

# ELEXON

## Elxon's whole system market design capabilities

### Summary

Elxon has played a leadership role in designing and facilitating changes in market rules to open new markets to a greater number of participants, while also making sure that the interests of all stakeholders are listened to, and change is implemented without unfairly disadvantaging other stakeholders.

Elxon's existing role and expertise ranges from settling the Balancing Mechanism (BM) and wholesale imbalances right down to assuring the metering and data collection processes for the customers. This means that Elxon has an existing 'whole system view' through its data collection processes from MPAN-level (smallest customer) to large TO-connected power plants, making Elxon's position in the industry unique.

If appointed as market facilitator, Elxon will work with NESO and all market participants to ensure coordination and alignment between transmission and distribution by applying this 'whole system approach' to decision making, giving priority to actions that prove to be in the interest of innovation, competition and ultimately, consumers.

Elxon has established and recognised expertise in metering, baselining, imbalance position calculation, assurance, data and data and system architecture. As Senior Responsible Owner (SRO) for the MHHS Programme, Elxon will manage billions of data items related to consumers' consumption, which we believe will be a critical asset for programmes aimed at unlocking the potential of local flexibility for consumers, where Demand Side Response (DSR) at the individual household level has only been employed to a limited extent, and the transition to MHHS will open this opportunity to all households.

In light of above, Elxon believes it can build on its existing capabilities to increase market liquidity, certainty of possible earnings for aggregators and service providers, confidence, and the participation necessary to stimulate flexibility at local level. Our expertise, combined with our standing as a neutral entity, and trust from market participants, makes Elxon the most suitable entity to fulfil the role of market facilitator.

### Preface

In the consultation, Ofgem highlights that the market facilitator role must be delivered by an institution with the right competence and skills to ensure coordination and joined up distribution and transmission market arrangements. In its assessment, Ofgem deems that Elxon's independence and its track record of delivering a substantive, robust, transparent change process means it could be an effective market facilitator. However, Ofgem

also notes that Elexon's most substantive roles relate to code administration, settlement and scheme administration, outlining lack of expertise on the flexibility markets.

In this discussion paper Elexon provides an overview of how its present role creates a strong foundation for the successful delivery of the market facilitator role. We also outline the importance of having different 'centers of expertise' across the energy systems and how Elexon's existing market design expertise can be built on and strengthened, to deliver coherent whole system technical solutions and rules, that create greater transparency for all market participants, benefitting both markets and consumers.

More specifically, in this Discussion Paper, we touch on several aspects of Elexon's market design capabilities, namely:

- 1) General market design capabilities based on the wide set of market rules and arrangements included under the BSC (Balancing and Settlement Code). We note that Elexon acts as a design partner to the industry through our internal capabilities and teams, rather than a simple code administrator;
- 2) Market design and implementation capabilities for shaping and driving industry-wide strategic change as a partner to Ofgem and the industry (Market-wide Half Hourly Settlement Programme);
- 3) Market design capabilities to enable new policy and new business model;
- 4) We also highlight a need to introduce 'customer centric' perspective into the design of central market arrangements in order to fully enable consumer-level flexibility.

### **Elexon's Market design capabilities**

Over recent years, the dependencies between ESO balancing services and broader market arrangements have become significantly more complex, as ESO buys more flexibility from distributed providers, through services like the Demand Flexibility Service (DFS) and the Local Constraint Market (LCM).

These changes have affected the way Elexon exercises its role daily. In an interconnected and cross-vector energy system, in which actions taken at the national balancing markets have an increasing impact on Distribution System Operators and Suppliers, Elexon plays a key role, coordinating and collaborating with ESO, flexibility service providers and Suppliers to enable changes through the necessary modifications to make sure the market arrangements enable innovation and competition rather than hampering it.

At the same time, in its role as the BSC manager Elexon ensures the maintenance of robust and future-proofed arrangements to avoid market distortions or unexpected consequences on market participants' balancing positions.

**We note that no other entity has this wide-ranging expertise in terms of**

**the design of the rules and the changes needed to facilitate innovations without altering other market participants' balancing positions.**

Below, we have summarised some examples of modifications to the BSC necessary to facilitate the entry of new entrants into flexibility markets, and the measures implemented to ensure that these changes do not have distortive impacts on other market participants or segments of the energy supply chain.

We believe that these changes demonstrate:

- A) Elexon's ability to enable the reforms necessary to guarantee optimal results for markets, the industry as a whole, and customers/consumers;
- B) the required breaths of technical and market design expertise needed to align policy and regulatory objectives and market rules;
- C) ability to work with a range of market participants as a neutral, expert facilitator to agree on a way forward amidst a range of individual positions.

These are also critically important foundations for the functioning of local flexibility markets, that will ensure coordination and alignment between transmission and distribution level markets.

<b>Modification</b>	<b>High level description</b>	<b>Status</b>
<b>Modification P344 'Project TERRE implementation into GB market arrangements'</b>	P344 was originally raised to align the BSC with the European Balancing Project TERRE (Trans European Replacement Reserves Exchange) requirements. This was to allow the implementation of the TERRE balancing product at national level and therefore ensure compliance with the European Electricity Balancing Guideline (EBGL). During the course of developing the P344 solution we worked with ESO, FSPs and Suppliers to also incorporate a solution to Wider Market Access, allowing independent aggregators access to the BM (while avoiding disruption to Suppliers' imbalance positions).	Successfully implemented December 2019
<b>Modification P354 'Use of ABSVD for non-BM Balancing Services at the MPAN level'</b>	This modification was aimed at solving a defect in the arrangements for notifying Applicable Balancing Services Volume Data (ABSVD). More specifically, when the modification was raised, the ABSVD Methodology Document allowed NGESO to submit ABSVD for BM Units, but not for distributed providers without their own BM Units. This distorted some ancillary services (e.g. STOR). To solve this issue, Elexon worked with NGESO to understand options and outline solutions, leading to P354 and subsequent changes to the ABSVD Methodology.	Successfully implemented in April 2020
<b>P375 'Settlement of Secondary BM Units using metering behind the site Boundary Point'</b>	P375 allows Metering Equipment situated 'behind' the defined Boundary Point to be used for Settlement purposes in place of the Boundary Point Meter. Primarily, this will allow balancing-related services on-site from smaller assets to be separated from current imbalance-related activities, more accurately reflecting the balancing-energy volumes provided by the Balancing Service Provider (BSP). This	Successfully implemented in June 2022

	Modification allows aggregators to use sites where the asset delivering the balancing service cannot demonstrate reliably the energy change using the site Boundary Point Metering System due to the complex nature of the site and the aggregator not being in control of other processed behind that Boundary Point. This allows more sites access to the BM.	
<b>Modification P376 'Utilising a Baseline Methodology to set Physical Notifications for Settlement of Applicable Balancing Services'</b>	This modification was developed to enable improved market access to existing and potential balancing service providers. More specifically, the modification was aimed at solving issues in providing an accurate physical notification (PN) in settlement calculation for some assets with potential to provide balancing services to the National Electricity Transmission System Operator (NETSO). As this issue was a disincentive for such potential providers to enter the balancing market (as it would have led to incorrect payments/non-delivery charges for balancing services provided). As a result of this BSC modification, these providers are no longer discouraged to enter the balancing markets.	Successfully implemented in February 2023.
<b>Modification P415 'Facilitating access to wholesale markets for flexibility dispatched by Virtual Lead Parties'</b>	P415 seeks to amend the BSC to allow Virtual Lead Parties (VLPs) to participate in the GB wholesale market. Customers (consumers of electricity) who can be flexible about their consumption cannot currently obtain any value from that flexibility from the Wholesale Energy Market, except if they work with their Supplier to do so. This is because the BSC assigns all flexibility delivered by a customer to their Supplier, except for flexibility instructed by National Grid in the Balancing Mechanism, which can be assigned to a third party (referred to in the BSC as a "Virtual Lead Party"). As a result, customers can only access power exchanges (and other markets that require notification of contracts under the BSC) through their Supplier. This contrasts with Balancing Services, the Balancing Mechanism, and the Capacity Market, all of which allow a customer's flexibility to be offered by an aggregator without the involvement of the Supplier.	Awaiting implementation November 2024 BSC Release
<b>P437 'Allowing non-BSC Parties to request Metering Dispensations'</b>	This Modification proposes to introduce a provision in Section L 'Metering' to allow the relevant Meter Operator Agent to apply for Metering Dispensations on behalf of a non-BSC Party. The solution sees non-BSC Parties being able to request Metering Dispensations for the relevant MOA (Supplier Volume Allocation (SVA) for SVA sites, Central Volume Allocation (CVA) for CVA sites) to apply on their behalf. This allows more certainty to developers, as prior to this, a Metering Dispensation could only be submitted once a Registrant was appointed by the customer, which tended to be done in the latter stages of the project shortly before energisation. As a Metering Dispensation is approved by an independent committee Elexon could not guarantee it was approved, which could cause delays in energisation or significant re-work at	Successfully implemented in November 2022

	site, both of which had a significant financial impact on the developer. This option for an early application allowed these issues to be picked up in the design stage, thus mitigating this risk.	
<b>P 453 Metering Dispensation process improvements and clarification to the CoPs</b>	<p>This Modification seeks to address the following issues related to metering:</p> <p>a) Differences in metering point locations between the AMP (Actual Metering Point) and DMP (Defined Metering Point) that can lead to Metering Dispensation requests, which require significant time and resources to process. If the metering point error, introduced by location, doesn't exceed overall accuracy limits, applying a Metering Dispensation may not be necessary, as it poses no significant risk to Settlement. When the error exceeds overall accuracy limits, compensation can be applied to the meter, but using a generic Metering Dispensation is still challenging and poses a Settlement risk if not validated. This will improve the customer experience for collocated sites introducing a more efficient streamlined process.</p> <p>b) The relevant CoP (Code of Practice) for circuits embedded behind the Boundary Point Metering System or DMP specified in Appendix A of the CoPs is unclear, resulting in different interpretations and Metering Dispensation requests. This Modification removed the uncertainty and gave clarity to designers thus avoiding Metering Dispensations being required where the requirements were misinterpreted.</p>	Successfully implemented in November 2023
<b>Modification P462 'The removal of subsidies from Bid Prices in the Balancing Mechanism'</b>	This Modification aims to reduce consumer cost potentially caused by the interaction between the BM and support mechanism arrangements. This shall be done by removing distortion of support mechanisms (such as Contracts for Difference (CfDs) and the Renewables Obligation (RO) schemes) to reduce actions being taken outside of consumer cost order when following the Bid stack merit order. For designing this modification, Elexon has been recently working closely with NGESO to understand interactions between the BM and support mechanisms (such as RO and CFD).	Assessment

We would like to provide a further example of Elexon's market design expertise combined with a delivery vehicle responsibility for an industry-wide strategic change: the Development of the Target Operating Model (TOM) for Market-Wide Half Hourly Settlement (MHHS) and delivering it in our Senior Responsible Officer (SRO) role.

### **Market Wide Half Hourly Settlement (MHHS)**

**Elexon's standing as a neutral party trusted by all market participants groups, combined with its role of enabler of half-hourly advanced meter data flows and code administrator (with which imbalances and market**

**distortions can be limited/avoided) makes Elexon's position in the industry unique to successfully deliver the role of market facilitator, by bringing the relevant parties together to deliver a common outcome.**

Elexon led on the Target Operating Model (TOM) design through several discussion groups with the industry and Ofgem. The MHHS TOM has later become a blueprint for the industry-wide implementation of the Programme. Elexon was nominated by Ofgem as a Senior Responsible Officer (SRO) for the implementation phase of the MHHS work.

The implementation phase involves two main groups of activities: a) coordination of 180 market participants to make change to their own processes and systems, b) developing changes to Elexon's own processes and changes. Below we focus on the impacts of those internal changes and the benefits these can bring to the distributed flexibility markets.

Under the MHHS Programme, Elexon has designed and implemented new BSC Central Settlement Services to leverage maximum benefits from the programme. These include the Market-wide Data Service<sup>1</sup>, the Load Shaping Service (LSS)<sup>2</sup>, the Volume Allocation Service (VAS)<sup>3</sup> and the Industry Standing Data (ISD)<sup>4</sup>.

In a nutshell, these services will:

- Provide robust consumption profiles that will improve the information Elexon provides to Suppliers, by enabling them to better predict their customers' usage and perform their associated balancing activities.
- Be key to aggregated flexibility as they would be a foundation for assurance activities on delivering a balancing service, particularly

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<sup>1</sup> The Market-wide Data Service (MDS) processes SP level data across all market segments. It provides different summations of data for Imbalance Settlement and other purposes such as network charges and flexibility offerings (if required). The MDS will also be responsible for calculating distribution Line Loss values for different sub-classes of Metering Systems by applying Line Loss Factors (LLFs) to the data. The summed data will then be made available to the Volume Allocation Service (VAS) for use in the Volume Allocation Runs (VARs).

<sup>2</sup> The Load Shaping Service (LSS) is responsible for calculating energy consumption (import and export) Load Shapes for several defined Categories of Metering Systems. The LSS uses validated actual Settlement Period (SP) level data accessed from the Processing Service (Smart) (PSS). The Load Shapes will then be used by the PSS to convert Register Readings (RRs) or Daily Consumption values into SP level data. The Load Shape data will also be used to estimate invalid SP level data for smart Meters and default where data is missing or unavailable.

<sup>3</sup> Volume Allocation Service (VAS) will use data from the MDS to calculate energy volumes for Balancing Mechanism Units. The VAS will replace the legacy Supplier Volume Allocation Agent (SVAA) The VAS feeds into shorter Settlement run times, allowing Suppliers to better manage their credit positions, and pass savings on to customers

<sup>4</sup> Industry Standing Data – a system which will be an enhanced version of the Market Domain Data and Line Loss Factor services.



through a baselining technique that could be used as a comparator against a control group.

- Facilitate independent aggregators' access to flexibility markets, as processes for adjusting Suppliers' positions and/or settling flexibility using Asset Metering Systems rely on data from a half-hourly Settled Boundary Point Metering System.

Half-hourly meter data brings significant value in accelerating the transition to a smarter, more flexible electricity system.

As also outlined in Attachment E: Data Capabilities, Elexon is currently building a Data Integration Platform (DIP), a new industry-wide data transfer service, which will facilitate half-hourly advanced meter data flows. Under the remit of MHHS programme, Elexon will also be implementing an advanced meter data repository, utilising data from the DIP, from which Elexon will make data available via our Elexon Kinnect platform (subject to necessary data aggregation and data sharing rules).

Elexon believes that this data represents a great opportunity to maximise the value of flexibility, and that the market facilitator must actively encourage consumers and households to engage in flexibility markets. This involves collaborating with suppliers and aggregators, as well as promoting innovation and the development of new business models, to stimulate required changes in consumers' behaviour.

We understand that these activities may go beyond the set of functions that are currently assigned to the market facilitator, but in outlining its vision for this role, Ofgem emphasised that it would openly and transparently discuss and delineate the boundaries of its role and responsibilities with the market facilitator and the industry.

As already noted in its consultation response, Elexon considers it important that these roles and responsibilities are clearly outlined.

Elexon also believes that whoever is appointed as the market facilitator should stimulate both standardisation as well as innovation (in collaboration and with inputs provided by all market participants) and new business models that can unlock the potential of flexibility to increase liquidity in these markets.

### **Enabling Independent aggregators and flexibility markets**

**As flexibility markets become more established and liquid, it will be increasingly necessary to introduce clear rules to facilitate the entry of new market participants, define the right economic incentives, and prevent unintended negative consequences.  
In light of our expertise as code manager we believe that Elexon is in the best position to achieve these objectives in collaboration with the industry and Ofgem.**

In recent years, independent aggregators have delivered a significant share of aggregated flexibility in markets, that they can now access, delivering benefits to the consumers.

As outlined by Ofgem in its views on the design of arrangements to accommodate independent aggregators in energy markets<sup>5</sup> “the introduction of independent aggregators in certain markets will need additions to, or alterations of, some existing industry codes in order to allow access to the Balancing Mechanism (BM) and wholesale electricity market. This may have implications for aspects such as the relationship between relevant parties and the measurement of DSR volume delivery. Careful design of arrangements that reflect these and other issues is important to protect against less efficient outcomes”.

In the same letter, Ofgem also highlights that the measure of DSR is key: “DSR instructions by an aggregator result in lower or higher demand, which is measured at a certain metering point. This change may only affect a part of the load connected to a specified metering point. It can be challenging to distinguish between changes in demand attributed to a DSR instruction and changes in demand attributed to the demand characteristics of a particular customer (‘business as usual’ demand). However, measuring DSR volumes is key. We consider it important for the design of baseline methodologies to balance accuracy and verifiability, on the one hand, against cost, on the other hand. This will help to ensure that the unique technical characteristics of DSR flexibility are taken into consideration and baseline gaming opportunities are mitigated, at a reasonable cost.”

When an independent aggregator sells flexibility, its customer changes their energy consumption (either reducing or increasing consumption), as per their contract. The customer’s supplier, however, has sourced energy in anticipation of the customer’s normal energy use. For this reason, the efficient formation of independent aggregator bids and offers may be best supported by arrangements that allow for payments to cover the cost of energy sold by the independent aggregator, but initially sourced by the supplier. This helps ensure a more cost-reflective supply curve at a system level (also referred to as efficient price formation) and a level playing field between different technologies. Related to this, the information flows required to allow contractual arrangements to account efficiently for payments for energy sold on, merit careful consideration. A careful balance may need to be struck between enabling information flows to support efficient contractual arrangements, and the potential impact on competition in the market for flexibility.

On this topic, Elexon has been working collaboratively with flexibility providers and ESO on the major Balancing Mechanism changes such as wider access and the introduction of the Virtual Lead Party (VLP) role. Under current

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[5ofgem\\_s\\_views\\_on\\_the\\_design\\_of\\_arrangements\\_to\\_accomodate\\_independent\\_aggregators\\_in\\_energy\\_markets.pdf](#)



arrangements, suppliers receive payments or are exposed to penalties due to a customer being instructed by an independent aggregator. With the BSC modification Elexon is coordinating and working with market participants to amend BSC systems and processes to introduce a compensation mechanism for parties who have been impacted when a VLP takes a Bid or Offer in the BM, ensuring a level playing field and enabling correct incentivisation of flexibility. The driver for the solution is to ensure that parties have the right balancing and delivery incentives, resulting in level playing field competition and more efficient outcomes for markets and consumers.

### **Metering and baselining expertise**

**Elexon is a centre of expertise on metering arrangements and is leading industry thinking on topics like metering of collocated assets and digital metering that are key enabler of flexibility. We outline Elexon’s expertise and capabilities in these areas in the Attachment C - Discussion Paper: Market Facilitator – Metering Expertise.**

### **Data capabilities**

**Elexon believes that increasing transparency in the way data is shared between market participants will be key to the development of flexibility markets.**

**Elexon has a proven track record of managing and providing large amounts of market data to over 10,000 users globally. Our commitment to open data principles extends across the BSC, and our new Insights Solution is designed to serve as a vital, free information service to the industry. We discuss this in more detail in the Attachment E Discussion Paper: Data Capabilities.**

### **Market oversight and assurance**

**Elexon believes that implementing a light but robust assurance framework for local markets will provide market participants with the confidence that their counterparts are adhering to the market rules and that any identified risks are effectively managed. The design and implementation of this framework should be one of the priorities of the market facilitator when appointed. Elexon has the experience and capabilities to play a leadership role in the design and implementation of this framework, due to its long track record in designing rules collaboratively with stakeholders and its neutral nature.**

Elexon operates a Performance Assurance Framework (PAF), under the supervision of an independent Performance Assurance Board, which audits all parts of the settlement process, and conducts and administers activities to provide assurance that all participants in the Balancing Mechanism arrangements are suitably qualified, and that the relevant standards are

maintained to ensure data accuracy.

The PAF set of techniques is flexible and robust, maintaining the highest standard of scrutiny and assurance, whilst not overburdening the market participants.

Elexon believes a similar function will be required for the distributed flexibility markets, due to their increasing effect on other industry arrangements. In fact, we note that there was a growing interest among market participants in establishing an assurance arrangement following Ofgem's initial consultation in March 2023. There is an ongoing industry discussion about baselining and how accurate it is. We believe that baselining is an area that would need a data driven assurance activity to validate accuracy and make proposals for improvements. Many factors must be considered, such as source of metering and accuracy, asset technology type, weather impacts and event days. The BSC PAF covers all areas, from registration, metering, process performance and data submission, all of which are needed for flexibility services. Elexon believes that these skills are a prerequisite for the successful operation of the market facilitator and to give industry and all stakeholders confidence in the flexibility service.

A profiling methodology would be the basis for managing the many to one relationship between aggregated assets combined into a single operational data stream to ESO/DSOs. This would be another critical area for assurance activities to focus on.

### **Elexon as a 'whole system' centre of expertise**

**Elexon believes that by empowering existing centres of expertise in the industry Ofgem and the government will reduce the cost of the net zero transition and increase the speed of delivery, through avoiding duplication of efforts and clarifying and clearly assigning roles and responsibilities.**

In this section we want to draw Ofgem's attention to some general considerations that we believe are relevant to the decision regarding the market facilitator. These considerations mainly relate to the need to ensure efficient solutions, which avoid duplication of costs and, in the end, the best outcomes for all market participants and consumers, who should be at the heart of the market facilitator's choices and guide the decision-making process. This is what we are referring to when we refer to a 'whole system approach' and 'consumer centric objective'.

We note that in its original Call for Input on the Future of local energy institutions and governance<sup>6</sup> in 2022 Ofgem proposed four framework models, one of those being 'Interacting Organisations'. This model is based on the principle that the roles are dispersed to create the clusters with the strongest functional synergies and existing core competencies. This is the model Ofgem has taken forward as

<sup>6</sup> [Call for Input: Future of local energy institutions and governance | Ofgem](#)

a blueprint for the central functions design.

We see strong alignment between this idea of 'Interacting Organisation' and a proposal Elexon articulated in our consultation responses in 2023 to the Strategy and Policy Statement for energy policy in Great Britain<sup>7</sup>, where we stated: "It is also important to recognise that expertise, knowledge and skills are dispersed across a range of central services organisations and regulated entities that will all have to contribute to the ongoing energy industry transformation. Where the expertise and experience needed to transform parts of the industry is found outside of the FSO/NESO, we believe it will be faster and more efficient to allow other organisations to undertake and deliver market-wide functions rather than to ask the FSO to develop new expertise or consolidate existing market expertise... especially, while FSO is establishing itself as a new organisation with a new culture."

We believe Elexon's existing market design expertise can be built on and strengthened to deliver coherent whole-system technical solutions and rules that create greater transparency for all markets, and align policy and regulatory objectives with the delivery mechanisms

As we outline in more detail in the next paragraphs, we also believe that there are several advantages of appointing Elexon as the market facilitator, one of which is ensuring the best outcome for market participants and consumers.

### The 'consumer first' approach

**Elexon believes that whoever is appointed as the market facilitator must put the protection and interest of the final consumer at the center of their decisions.**

**This 'consumer first approach' should guide the action of the market facilitator in outlining its vision for the development of local flexibility markets.**

**We believe that Elexon can efficiently carry out this role, considering not only its expertise, but also its impartiality.**

In the following paragraphs we outline two practical examples that highlight the importance of having a neutral third party in the role of market facilitator able to operate a balanced coordination of interests between the market participants to avoid distortive impacts, duplicate costs or even give rise to inefficiencies or negative results for consumers and bill payers.

#### Example 1

1. The NESO runs a Demand Flexibility Service (DFS) tender that seeks domestic DSR.
2. A Supplier wins the tender as it has a large portion of the domestic EV market and can therefore shift significant EV demand (each EV charger is 7kW).

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<sup>7</sup> [Strategy and Policy Statement for energy policy in Great Britain - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/consultations/strategy-and-policy-statement-for-energy-policy-in-great-britain). The Strategy and Policy Statement is developed in accordance with the Energy Act 2013 and sets out the government's strategic priorities and other main considerations of its energy policy; the policy outcomes to be achieved as a result of the implementation of that policy; and the roles and responsibilities of those who are involved in implementation of that policy.

3. Responding to a NESO low frequency event the Supplier turns down all the EV demand on its time of use tariff, which helps raise and correct overall system frequency.
4. The Supplier switches all the same EVs on at a point in time overnight to make use of low wholesale prices.
5. Many of the Supplier's EV customers are part of clusters i.e. they are found on suburban streets that feed into the same Low Voltage (LV) transformers.
6. The DNO was not notified of the NESO and Supplier's agreement and how the EV demand would be shifted.
7. As a result of EVs being switched on at the same time, LV circuits and transformers can be overloaded, which results in large numbers of customers going off supply. Therefore, the DNO must then act to restore electricity to these customers.

### **Example 2**

1. The NESO runs a Local Constraint Market (LCM) tender that seeks demand response that is going to provide a demand turn up service.
2. In a period of constraint activation, the NESO activates the LCM service in a particular DNO area.
3. As a result, there is an increase in demand on the DNO network.
4. Many of the customers signed up by aggregators to the LCM are part of clusters i.e. they are found on suburban streets that feed into the same LV transformers.
5. The DNO was not notified of the NESO and aggregator's agreement and how the demand would be shifted.
6. As a result of demand being turned up at the same time, LV circuits and transformers are overloaded, which results in large numbers of customers going off supply. Therefore, the DNO must then act to restore electricity to these customers.

### **Impact on customers/consumers/bill payers**

In both examples, as a mitigation measure the DNO reinforces more local networks. Had it been engaged or data been shared, it could have helped coordinate the dispatch of flexibility to avoid overloads without reinforcement, and detrimental outcomes for consumers (and, ultimately, their energy bills due to network reinforcement).

Both examples highlight the importance of having a neutral third party that can have a 360-degree vision, which will enable appropriate information sharing and coordination of the actions of different stakeholders. This will lead to greater collaboration between NESO, DSOs and Suppliers/Flexibility Providers.

In example 1, demand shifting that results in customer minutes lost is not providing the desired customer benefit that flexibility services should provide. Similarly, in example 2 demand turn up causes disruption and outcomes that are detrimental to the customers and, ultimately, their energy bills (due to reinforcement activities undertaken by the DSO).

It should be noted that these examples reported are not merely hypothetical, but represent plausible situations where the negative results are not determined by incorrect behavior of any of the parties involved, but rather highlight the need to have a third party who, in a situation of neutrality can facilitate/coordinate actions to guarantee an efficient result for the system and, above all, the final consumer.

Elexon believes that if the market facilitator is equipped with appropriate

supervisory and coordination powers, it will reduce or avoid such unintended consequences.

As a neutral party with long established links with ESO, DSOs, Suppliers and Flexibility Providers, we are ideally placed to develop a solution to this lack of transparency/coordination between activation of flexibility and the Supplier/Flexibility providers' actions to shift demand.

A coordinated approach to manage demand shifting and increased transparency is a critical element that Elexon is uniquely placed to resolve.

## Conclusions

Elexon believes that the benefits and experience that Elexon can bring to the industry if appointed as the market facilitator are multiple:

1. **Market Design Expertise** in areas crucial for enabling flexibility markets, such as metering, baselining, imbalance position calculation, assurance among others. We discuss metering aspects in our Attachment C - Discussion Paper: Market Facilitator – Metering Expertise, to which we refer for more details.
2. **Data Capabilities and expertise**, which should be a key feature of the market facilitator. We discuss this in more detail in Attachment E Discussion Paper: Data Capabilities.
3. **Balancing Code administrator/manager role and expertise** in avoiding market distortions will enable the design and delivery of coherent 'whole-system' technical solutions that take into account new markets and changes in market economics.
4. **Unique position and key role as enabler of half-hourly advanced meter data flows**, where half-hourly meter data brings significant value in accelerating the transition to a smarter, more flexible electricity system.
5. **Years of experience of collaborating with ESO.** The examples outlined in the Table above are clear testament to the ability of Elexon and ESO to work together to solve critical issues and implement programmes aimed at opening markets, stimulating liquidity, competition and innovation<sup>8</sup>.

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<sup>8</sup> Elexon has also been working with ESO to understand:

- the interaction between Imbalance Settlement and the LCM (and how this may disincentivise participation by some providers). Due to this collaboration, changes to ABSVD Methodology and/or BSC are likely to follow;
- how appropriate adjustments could be fed to Settlement via the BM and non-BM ABSVD routes to come up with a solution which was workable, and which NGENSO could implement in their C16 ABSVD statement;
- how to stimulate increased participation in the different forms of flexible technology such as Demand Side Response (DSR) and storage via the Power Responsive Programme<sup>2</sup>.

6. **Efficiency gain.** Should Elexon be appointed as market facilitator, it will be in the position to incorporate processes and run change assessment alongside the BSC changes, achieving efficiency in industry engagement through discussing connected issues under various codes at the same meeting/series of meetings, leading to faster overall turnaround on enabling modifications.
  
7. **Elexon's unique position as a neutral, transparent, and independent entity** will ensure trust and confidence in market participants, which will be crucial for the future of local distributed flexibility markets and ensure that these markets can achieve the best outcome for consumers and bill payers, as articulated in the examples provided.

**Based on these features, we strongly believe that Elexon is in a unique position to drive and implement changes coherently through transition and distribution markets to enable greater transparency and, ultimately, liquidity of markets for the benefit of all market participants and consumers.**