

4 November 2022

***Consultation: A step change in local flexibility***

Dear Sir/Madam,

Thank you for the opportunity to respond to your *Consultation: A step change in local flexibility*, issued in October 2022.

We welcome UKPN's ambition and commitment to facilitating and utilising local flexibility to meet future network needs. The UK Government's target to decarbonise the electricity system by 2035, coupled with ambitious electrification targets for heating and transport, mean GB will need to unlock the full potential of flexibility across the whole electricity system, including distributed flexibility. Distribution System Operators' (DSO) markets are increasingly important in driving investment in, and operation of, new distributed flexibility assets. Therefore, the growth of these local markets is crucial if GB is to achieve a secure, cost-effective and net zero carbon electricity system by 2035.

We share UKPN's view that the power sector, including System Operators (SOs), will need to take a strategic and coordinated approach to reforming local flexibility markets. We are pleased to see that, as part of the consultation, UKPN has engaged a range of Flexibility Service Providers (FSPs) to understand their challenges in participating in DSO markets. It is important that the SOs understand the capabilities, business models and journeys of our providers, and that we reform markets to remove barriers to entry, ultimately delivering consumer benefits. The ESO is committed to continue to work closely with UKPN and the other DSOs to share knowledge and develop coordinated markets for flexibility. This includes our work in the Energy Networks Association (ENA) Open Networks project as well as our [Regional Development Programmes \(RDPs\)](#).

We have responded to UKPN's specific questions, where appropriate, later in our consultation response. However, there are two points made by UKPN in the consultation which don't form part of a specific question. We provide thoughts on these points below and would welcome further discussion with both UKPN and other stakeholders on these matters.

1. Proposed need for an Independent Market Platform. This consultation strongly champions the potential of an independent market platform. At this stage, we do not think there is sufficient evidence to suggest that the lack of an independent platform is the key barrier to the growth of local flexibility. This includes the flexibility service provider feedback contained within the consultation document. We therefore do not believe that the case is made to push immediately ahead with a single, independent market platform as proposed in this consultation. Our focus remains on becoming a "better buyer" of balancing services through the development of our [Single Markets Platform \(SMP\)](#), which aims to provide a consistent and seamless user experience that supports the move to closer to real time procurement, removes any perceived barriers to participation and promotes greater levels of market liquidity from existing and new participants. We believe that such a focus on consistency and the user experience can both help resolve the challenges received by UKPN from FSPs as well as improve market liquidity overall. Whilst doing this we will continue to ensure that we do not put up any unnecessary barriers to future integration with DSO products.

2. Joint ESO-DSO procurement of flexibility. Reference is made to the potential joint procurement of services to manage co-incident system needs, with constraints on transmission and distribution networks being cited as an early use case. Benefits cited include the ability for FSPs to stack services between transmission and distribution needs. We accept the potential benefits of such service stacking, whilst also recognising the stakeholder value in transparency of procurement activities and dispatch decisions. It is important to ensure that the necessary building blocks of enablement such as service coordination frameworks, and operational visibility of Distributed Energy Resources (DER) are established before enhancements are considered. Through our joint work on RDPs we are delivering these building blocks and would see this as an important next step in the journey towards coordinated and transparent procurement and dispatch of services.

Lastly, we recognise that, in order to signal investment in and operation of the significant volumes of distributed flexibility needed to meet 2035 decarbonisation targets, reforms are needed beyond those markets run by DSOs and ESO. We believe that fundamental reforms are needed in the wholesale market, as well as to broader GB energy investment policies (e.g., the Capacity Market), in order to deliver the strength and accuracy of pricing signals required. The ESO is leading analysis on this as part of our Net Zero Market Reform programme. We also support policymakers and the regulator in assessing local market arrangements and governance, including the ideal end state of market platform(s).

We look forward to progressing these workstreams with UKPN and other DSOs to unlock the future local flexibility required to deliver power system decarbonisation. We welcome the opportunity to further discuss the points raised within this response. Should you require any further information or would like clarity on any of the points outlined in this paper then please contact Distributed Flexibility Strategy Manager, Yujia Du ([Yujia.Du@nationalgrideso.com](mailto:Yujia.Du@nationalgrideso.com)).

Yours sincerely,



Cian McLeavey-Reville

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## Responses

### Q1 Do you share our vision for local flexibility markets? Where do you see greatest potential for tension or ambiguity?

We welcome UKPN's publication of a vision for local flexibility markets to direct future market reforms. This is consistent with our approach set out in the [Enabling the DSO transition](#) document published last year. We aim to build this vision out further in our distributed flexibility strategy, a new commitment in our RIIO-2 Business Plan 2 (BP2).

We broadly agree with the statements in the vision, which are consistent with what BEIS set out in its [Smart Systems and Flexibility Plan 2021](#). They cover key principles of well-functioning, liquid markets, both in terms of market design (low barriers, focused procurement) and market coordination (local and national markets working hand-in-hand, complementary market frameworks). Such markets are enabled by improved visibility and forecasting by the SOs, which demonstrate and in turn enhance trust and confidence. We agree that roll-out and adoption of time-of-use tariffs is foundational to encourage flexibility from consumers, particularly to resolve challenges around the adoption of electric vehicles and heat pumps. We would like to point out that this tariff should go beyond the current time-of-use mechanism and incorporate the locational and temporal value of production and consumption.

One potential ambiguity is the definition of local flexibility markets. The recent BEIS REMA consultation included options where local markets are responsible for energy balancing as well as ancillary services. It is worth clarifying if the scope of the vision set out in UKPN's consultation is limited to ancillary services, with a focus on constraint management.

### Q2 What do you see as the biggest blocker to wider participation?

Views expressed by providers in this consultation, as well as from our own engagement via Power Responsive and SMP, point to the need for stronger alignment and standardisation of flexible services across providers, namely ESO and all DSOs. We therefore see the lack of standardisation of services as the key blocker. However, we recognise flexibility providers have diverse technical capabilities, motivations, interest and ability to engage with marketplaces. We would expect them to rank these blockers differently depending on their unique circumstances.

We support UKPN's approach to service reform by seeking feedback from FSPs. The ESO is commencing work to understand capabilities and business models of flexibility providers, as well as barriers to participation to help improve reforms of flexibility markets. We look forward to seeing responses from FSPs to this consultation, which will also help inform the ESO's understanding.

### Q3 What else might it take to enable mass participation in local flexibility markets?

The volume of flexibility active at the local level today remains relatively small compared to the volumes needed to meet GB's net zero target by 2035. We believe fundamental market reforms are required to provide sharper investment and operational signals via wholesale markets, which will improve the investment case for all flexibility including assets connected at distributional level and below. In addition to resolving the blockers described, we also encourage UKPN to continue to nurture the growth of volume by identifying and engaging with energy consumers and flexibility asset owners that are currently not participating in energy management (energy cost optimisation or participation in flexibility markets). DNO/DSOs also have a unique role in working with local stakeholders to facilitate market access for new local flexibility providers.

### Q4 Do you agree our priorities for development of local flexibility markets?

We agree that reform of UKPN services (priority 4) and stronger coordination between ESO and DSOs (priority 2) would help to achieve wider participation (priority 1). These priorities are consistent with our shared commitments in Open Networks. For priority 2, we would also recommend that UKPN work with other DSOs to standardise services across regions to facilitate efficient participation from providers with a national portfolio.

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It is less clear from the analysis presented in this consultation how priority 3 would address the challenges outlined in the feedback from FSPs. We would recommend UKPN to further engage with FSPs and SOs to understand the need for urgently establishing an independent market platform.

### Q5 To what extent do our proposed product changes complement your activity in other markets, and maximise the incremental value of local flexibility services to your flexible assets?

We welcome these proposed changes (number 1 and 2 on page 19) which are aligned with our procurement approach. We believe they would help address some of the challenges identified in the previous section. We also encourage UKPN to continue to develop and implement changes with other DSOs to ensure consistency across local markets.

As previously mentioned, the ESO is conducting new research to understand the business models of existing and future flexibility service providers, including distributed flexibility. As part of this work, we will investigate the customer journeys for accessing multiple revenue streams, including DSO markets. This information will help us reform ESO markets to enable wider participation, and we will share the insights with our DNO and DSO colleagues to inform reforms of local markets as well.

### Q6 What approaches should UKPN consider to successfully develop an energy efficiency flexibility service?

As stated in our [Future Energy Scenarios 2022](#) and our recent [response](#) to BEIS's REMA consultation on market design, we believe that improving energy efficiency is a no-regrets policy solution that can provide immediate benefits in terms of both affordability and energy security while also facilitating more enduring decarbonisation. We believe improved energy efficiency needs to be delivered through policy/regulation, rather than electricity market design.

Given DNO/DSOs role in local energy systems and communities, they could play an important role in the deployment of energy efficiency through initiatives such as local area energy planning. But without understanding more about this 'energy efficiency flexibility service', it is difficult to comment on what might make it successful.

### Q7 Do you agree that there is a need for an independent market facilitator which is not a buyer of local or national flexibility?

We share UKPN's vision that the simplification of participation across flexibility markets, enabled by coordinated service design and procurement across ESO and DNO/DSOs, is vital for the growth of distributed flexibility required to meet our net zero targets. We are working with DNO/DSOs to resolve these issues via a number of Open Networks products.

With this in mind, we have also committed to deliver the ESO SMP within RII02 to "become a better buyer" of balancing services. Our aim with SMP is to provide a consistent and seamless user experience that supports the move to closer to real time procurement, removes any perceived barriers to participation and promotes greater levels of market liquidity from existing and new participants.

From the early stages of developing SMP we have also had an eye on the future and have engaged with representatives from the distribution community to ensure that we do not put up any unnecessary barriers to future integration with DSO products. Examples of this include our focus on asset level data as the lowest common denominator of service participation, for which we have shared the data model with DSOs and other market operators as appropriate.

We plan to investigate the optimal future arrangements for coordination across markets, including the need for consolidation of market platforms and the best institutional arrangements. At this stage, we do not think there is sufficient evidence to suggest that the lack of an independent platform is the key barrier to the growth of distributed flexibility, and do not agree with the assumption in the consultation that providers are concerned about SOs' ability to remain neutral market facilitators. We note the work being undertaken by Ofgem through their recent 'Call for Input: Future of local energy institutions and governance' and would suggest that this is

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the appropriate industry vehicle to be progressing such points. We therefore do not believe that the case is made to push immediately ahead with a single, independent market platform as proposed by UKPN in this consultation. We would like to work with DNOs, industry and the regulator to understand the benefits, costs and implementation timeline of various options to be assessed, including options discounted at the end of the consultation.

## Q8 Do you agree that constraint management should be a priority for ESO-DSO coordination?

Through our collaborative work on the South-East RDP, we are establishing a coordinated thermal constraint management service for transmission system needs with UKPN. The intent is that this service will connect into our SMP consistent with other ESO services from DER. We are happy to work with UKPN and other GB DNOs to build on this project to develop further coordinated ESO-DSO solutions for constraint management and would see this as a sensible way forward.

We note that this section of the consultation document contains more context around areas such as joint procurement of services. We provide thoughts on joint procurement at the start of our response to this consultation and would be happy to discuss this matter, or any of the other context raised by UKPN in their consultation.

## Q9 Are you ready to integrate to support participation in local flexibility markets? If not, what needs to happen first?

The ESO has multiple markets and products open to the participation of local flexibility, including the new Demand Flexibility Service which encourages flexible consumption. As highlighted in our responses to previous questions, we have various strategic programmes working towards removing remaining barriers for greater participation, as well as improved coordination with DSO markets. The SMP is developed to improve the experience for participation in multiple ESO services, with the potential to integrate DSO services in the future. Over the years we have stimulated the development of demand side flexibility through our Power Responsive programme. Our new distributed flexibility strategy will investigate barriers for local flexibility to participate in markets and coordinated actions required across stakeholders.

## Q10 Which existing standards (formal or informal) are most suitable for data exchange between SO and FSP? Which, if any, are you already using?

We have implemented several different communication methods between ESO and FSPs, utilising traditional energy industry protocols as well as more modern Internet of Things (IoT) protocols.

ESO currently employs multiple systems, with multiple formal published interface protocols for industry data exchange to gather performance data, availability, metering, and control instructions (ASDP – web services, Wider Access – APIs, BMUs – EDL/EDT). In addition, we also include the use of IEC 61808-104 and Message Queuing Telemetry Transport (MQTT) for real-time visibility of FSP assets.

## Q11 Do you support a trial of dynamic network pricing? What are the most important things to test?

We support the trial of dynamic network pricing to explore the mechanics of designing and communicating price signals that accurately reflect system conditions. This is consistent with our identified direction of travel that incentivises more efficient utilisation of the system by providing sharper signals to users. We would be interested in understanding how the price signal could be passed through to consumers, either directly or via suppliers and what this can mean for enabling accurate consumer response. We are interested in working with UKPN on this trial to better understand the relationship between distribution price signals and those from transmission and the wholesale market.

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## Q12 What else should we be doing as a matter of priority as we prepare for the start of ED2?

We wish to underline the importance of consistency and alignment to ensure that the ESO can effectively coordinate with all six DNOs as their DSO functions develop. This is particularly important in areas such as service coordination and DER visibility and is not just a priority for the ESO but for service providers also.

We hope to continue to develop these consistent and coordinated approaches to DSO with UKPN through work on RDPs as well as the ENA Open Networks project.

## Q13 Do you agree with the approaches we have discounted? If not, which approaches deserve more consideration and why?

We share UKPN's vision and commitment to facilitate the growth of local flexibility by removing barriers to participation. We would like to work with industry to investigate the options available and assess their benefits, costs and time to deliver. It is important that we prioritise actions that would deliver the most whole-system value, and understand the full extent of costs (both direct costs and delayed benefits due to longer implementation) before we move forward with the establishment of an independent platform.

In the meantime, we strongly encourage UKPN and the wider industry to continue to consider other options discounted in this consultation. The first option discounted describes current efforts to align service procurement and resolve dispatch conflicts via Open Networks, which should therefore not be labelled as 'uncoordinated'. It is important we keep pace with aligning service design across SOs (via Open Networks). This has been consistently requested by providers and SOs have made commitments to resolve these challenges. It is worth highlighting that an independent platform does not necessarily resolve any of the challenges around service design and coordination.

While we agree with the issues outlined for discounted option 2, we think it is vital that we continue the integration of these existing platforms to improve user experience in the short term. We are concerned that any delays to such efforts, including the ESO's SMP programme, would be damaging to the development and growth of distributed flexibility.

We agree with the assumption in the consultation that having the FSO facilitate coordinated markets would tackle some of the issues outlined earlier in the document. While the roles of the FSO are developing, there is still uncertainty to what extent the FSO would establish and operate a single platform for the whole market (transmission and distribution). As explained in the consultation, the reason UKPN has discounted this option is due to timing to meet ED2 targets. While we agree and support UKPN in taking timely measures to expand their flexibility markets, this should not be the reason to justify the wider industry's decision to also adopt an independent platform without further analysis. Given the current maturity of DSO flexibility markets, focus at this stage may be better placed on delivering fundamental building blocks such as service coordination and DER visibility.

We appreciate the evidence, analysis and options presented in this consultation and will continue to engage with DSO, Ofgem and the wider industry to understand the current challenges and appropriate solutions to address them.

## Q14 How would you like to be kept involved in the future?

We will continue to engage with UKPN bi-laterally and via Open Networks to progress these discussions.

## Q15 Finally, is there anything you would like to say that is not covered above?

No.