

Energy Networks Association

Response to Future of Distributed Flexibility Call for Input

May 2023

TABLE OF CONTENTS

ENERGY NETWORKS ASSOCIATION.....	3
ABOUT ENA	3
OUR MEMBERS AND ASSOCIATES.....	3
<i>ENA members</i>	3
<i>ENA associates</i>	3
EXECUTIVE SUMMARY	5
INTRODUCTION	5
PROGRESS IN THE DEVELOPMENT OF LOCAL FLEXIBILITY	6
OUR RESPONSE.....	7
SPECIFIC QUESTIONS	9
<i>Potential, and challenges of flexibility</i>	9
<i>The case for change</i>	9
<i>What that future could look like</i>	11
<i>Delivery considerations</i>	11

Energy Networks Association

About ENA

Energy Networks Association represents the companies which operate the electricity wires, gas pipes and energy system in the UK and Ireland.

We help our members meet the challenge of delivering electricity and gas to communities across the UK and Ireland safely, sustainably and reliably.

Our members include every major electricity and gas network operator in the UK and Ireland, independent operators, National Grid ESO which operates the electricity system in Great Britain and National Grid which operates the gas system in Great Britain. Our affiliate membership also includes companies with an interest in energy, including Heathrow Airport and Network Rail.

We help our members to:

- Create smart grids, ensuring our networks are prepared for more renewable generation than ever before, decentralised sources of energy, more electric vehicles and heat pumps. Learn more about our [Open Networks programme](#).
- Create the world's first zero-carbon gas grid, by speeding up the switch from natural gas to hydrogen. Learn more about our [Gas Goes Green programme](#).
- Innovate. We're supporting over £450m of [innovation investment](#) to support customers, connections and more.
- Be safe. We bring our industry together to [improve safety](#) and reduce workforce and public injury.
- Manage our networks. We support our members manage, create and maintain a vast array of electricity codes, standards and regulations which supports the day-to-day operation of our energy networks.

Together, the energy networks are [keeping your energy flowing](#), supporting our economy through [jobs](#) and investment and [preparing for a net zero future](#).

Our members and associates

Membership of Energy Networks Association is open to all owners and operators of energy networks in the UK.

- Companies which operate smaller networks or are licence holders in the islands around the UK and Ireland can be associates of ENA too. This gives them access to the expertise and knowledge available through ENA.
- Companies and organisations with an interest in the UK transmission and distribution market are now able to directly benefit from the work of ENA through associate status.

ENA members



ENA associates

- [Chubu](#)
- [EEA](#)
- [Guernsey Electricity Ltd](#)
- [Heathrow Airport](#)
- [Jersey Electricity](#)
- [Manx Electricity Authority](#)
- [Network Rail](#)
- [TEPCO](#)

DRAFT

Executive Summary

In this call for input response, we set out how:

- We believe that energy networks are critical to enabling flexibility for the whole system and the wider decarbonisation of the energy sector. ENA and its members welcome this call for input.
- It is important that the regulator recognises the progress that Open Networks has made over the last five years in delivering a world leading local flexibility market.
- It is clear to our members that the outcomes planned for delivery through Open Networks in 2023 are the least-regret steps that are necessary to progress flexibility markets regardless of the outcomes from this call for input.
- Clear, consistent, and well-co-ordinated engagement both with the Department for Energy Security and Net Zero (DESNZ) and Ofgem is key to ensuring Open Networks builds on its considerable achievements to date, especially to ensure the momentum of development is not lost.
- We see the need for a digital infrastructure as a necessity, but it is not the only step needed to unlock the full value of flexibility. Whilst the digital infrastructure is a part of the solution it is not the full solution.
- Some of our members believe that the existing market design is unsupportive of CERs inclusion and needs a definite focus whilst others advocate that the focus should be to improve access to all flexibility service providers, which include both CER and DER flexibility to be developed in parallel.
- We fully support working towards a vision and should really be pushing to see how we get to standardisation quickly and effectively without removing possibility for innovation.
- These archetypes could be seen as steps along a journey where each of these archetypes could be most viable state at different points in time. If Ofgem nevertheless wants to identify a clear vision for an end destination at this point, some members have noted a preference to focus on the “medium” archetype for the time being, leaving further evolution to be resolved when the market is more mature.
- DNOs are keen to facilitate a framework for the operation of platforms that provide the optimal end-to-end experience for flexibility providers, through the adoption of common communication standards that allows interoperability.
- There is a need for Ofgem to ensure the regulatory framework for distribution system operation and the flexibility enablers enables the DNOs, FSO and wider energy market to deliver best value to the consumer.

Alongside this response, we refer you to individual electricity network company responses for their views on preferences of options and the specific questions posed through this call for input.

Introduction

- ENA welcomes the opportunity to respond to Ofgem's call for input on the Future of Distributed Flexibility¹. Please note that this response is on-behalf of all of our Electricity transmission and distribution network members only.
- Network companies believe the transition to a decarbonised economy will require network companies to work more closely together along with external parties in a fast and highly organised fashion. Energy

¹ <https://www.ofgem.gov.uk/publications/call-input-future-distributed-flexibility>

network companies recognise and support the case for evidence-based reform of energy market arrangements, systems and functions that is necessary to deliver deeper levels of decarbonisation of our energy system, our homes, businesses, and communities.

- As a reflection of that reality, we note that the proposals set out in this call for input (CFI) should not be viewed in isolation from other areas of policy. Key, strategic policy interactions include but are not limited to:
- **Consultation on the future of local energy institutions and governance** that is being run concurrently to this CFI and will have a direct impact on the proposals in it. In our response to both that consultation and this Call for Input, we set out the role we think that network companies can and should play in helping the government and the regulator meet the policy objectives related to future market facilitator and other actors.
- **Future of Systems and Network Regulation** activity, also being undertaken by Ofgem. The design of successor price controls to the current RIIO-2 framework will be dependent on the roles and responsibilities of network companies, both as proposed in this call for input and in the Archetypes presented in the current FSNR consultation. ENA's response to that consultation sets out the principles on which those different archetypes might be applied in different scenarios.
- The **draft Strategy & Policy Statement** by the Department of Energy Security & Net Zero (DESNZ), which will inform how Ofgem discharges its responsibilities in relation to strategic network planning, accelerated network infrastructure delivery, anticipatory investment and network connections. This can be expected to include long-term policy development decisions as well as shorter-term price control implementation decisions.
- The **Review of Economic Regulation** being undertaken by the Department of Business & Trade, which also covers the scope, duties and responsibilities of Ofgem in relation to price control and institutional design.
- The **Review of Electricity Market Arrangements** by DESNZ. While this is focussed on wholesale market reform, proposals for locational pricing would impact on the responsibilities and operations of network companies, and the planning of network infrastructure required to decarbonise the power sector by 2035. We note that there is still a great deal of ambiguity around the interactions between locational pricing, flexibility markets and network charging reforms and their collective potential to send locational signals.

Progress in the development of Local Flexibility

- ENA's Open Networks has been instrumental in leading the UK's transition to a smart, flexible energy system and getting the networks ready for net zero. Launched in 2017, Open Networks is a non-regulatory funded programme that engages over 200 subject matter experts from network companies, DESNZ and Ofgem, working together with key industry stakeholders via the challenge group to develop and implement a smart and flexible energy system.
- Since the publication of the Smart Systems and Flexibility Plan, the programme has made substantial progress and contributions to the sector, including informing the transition to Distribution System Operation of which the development and implementation of flexibility markets is a key function. The programme has produced several outcomes delivering clear benefits to consumers and the sector.
- In July 2019, a joint letter from Ofgem and DESNZ to ENA stated that "since the publication of the Smart Systems and Flexibility Plan, we have seen a positive step change in efforts to open up network needs to competition and support network coordination". The outputs from the programme were

developed in close consultation with Ofgem and DESNZ, who also sit on the Open Networks Steering Group.

The output of the programmes has helped to standardise and simplify processes in a transparent way, contributing to the development of world leading local flexibility markets starting from zero in 2017. Key highlights, include:

- 3.7GW of flexibility tendered out in 2022 – a record amount, with 2GW of this contracted by July 2022, maintaining the UK as a European leader in local flexibility markets.
- 2022 saw an increase of 31% flexibility services tendered since 2021, and a 76% increase since 2020, spanning 119 of the 129 grid supply points across the UK.
- To work closely with the wider industry the Open Networks Challenge Group was introduced in 2022 to shape the direction of the programme, its priorities, and the outcomes it delivers by providing a more formal challenge function on behalf of the wider industry.
- Work undertaken in Open Networks has resulted in over 10 code modifications being triggered. These are key industry milestones on critical topics such as data exchange and Queue management essential for transparent network process and proliferation of flexibility markets.

DSO Tenders (Industry Total)	Sustain (MW)	Secure (MW)	Dynamic (MW)	Restore (MW)	Reactive Power (MVar) (if applicable)
	Peak Capacity (MW)	Peak Capacity (MW)	Peak Capacity (MW)	Peak Capacity (MW)	Peak Capacity (MVar)
Contracted for 2018	0	24	34	59	0
Contracted for 2019	0	10	121	125	0
Contracted for 2020	2	105	556	502	0
Tendered for 2020	14	493	771	778	7
Contracted for 2021/22	28	375	926	538	0
Tendered for 2021/22	57	840	1584	1149	5
Contracted for 2022/23*	37	192	643	220	0
Tendered for 2022/23*	141	802	1289	961	11

* Contracted/Tendered as on July 2022

Our Response

Open Networks has made significant progress over the last five years. Both the Department for Energy Security and Net Zero (DESNZ) formerly BEIS)) and Ofgem, working in partnership with network companies as members of the Open Networks Steering Group, have played a significant role in that success. Whilst network companies recognise and accept the need for changes to the programme, it is also important that the regulator recognises the progress that the programme has delivered.

Open Networks embodies the commitment of all the network companies to come together as an industry to progress key challenges in the proliferation of flexibility markets and to ensure that the sum of our efforts is greater than individual parts, especially in a competitive UK regulatory landscape, where individual DNOs are competing in some areas to be first and/or differentiate themselves from the rest.

In 2022, comprehensive stakeholder feedback was gathered via the Challenge group to determine what Open Networks should focus its efforts on in the following year. The feedback recommended the programme to take a more refined focus in 2023, that fully centred on:

- Making it easier for flexibility service providers to participate in the flexibility market by standardising products, processes, and contracts.
- Improving operational coordination between networks and companies to remove barriers to the delivery of flexibility services,
- Improve the transparency of processes, reporting and decision-making.

The consensus was for the programme to continue delivering the actions from the BEIS and Ofgem's Smart System Flexibility Plan. Crucially, and following stakeholder feedback, these actions will be delivered by setting out specific and measurable results with clear timelines for consistent implementation. These are set out in the [Open Networks 2023 Work Plan](#) in more detail. These plans are consistent with the call for action to networks in the Business, Energy and Industrial Strategy Committee's Decarbonisation of the power sector report 2023².

Our members are committed to bringing further liquidity into these markets and removing barriers to participate in the market. These are key focus areas for Open Networks Programme in 2023 and the DNOs in their ED2 business plans. As articulated in the baseline requirements from Ofgem and the DSO incentives, network companies continue to drive standardisation of the technical parameters of flexibility products, processes, commercial contracts, data standards and methods for sharing this information will support economic activity. This includes publishing relevant information to help flexibility providers and other market participants to identify and value opportunities that will support economic activity.

Network companies believe that the development of a mature flexibility market will require network companies to work more closely together and with external parties in a fast and highly organised fashion. Whilst various markets are managed and developed by different parties, the consensus on the need for digital infrastructure is unanimous. Regardless of a decision on the final infrastructure archetype, there will continue to be a near to medium-term (2-5 years) need to ensure that market facilitation supported by network companies adequately meet the government and regulatory policy requirements of the DESNZ and Ofgem.

This includes changes to the pace and the scope of reforms to the programme that are needed to meet those policy requirements. Network companies remain confident that they will be able to deliver those changes. An additional benefit of this approach is that it would allow the regulator additional time and space to consider its proposals for market facilitation and local institutions reform in more detail.

Clear, consistent, and well coordinated engagement both with DESNZ and Ofgem is key to ensuring Open Networks builds on its considerable achievements to date. The call for input does not include an assessment of the proposed changes to the Open Networks programme that were published in January 2023 and their suitability to meet current government and regulatory policy objectives.

Therefore, network companies, government and regulatory stakeholders should collaborate to:

- Assess what elements of the Open Networks work programme, as set out as part of 2023 plans, can adequately serve their current policy objectives.
- Identify what changes Open Networks can make, beyond those already set out above, to improve the pace of outcome-focussed delivery in the near and medium term (< 2 years).

² <https://committees.parliament.uk/publications/39325/documents/193081/default/>

- Determine what accountability mechanisms and resource reviews could be introduced to ensure the programme and network companies better meet the government, the regulator, and wider market's requirements in terms of pace of change and outcomes.

Specific Questions

Potential, and challenges of flexibility

Q1 – What do you think distributed flexibility could contribute to the energy system?

Q2 – Will a focus on CER flexibility also help enable other forms of flexibility, especially distributed flexibility?

- Our members strongly support the view that distributed flexibility is absolutely essential for the decarbonisation of energy sector and delivering net zero at the lowest cost. It is our view that the network companies will have to continue to work with wider industry and especially flexibility service providers to find solutions to maximise opportunities for their assets. We believe that energy networks are critical to enabling flexibility and the wider decarbonisation of the energy sector. Our electricity networks members are committed to the "Flexibility First" approach, under which they are testing the market to compare traditional network-based solutions to flexibility services.
- We note that the network companies are a part of the value spectrum of the overall benefits flexibility can unlock as part of a wider energy system. De-stacking and identifying the various industry actors responsible to deliver the different components of the overall value is essential to unlock the full potential of flexibility services in the net zero journey. It would therefore be good to clarify, in Ofgem's view, what is the network companies' roles in unlocking full value spectrum of flexibility across wholesale, balancing and transmission and distribution constraints.
- Some DNOs are strongly in favour of the prioritisation of CERs in unlocking the potential of distributed flexibility. However, some are of the view that the focus should be to improve access to all flexibility service providers, which include both CER and DER flexibility to be developed in parallel and grouping common challenges where possible.
- We note that, it is important to be cognisant of the correlation between the types of flexibility service delivered by consumer energy sources, e.g. delivered through a DSO contract (explicit flexibility) or delivered through price signals provided by a supplier (implicit flexibility). This distinction becomes especially important with regards to valuing flexibility services delivered by CERs as they correlate to consumer profile.

The case for change

Q3 – Is there a 'case for change' and a need for a common vision for distributed flexibility?

Q4 – What is your vision for how to accelerate the delivery of accessible, coordinated and trusted markets for distributed flexibility?

Q5 – Will certainty of an end vision help accelerate enabling work and make it cohesive?

Q6 – When should a common digital energy infrastructure be in place? And therefore, when should development begin?

- Sufficient liquidity in local markets is essential for the networks to really maximise the use of flexibility to deliver benefits for the Net Zero journey and for customers to see its full benefit. In ED2 there is a clear regulatory incentive to use flexibility. However, DNOs struggle with liquidity in the local flexibility markets, and in many instances, there is a lack of adequate services to secure the network and/or defer network enforcement. Therefore, there is a case for change. We see the need for a digital infrastructure as a necessary part of the solution, but it is not the only step needed to unlock the full value of flexibility. We are not convinced enabling a common digital infrastructure through any of the archetypes can fully bring about this change in isolation.
- Whilst we fully support working towards a vision, we should really be pushing to see how we get to standardisation quickly and effectively without removing the possibility for innovation. Some members believe that locking the trajectory to an archetype (whether it is the exchange or the central platform) would remove the option for third party innovation or new innovations that may come along.
- We believe that clear articulation of a vision is useful for industry to collectively drive towards. The infrastructure should be in service of that vision, which could mean that we progress from our present state possibly towards a thin archetype and incrementally review our direction based on our learning. We should be working in an agile fashion by identifying clear milestones and owners for actions in the direction of achieving those milestones. Each milestone then offers an opportunity for course correction if deemed necessary at the time.
- Based on [stakeholder engagement undertaken in the Open Networks](#) and through individual DNOs, flexibility service providers continue to flag poor revenues and poor revenue stacking options as key barriers for entry of new market participants into the local flexibility market. Furthermore, there is a need for a detailed assessment of market interactions (of both existing and emerging markets) to develop primacy rules for service conflict. While these barriers are being progressively addressed by Open Networks, it is not clear from the CFI how the establishment of a digital infrastructure itself can deliver the outcomes without addressing some of these key barriers. Furthermore, delivering a change from a whole systems perspective will naturally require it to factor in a wider set of views and concerns.
- There is a clear need to keep up the momentum developed in the uptake of flexibility markets in order to ensure that UK's 2035 and 2050 climate goals are met. Some members have concerns that a pivot to a new direction will be detrimental to the pace of development in this space.
- It will be helpful for Ofgem to work with the network companies to develop a road map with some agreed priorities of low regret steps which would accelerate progress. This allows for us to then work out what these steps mean for the wider industry in the short and medium term and how these archetypes impact their investments. It is clear to our members and the Open Networks Challenge Group that the outcomes planned for delivery through Open Networks this year are the least-regret steps that are necessary to progress flexibility markets till further clarity on the short-medium-term steps emerge post this CFI. Historically, Ofgem has engaged with Open Networks with representation at all levels of programme governance. It would be helpful to re-engage and co-develop a strategic action plan with short-to-medium term steps that are essential to achieve an accessible and liquid flexibility market.
- The CFI notes a "structural lack of trust" as a case for change. Stakeholder engagement undertaken via Open Networks and by individual DNO's have not raised any instance of biased or non-impartial market operations. Whilst we believe that the governance of DSO and ESO markets are clear and transparent, we acknowledge the concerns noted in the CFI documents that the stakeholders feel a lack of transparency in market operations.

What that future could look like

Q7 – What should a common digital energy infrastructure look like, and why? Please consider the archetypes or develop your own proposition.

Q8 – What is your view on the desirability and feasibility of the archetypes or your own alternative proposition?

- We see these archetypes could be steps along a journey where each of these archetypes could be the most viable state at different points in time. Therefore, we don't see committing to a central platform directly at this stage is advisable, even if that is the final stage of the journey. The archetypes from thin to thick could be a transitional timeline where you go from something that's described as a no regret short-term solution on the left and then move across, with the progress determining how far across we move. If Ofgem nevertheless wants to identify a clear vision for an end destination at this point, some members have noted a preference to focus on the "medium" archetype for the time being, leaving further evolution to be resolved when the market is more mature.
- In our view, standards of interoperability between any platforms, functions and use-cases are critical at this stage, such that if we did have multiple platforms across any of those archetypes you have these standard operability options that would potentially allow for more innovation between platforms. This allows for migration to different platforms in terms of doing a specific function, rather than having one platform that carries out all the functions.
- Our members recognise the potential benefits expected from a common platform. This is in line with the feedback received via the Open Networks Flexibility consultation in 2022. The DNOs are therefore keen to facilitate a framework for the operation of platforms that provide the optimal end-to-end experience for flexibility providers, through the adoption of common communication standards that allows interoperability.
- It might be the case that a common interface for these standard communications can be better implemented by third parties. Such third parties may be able to provide integrations with other equipment or tooling for the commercial optimisation of flexibility offerings across markets that would be inappropriate to be implemented by DNOs/ESO. Hence, in 2023 Open Networks are working closely with market participants to build on the benefits of competition and innovation between platform developers and deliver the benefits stakeholders seek, whilst avoiding risks relating to technology lock-in to a single provider. Design of a common API should ensure reliability and ease of implementation are a priority. The design of the API should not exclude alternative routes of participation in flexibility markets, but it would be down to individual System Operators & Market Operators to decide what communication methods they implement.
- The archetypes can't be treated in isolation, away from roles and responsibility of market operations. Although the CFI focuses on the distributed flexibility market, the interactions with market reforms broader market components (such as wholesale markets, ancillary services etc) become absolutely critical. It is especially important therefore to clarify the roles, responsibilities and accountability of market operations and various actors in the presence of a common exchange, or a central platform.

Delivery considerations

Q9 – Should a common digital energy infrastructure be new-build, or should it build-out from existing infrastructure?

Q10 – What are the important areas for consideration when designing institutional delivery models for a common digital energy infrastructure?

Q11 – What are the important areas for consideration when designing financial delivery models for a common digital energy infrastructure?

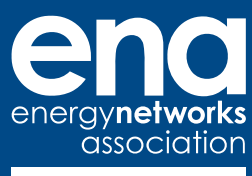
- We do not rule out the possibility of any of the specific archetypes as the potential end state, we see this as a progression with the optimal end state of the digital spine to be determined. It is too early to define a timeline for the development of an exchange or platform especially since there is no consensus of the “product definition”. The CFI is focused on the digital infrastructure. In order to progress the vision of a liquid and fully accessible market there are several enablers such as policy, market interactions, user experience etc. It is essential to ensure that the infrastructure that is being developed works with the rules and the frameworks.
- In December 2021, the ENA commissioned an independent review of the transition to distribution system operation by E&Y; the findings were:
 - To develop DSO flexibility markets to the scale required to deliver Net Zero, the range of flexibility providers will need to increase. DNOs will need to target emerging flexibility providers, which may have a less detailed understanding of the sector compared to the initial flexibility providers.
 - DNOs should engage with emerging flexibility providers to ensure the right incentive structures are in place to ensure these providers deliver the required services.
 - DNOs should be actively involved in discussions with Ofgem and DESNZ around both incremental and fundamental changes to GB market design, being considered at that point in time.

Open Networks is addressing the above noted action points.

- Whilst network companies do not share a common view on how an exchange or platform should be delivered, they do have reservations about another standalone delivery vehicle for the creation of a digital spine. There are a number of entities that exist or will come into existence next year that have both digital market and data experience that are already funded through network companies. We are keen that all existing options that could step in and provide this infrastructure, including FSO should be equally considered with regards to cost-benefits, pros-cons, skills and experience. Some of our members believe that an industry-owned model is preferable, particularly to give the flex supply industry significant control over any future CDEI, in order to ensure that it is responsive to their evolving needs over time.
- The CFI documents call out network companies for lack of progress in developing a standardised flex market. The RIIO ED2 licence for the first time has an incentive for DNOs to standardise. Historically individual DNOs have been incentivised to compete to be first and/or differentiate themselves from the rest.
- DNOs have now received their Final Determinations for the ED2 period. These cover detailed plans to invest in the necessary areas to deliver key DSO functions including developing the flexibility services market. It is not clear how the proposals for a common digital energy infrastructure tie in with the DNOs' ED2 plans. There is a need for Ofgem to ensure that that regulatory framework for distribution system operation is aligned with the delivery of a common digital energy infrastructure that enables the DNOs to provide appropriate value to the consumer.
- Some members believe that the incentive plans could require some tweaking to make sure that DNOs are not only incentivised to invest in improving their own systems but, also overtime, start to move towards some form of common infrastructure, whichever archetype that may be. It is also equally

important to review how regulatory incentives work to ensure that not just the “owner” of the platform is incentivised to deliver it, but also other regulated bodies are incentivised to gravitate towards it over some kind of agreed time scale.

DRAFT



Energy Networks Association

4 More London Riverside

London SE1 2AU

t. +44 (0)20 7706 5100

w. energynetworks.org

🐦 [@EnergyNetworks](https://twitter.com/EnergyNetworks)

© ENA 2020

Energy Networks Association Limited is a company registered in England & Wales No. 04832301
Registered office: 4 More London Riverside, London, SE1 2AU