have to be aggregated within central settlement. In addition, they argued that central systems are less receptive to innovation and change, as well as less receptive to customer needs and to managing their issues, relative to competition. The argument is that central systems are always a second best option in terms of innovation and efficiency. Furthermore, they said that implementing a central DA system would incur significant set up and administrative costs. They contested our view that the fact that central settlement systems could now work with non-aggregated data is a reason to consider requiring suppliers to submit non-aggregated data to central settlement systems.

3.40 ***Ofgem response*:** We agree that it is important we do not move to a new market structure which could be harmful to competition. This is also in line with the assessment principles used when coming to our decision.[30]

[28] Paragraph 3.5 of this document
[29] Paragraph 2.56 of https://www.ofgem.gov.uk/system/files/docs/2018/09/agent_functions_consultation_-_ready_to_be_published.pdf
[30] Page 41 of Supplier Agent functions working paper: https://www.ofgem.gov.uk/system/files/docs/2018/03/supplier_agent_functions_working_paper.pdf

3.41 As we have stated elsewhere in this document,[31] we are not proposing that central settlement systems should provide the value-added services that are currently carried out by DAs. Nor are we proposing to remove the ability of supplier agents to aggregate the data for their own purposes. Rather, we suggest that aggregation of data for settlement purposes could take place within central settlement systems, and if so would give rise to benefits for innovation, flexibility and competition. We think that if all the non-aggregated data was accessible from one place this would in fact promote competition and innovation because parties who are interested in carrying out these value-added services, including those who are currently carrying out DA services in the market, would have access to market wide non-aggregated data (subject to privacy considerations and the appropriate governance) and not just the data they have collected. It would also allow access to new market entrants who currently do not carry out DC services but would like to compete on a level playing field to carry out these value-added services.

3.42 We do not agree that we would be creating a monopoly by simply allowing central settlement systems to work with non-aggregated data. We would not be conferring a right onto the BSCCo but rather removing a restriction, that they have to work with aggregated data. Currently, settlement systems still have to further aggregate the aggregated data they receive from DAs and so we would be removing the requirement of aggregating data in two separate systems. This would not only remove a step, as it would be done in one system rather than two, but it would open up the opportunities for different types of aggregation to take place, which would make settlement processes much more flexible to future changes (ie specific aggregations might be required for P2P trading, multiple suppliers, charging arrangements etc).

3.43 Supplier agents, and any other party in the market, would still be able to aggregate consumption data if they see value in that, for example to offer value-added services. In fact, we think that by facilitating the access to non-aggregated consumption data, we would be increasing competition in the market for value-added services, and the fact that non-aggregated data would be available within central settlement systems would promote innovation for the whole of the electricity market. We expect that this would boost the innovation and efficiency that we would expect to result from healthy competition in the market for value-added services.

3.44 In terms of efficiency and innovation in how central settlement systems will be set up and run, it will be for BSCCo to procure and contract for these, and the anticipated costs of doing so will be considered in our IA.

3.45 **Impact on competition of any privileged access to data**: One supplier agent argued that granting the BSCCo with access to market-wide non-aggregated HH data would confer an unmatchable advantage, as it would be able to offer value-added services outside of core settlement to the entire market. These are services that supplier agents already provide, and so would distort competition and represent an extension to an existing central service that, in their view, is not proportionate or objectively justified. They point to BSCCo's planned architecture for their Foundation Programme[32] which shows all the services and capabilities enabled by having access to this data, such as data analytics, streaming analytics, modelling and machine learning.

3.46 ***Ofgem response*:** We think that it would be concerning if our proposals gave rise to any party (for example the operator of central settlement systems, the BSCCo) taking undue advantage of privileged access to consumption data. We agree that it is important that the operator of the central settlement systems, or any other party, including any that the BSCCo might contract to carry out functions on their behalf,

[31] Paragraphs 3.4, 3.10 and 3.13 of this document
[32] https://www.elexon.co.uk/about/about-elexon/foundation-programme-2018/

should not benefit from any privileged access to data which could undermine fair competition.

3.47 We think that the current restrictions in place around the BSCCo's ability to take on additional functions provides sufficient guarantees and safeguards. The main restriction is that the BSCCo would need our consent to take on additional activities.

3.48 We note that in considering any additional activity we would consider whether it meets four conditions - set out below[33]:

- BSC Parties should benefit from any diversification;
- The arrangements should not place disproportionate risk on BSC Parties;
- Standards of service under the BSC should be maintained; and
- BSCCo role should not give it any undue competitive advantage in a contestable activity.

3.49 The fact that the BSCCo would need our consent to take on additional activity, and that we have said we would consider the impact on competition in contestable markets in considering whether to grant such consent, gives us the ability to prevent them from taking any such unfair competitive advantage.

Security risk

3.50 **Data security***:* A number of responses said that we should further consider the data security implications of holding non-aggregated data in one place and there were concerns that it would be too high a risk for a single point of failure, or security threat.

3.51 ***Ofgem response*****:** Data security will be considered as part of assessing the overall TOM and taking our final decision, but at this time is not a reason why we should not allow for potential changes in principle to the DA role.

Post Consultation Decision

3.52 Based on the responses we have received through this consultation, and the further analysis we have carried out based on these responses, we confirm our original thinking that: **We think that there may well be a case for future models where data is not aggregated for submission into central settlement systems.** Therefore, the data aggregator role may no longer be required in its current form. This opens up the possibility that data aggregation - for settlement purposes – could take place within central settlement systems. Whether or not this is carried out in practice will be determined by our future decision on the final TOM, which will be set out in the FBC and take account of relevant evidence, including the forthcoming RfI and IA, which will examine the costs and benefits of the TOM.

3.53 We confirm this approach based on the following:

- We think that holding non-aggregated data in central settlement systems would give rise to benefits for innovation, flexibility and competition.
- We are not proposing to prohibit supplier agents, or any other party in the market, from aggregating consumption data if they see value in that.
- We are not considering value-added services – only the actual action of aggregating the data for settlement purposes. Therefore, we do not

[33] Open letter 2012: https://www.ofgem.gov.uk/ofgem-publications/61697/elexon-expansion-way-forward-letter-300412-pdf

think that the proposal would hamper competition in the value-added services market.
- We note that the Authority would need to give consent for the operator of central settlement systems to take on any future role, and that competition in contestable services is one of the factors we would take into account when deciding whether to grant that consent.
- We do not believe we have been presented with compelling evidence as to why the role of aggregating data should remain in its current form. However, stakeholders will have the opportunity to provide us with more data, including on the potential economic impact on their organisations, through the RfI that will be issued to inform the IA.

Next steps

3.54 The risks around data security and the economic impact on market participants are best addressed through other work streams of the project:

- data security will be considered as part of assessing the overall TOM;
- the economic impact on market participants will be considered as part of the IA, in the round with costs and benefits relating to the project as a whole.

3.55 In order to inform the IA, we will publish a RfI. We note that this will be an opportunity for any stakeholder wishing to provide further economic analysis regarding the DA role which to date we have not received.

Question 4: Do you agree with our consideration of our proposed position against our assessment principles?

4.1 Our March 2018 working paper[34] set out a number of assessment principles. These are repeated in Table 1 below. We published these to provide transparency on the main criteria we intended to use.

Table 1: Assessment principles

Principle	Rationale for principle
Carefully considering alignment with our regulatory stances, particularly on competition and innovation[19]	Our regulatory stances are an important way in which we help to deliver policy in the interests of consumers. We think that the principles on competition and innovation are the most relevant to this work stream.
Delivering settlement functions efficiently	Settlement functions affect all consumers. It is therefore important to consider how these can be delivered to a suitable standard and at a low cost.
Supporting the realisation of consumer benefits in a future market	The energy market is changing. We want consumers to be able to benefit from this (eg through new types of products). We want agent functions to enable this future where possible, and we want to avoid them creating barriers (eg in terms of any one type of party being able to

[34] https://www.ofgem.gov.uk/publications-and-updates/supplier-agent-functions-under-market-wide-half-hourly-settlement

	withhold access to settlement data, if this is important to other parties).
Limiting unintended consequences	Our immediate focus is half-hourly settlement (HHS) for domestic and smaller non-domestic customers. However, we recognise that any decision could have wider implications (for other types of consumers or other non-settlement services). We will need to understand and consider such impacts carefully.
Flexibility in adapting to an uncertain future	There is uncertainty about what the market will look like, both in the near-term and the long-term. We will need to consider which model is best-placed to adapt to changing circumstances, and the value of such flexibility.
Complying with legal requirements	Any decision will need to take into account all relevant legal requirements.

4.2 In our September 2018 consultation[35] we went through each principle and explained how we think our proposed decision aligns with them.

Responses

4.3 Most respondents were generally satisfied with the consideration of our proposed position against our assessment principles.

4.4 However, in general supplier agents felt that the decision regarding the DA role was not properly considered against these principles, and that it would have failed the test. Their views were:

- No clear evidence to suggest that "centralising the DA role" would deliver greater cost efficiencies and/or incentives to innovation, therefore, any decision to remove competition in the DA role would be contrary to our existing regulatory stances on competition and innovation.
- A competitive DA role currently delivers settlement functions efficiently and at low cost. Therefore, it cannot be cost effective to build a new aggregation layer within central settlement systems.
- Due to their size, a centralised DA would struggle to respond effectively to the needs of individual consumers, while competitive DAs are better placed to secure consumer benefits in a future market.
- They consider that we have not properly considered any unintended consequences of centralising DAs. This includes unnecessary impact to the existing HH settled advanced meter market, impact to commercial contracts, restriction of innovation and negative consumer outcomes.
- Individual data aggregation software in the HH market has proven to be more agile and adaptable than centrally developed data aggregation software in the NHH market. This shows that competitive data aggregation is better in providing flexibility in adapting to an uncertain future.

4.5 One response noted that in principle, competition is good for incremental change, but as it does not necessarily drive cost-effective transformational change, strong coordination may be needed at some stages of the movement to MHHS.

Post Consultation Decision

[35] https://www.ofgem.gov.uk/publications-and-updates/consultation-supplier-agent-functions-under-market-wide-settlement-reform

4.6 After considering the evidence submitted, we have not seen any that changes our view set out in the consultation document that our decisions on DCs and MOPs are in accordance with the assessment principles.

4.7 We do not consider that the comments made against the assessment principles changes our view on DAs (that there may well be a case for future models where data is not aggregated prior to submission into central settlement systems) because we are considering only the actual act of data aggregation. Specifically, the adding up of the consumption data for central settlement purposes, as opposed to activities relating to data quality and value added services (which we have said would need to be provided in the market).

4.8 In fact, by opening up the option of facilitating access to consumption data (subject to privacy considerations and governance) we believe this aligns with our assessment principles because:

- we would be increasing competition in the market for value-added services
- the fact that non-aggregated data would be available within central settlement systems would promote innovation for the whole of the electricity market and would support the realisation of consumer benefits in a future market
- having non-aggregated data would be more flexible and when data is aggregated in one place this would allow settlement functions to be delivered efficiently
- we have carefully considered the evidence submitted in relation to unintended consequences, including data security and economic impact, and have discussed this above.

4.9 In addition, the TOM is being designed in line with the design principles and strategic objectives set out in the SCR Launch Statement[36] and so any decision made under the TOM design – including whether the final TOM incorporates submission of non-aggregated data to central settlement systems – will also align with these.

[36] https://www.ofgem.gov.uk/system/files/docs/2018/01/updated_target_operating_model_design_principles.pdf

Appendix 4 – Glossary

BSC - Balancing and Settlement Code
The Legal document setting out the rules for the operation and governance of the Balancing Mechanism and Imbalance Settlement. All licensed electricity generators and suppliers must sign up to the BSC and other interested parties may also choose to do so.

BSCCo – Balancing and Settlement Code Company
A non-profit organisation responsible for managing the provision of the necessary central systems and services to give effect to the BSC rules and for managing the governance processes. ELEXON is known as the Balancing and Settlement Code Company, and they administer the Balancing and Settlement Code.

DA - Data Aggregator
As part of the settlement process a party appointed by an electricity supplier in accordance with Section S of the BSC, responsible for receiving data from the data collector, validating and providing reports and maintain relevant standing data. Enters data into the relevant aggregation system and aggregates the metered data into MWh in the relevant aggregator system and provides this to the Supplier Volume Allocation Agent.

DAB – Design Advisory Board
The Design Advisory Board provides strategic advice to Ofgem on potential Target Operating Models (TOMs), developed by the ELEXON chaired Design Working Group (DWG), to deliver Market-wide Half-hourly Settlement. DAB members have expertise in the energy industry, energy regulation and policy (GB and international), consumer issues and innovation.

DC - Data Collector
As part of the settlement process a party appointed by an electricity supplier in accordance with Section S of the BSC, responsible for collecting, validating and estimating data (as required). To provide reports and to maintain relevant standing data.

DWG - Design Working Group
The Design Working Group is an ELEXON-chaired group of industry experts working to design and assess the Target Operating Model (TOM) for Market-wide Half Hourly Settlement.

FBC - Full Business Case
The FBC will outline a detailed economic assessment of the introduction of MHHS to complement the final Target Operating Model. It will use the commercial, financial and management cases to set out arrangements for implementation. It will be informed by a Request for Information and an Impact Assessment.

HHS - Half-Hourly Settlement
Settlement reconciles discrepancies between a supplier's contractual purchases of electricity and the demand of its customers. Generators and suppliers trade electricity in the wholesale market in half-hourly periods. In half-hourly settlement, suppliers are settled against the half-hourly demand of their customers.

IA - Impact Assessment
An Impact Assessment is a tool to help explain the effects and impacts of regulatory proposals on consumers, industry participants, society and the environment.

MHHS – Market Wide Half-Hourly Settlement
Market Wide Half-Hourly Settlement will utilise the ability of smart meters to record a customer's usage during each half hour period to move domestic and small non-domestic customers to half-hourly settlement. Medium and large non-domestic consumers have been settled half-hourly since BSC modification P272.

MOP - Meter Operator
Responsible for installing, commissioning, testing, maintaining and rectifying faults in respect of metering equipment. Also responsible for maintaining Meter Technical Details and providing such details to the relevant Data Collector. As carried out by a party appointed by an electricity supplier in accordance with Section L of the BSC.

PAF - Performance Assurance Framework
The BSC Panel and the Performance Assurance Board use the Performance Assurance Framework to manage settlement risks.

P2P - Peer-to-Peer Trading
Peer-to-peer trading of energy is where small-scale producers, including homes and businesses with solar panels, sell energy to other consumers.

RfI – Request for Information
A Request for Information is a request to collect additional information, beyond the data collected in routine monitoring.

SCR - Significant Code Review
The SCR process is designed to facilitate complex and significant changes to a range of industry codes. It provides a role for Ofgem to undertake a review of a code-based issue and play a leading role in facilitating code changes through the review process.

TOM – Target Operating Model
The Target Operating Model is the settlement arrangements designed by the Design Working Group (DWG) that will facilitate Market-wide Half Hourly Settlement.