

# Consultation

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## Future of local energy institutions and governance

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We are consulting on the future of local energy institutions and governance. This is the follow up publication from our April 2022 Call for Input on the same topic and sets our proposed package of reform. We welcome responses from all interested stakeholders.

This document outlines the scope, purpose and questions of the consultation and how you can get involved. Once the consultation is closed, we will consider all responses. We want to be transparent in our consultations. We will publish the non-confidential responses we receive alongside a decision on next steps on our website at [ofgem.gov.uk/consultations](https://www.ofgem.gov.uk/consultations). If you want your response – in whole or in part – to be considered confidential, please tell us in your response and explain why. Please clearly mark the parts of your response that you consider to be confidential, and if possible, put the confidential material in separate appendices to your response.

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## **Foreword**

If there is one lesson to be taken from the energy crisis, it is the need to accelerate the shift away from fossil fuels to clean energy. This will help to reduce costs to consumers by breaking the link between electricity and gas prices; it will improve the security of supplies of energy; and of course, it will help to protect consumers from the dangers of unmitigated climate change.

Without reform, the electricity system, markets and grid become an obstacle, not an enabler, to net zero. It is imperative and urgent that generation and network capacity are closely planned and coordinated to deliver the investment needed to meet net zero targets for 2035 (a net zero clean power system) and 2050 (a net zero economy) and ensure the system can become truly smart and flexible.

This will be especially critical at distribution level where the transformation will happen on a local basis, with changes to the way people fuel their vehicles and heat their homes happening on a street-by-street, town-by-town basis and a growth of local generation of power. The changes needed to the energy system will need to empower consumers and deliver the right outcomes for all.

New innovations will give consumers more control to save money through access to better data and regularly updated prices, allowing them to harness the smart features of modern consumer goods to access cheap abundant renewable electricity when there is more wind or sun, and use their flexibility to change demand when it's still and overcast. This will mean lower bills, reduced strain on the grid, and help to enable the transition to net zero.

To get the best out of our energy system, local and national arrangements for network planning need to work together to optimise the system as a whole. Network planning at both levels needs to take full account of the potential for flexibility. And electricity network services on the ground need to be delivered effectively and consistently whether you're in Greenwich or Glencoe.

We don't have all the answers yet. Work is already underway to establish the Future System Operator (FSO). The Electricity System Operator (ESO) published the first edition of a holistic network design for the transmission system last summer, focusing on the offshore wind target for 2030. We followed this up with a decision on accelerating strategic transmission investment based on this holistic plan. We also made a decision that the ESO should prepare a strategic plan for the electricity transmission system to deliver net zero targets for 2035 and 2050. The consultation and call for input being launched today begin to put some more essential pieces in place – the regulation of

distribution system operation and the evolution of flexibility markets. Work in other areas of system and network regulation such as future price controls, connections policy and network charging will follow, but always with the same foundational mission: how to accelerate the shift to a net zero energy system at the least overall cost to consumers, in line with long-range whole system plans. This task is now vital and urgent. There is not a moment to lose.



**Akshay Kaul, Interim Executive Director, of Infrastructure and Security of Supply, Ofgem**

## **Executive summary**

As the energy system undergoes the transition to net zero, we will see accelerated decarbonisation and decentralisation of generation and demand. Accommodating the transformation of the ways we generate electricity, heat our homes and power our vehicles will require changes to how the energy system is planned and operated at the sub-national level.

To deliver this transition effectively, the three key energy system functions – energy system planning, market facilitation of flexible resources, and real time operations – must be performed by institutions with the competence, appropriate skillset and incentives to deliver net zero at least cost. There must also be clear accountability and coordination. These changes are in flight at the national level, and must also be reflected at the local level.

Effective governance arrangements are a critical enabler of the transition to a smart and flexible energy system, and we must ensure they accommodate existing as well as evolving system needs. In April 2022, we launched a review into the effectiveness of institutional and governance arrangements at a sub-national level, through a Call for Input.<sup>1</sup>

The responses to the Call for Input, subsequent workshops and bilateral meetings validated our understanding of the issues and demonstrated a strong case for change to governance arrangements.

This is our follow up publication consulting on our proposed reform package. This consultation provides an initial appraisal of our proposals and explores the next level of detail on key choices for design and implementation.

The key components of our proposed package of reform are:

- Energy system planning: Introduce new Regional System Planners (“RSP(s)”) to ensure there is accountability for regional energy system planning
- Market facilitation of flexible resources: Assign a market facilitation function to a single entity with sufficient expertise and capability, to deliver more accessible, transparent and coordinated flexibility markets

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<sup>1</sup> Call for Input: Future of local energy institutions and governance, <https://www.ofgem.gov.uk/publications/call-input-future-local-energy-institutions-and-governance>

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- Real time operations: Keep real time operations within the distribution network operators (DNOs), ensuring clear accountability for network reliability and safety.

We believe that this proposed package of reform is proportional to the issues with current arrangements, achievable at pace, cross-vector, coherent with national governance and most importantly delivers the priority benefits we and our stakeholders see. It should ensure that there is clear accountability for the delivery of the key energy system functions necessary for a smart flexible energy system capable of achieving a low cost net zero transition. Our proposals are also adaptable to future change, which we consider important given the other reforms that are underway and the continued change we are seeing in the system.

We consider that the FSO would be the lead option to take on the proposed RSP and market facilitation roles, via licence obligations. Both roles have strong synergies to the FSO's national functions and it would support greater local and national level consistency and coordination. This is one of the key concerns identified in Call for Input responses and our subsequent engagement.

We are seeking input and views from stakeholders on the proposed future institutional and governance arrangements and the extent to which our proposals are proportionate and targeted to the most pertinent issues. We are also seeking views on the key design and implementation choices. Lastly, we are interested in any data respondents may have which will inform our full impact assessment of these reforms.



## 1. Introduction

### Section summary

This section sets out the background to this consultation, including how it builds on the previous Call for Input.

### Background

- 1.1 The UK Government has set legally binding targets that mean the economy must reach net zero greenhouse gas emissions by 2050 ('net zero') and is also aiming to achieve power sector decarbonisation by 2035.<sup>2</sup> Delivery of these targets, and other relevant policy targets, will require a transformation of the entire energy industry.
- 1.2 We are already seeing this transformation occurring, with the rapid decarbonisation and decentralisation of generation and demand. This involves the integration of new technologies which will change how the system is operated. Achieving a smart, flexible energy system is critical to managing these changes in a cost effective way.
- 1.3 As the energy system undergoes the transition to net zero, effective governance arrangements can unlock significant benefits for consumers by facilitating a low cost transition to a smarter, flexible and digitally enabled local energy system. For example through:
  - Delivering well-coordinated, whole system strategic planning at sub-national level, with clear accountability for decision making, which can result in significant consumer savings by making the most of available resources and technologies.
  - Enabling flexibility markets that are facilitated and coordinated in a way that drives simplicity and transparency, which can support participation of distributed low carbon energy resources in local, and national, markets.
  - Supporting the integration of distributed sources of generation, storage and flexibility and help to drive efficient operational and network investment decisions which will ultimately reduce costs for consumers.
- 1.4 Whilst governance reform alone cannot deliver the above benefits, the effective delivery of the proposed functions in scope of this review will be a key enabler,

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<sup>2</sup> This is in line with the recommendation from the Climate Change Committee ('CCC').

and in some instances, a pre-requisite to their realisation. We believe that effective delivery is not possible without the key responsibilities within a function and the processes that support its delivery, ie the who, what and how, being well defined and understood.

1.5 Therefore, in April 2022, we launched a review into the effectiveness of institutional and governance arrangements at a sub-national level, through a Call for Input.<sup>3</sup> At the national level, effective governance will be ensured through the delivery of the FSO.<sup>4</sup>

1.6 In launching our review, we articulated challenges with current sub-national arrangements, namely that:

- there are institutional gaps and a lack of accountability in regard to the delivery of certain energy system functions;
- that even where there is clear accountability of roles and responsibilities, it is not clear that these are assigned to the institutions best placed to perform them in the future; and
- that there is insufficient, or ineffective, coordination between actors across the energy system at a sub-national level, and that confusion and regional variance in approaches to delivering functions could delay the transition to net zero.

1.7 The response to the Call for Input validated our understanding of the issue and demonstrated a strong case for change to governance arrangements. This consultation builds on what we learnt from the Call for Input and sets out our initial thoughts on how we propose to reform governance to deliver a smart, flexible energy system.

1.8 Our proposed package of reform seeks to ensure there is clear accountability for the delivery of three core functions necessary for a smart flexible energy system capable of achieving a low cost net zero transition. The key components are:

- Energy System Planning: Introduce a new RSP actor to ensure there is accountability for regional energy system planning.

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<sup>3</sup> <https://www.ofgem.gov.uk/publications/call-input-future-local-energy-institutions-and-governance>

<sup>4</sup> Consultation outcome: Proposals for a Future System Operator role, <https://www.gov.uk/government/consultations/proposals-for-a-future-system-operator-role>

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- Market facilitation of flexible resources: Assign a market facilitation function to a single entity with sufficient expertise and capability to deliver more accessible, transparent and coordinated flexibility markets.
- Real time operations: Keep real time operations within the DNOs, ensuring clear accountability for network reliability and safety while maintaining future optionality.

### **Call for Input Response**

The Call for Input received 73 responses from stakeholders. These included network companies, suppliers, flexibility service providers, industry representatives and trade bodies and local and regional government authorities.

Responses confirmed the need to review institutional arrangements at a sub-national level but with notable differences across the energy system functions and an array of views on where we should focus our attention.

The case for change was strongly confirmed for energy system planning and market facilitation of flexible resources, with concerns centred on accountability, credibility and coordination. The case for change was weaker for real time operations although a lack of transparency was clearly identified. There were mixed views on potential conflicts of interest with a minority of respondents calling for legal or ownership separation to mitigate this risk.

There was a clear message from respondents that, particularly for energy system planning, any future governance arrangements must go beyond considering roles and responsibilities for DNOs alone and instead take a cross-vector view.

## **Purpose and scope**

- 1.9 This is our follow up publication consulting on our proposed reform package: a framework of interacting organisations centred around the creation of RSPs and a central market facilitation role. This publication provides an initial appraisal of our proposals and explores the next level of detail on key choices for design and implementation.
- 1.10 We are seeking input and views from stakeholders on the proposed future institutional and governance arrangements and the extent to which they are proportionate and targeted to the most pertinent issues. We are seeking views on the key design and implementation choices that remain. Lastly, we are interested

in any data respondents may have which will inform our full impact assessment of this work.

1.11 We intend to follow up with a decision and impact assessment later in 2023.

### **Structure of consultation**

1.12 Chapter 2 sets out our updated strategic case for change, as informed by the Call for Input responses, stakeholder engagement and further analysis undertaken by ourselves and with support from LCP Delta and CEPA.

1.13 Chapter 3 set out our proposal for how governance arrangements should be reformed for energy system planning, including details of our rationale and further design choices to consider.

1.14 Chapter 4 set out our proposal for how governance arrangements should be reformed for market facilitation of flexible resources, including details of our rationale and further design choices to consider.

1.15 Chapter 5 discusses real time operations, including details of our rationale and further design choices to consider.

1.16 Chapter 6 sets out the next steps following this publication, including ongoing policy interactions, implementation pathway considerations, and how we intend to assess the impact of our reform.

1.17 Appendix 1 describes our proposed approach to undertaking an impact assessment.

### **How to respond**

1.18 We want to hear from anyone interested in this consultation. Please send your response to [flexibility@ofgem.gov.uk](mailto:flexibility@ofgem.gov.uk) by 5pm on 10 May 2023.

1.19 We have asked for your feedback in each of the questions throughout. Please respond to each one as fully as you can.

1.20 We will publish non-confidential responses on our website at: [www.ofgem.gov.uk/consultations](http://www.ofgem.gov.uk/consultations).

### **Your response, data and confidentiality**

1.21 You can ask us to keep your response, or parts of your response, confidential. We will respect this, subject to obligations to disclose information, for example, under the Freedom of Information Act 2000, the Environmental Information Regulations 2004, statutory directions, court orders, government regulations or where you

give us explicit permission to disclose. If you do want us to keep your response confidential, please clearly mark this on your response and explain why.

- 1.22 If you wish us to keep part of your response confidential, please clearly mark those parts of your response that you do wish to be kept confidential and those that you do not wish to be kept confidential. Please put the confidential material in a separate appendix to your response. If necessary, we'll get in touch with you to discuss which parts of the information in your response should be kept confidential, and which can be published. We might ask for reasons why.
- 1.23 If the information you give in your response contains personal data under the General Data Protection Regulation (Regulation (EU) 2016/679) as retained in domestic law following the UK's withdrawal from the European Union ("UK GDPR"), the Gas and Electricity Markets Authority will be the data controller for the purposes of GDPR. Ofgem uses the information in responses in performing its statutory functions and in accordance with section 105 of the Utilities Act 2000. Please refer to our Privacy Notice on consultations, see Appendix 4.
- 1.24 If you wish to respond confidentially, we will keep your response itself confidential, but we will publish the number (but not the names) of confidential responses we receive. We won't link responses to respondents if we publish a summary of responses, and we will evaluate each response on its own merits without undermining your right to confidentiality.

## **2. The case for change**

### **Section summary**

This section sets out an updated articulation of the case for change, and considerations for the development of reform options.

### **Strategic energy context**

- 2.1 As we transition to net zero, we will see accelerated decarbonisation and decentralisation of generation and demand. Accommodating the transformation of the ways we generate electricity, heat our homes and power our vehicles will require changes to how the energy system is planned and operated.
- 2.2 To support and enable these changes, we will need significant new investment in electricity network infrastructure, principally at the distribution level. As society electrifies, it may be that parts of the gas network could be decommissioned and the electricity networks reinforced, but alternative solutions may include new investments in hydrogen, or heat networks. Strategic planning, that takes account of increasingly complex trade-offs between energy vectors, will be critical to achieving a low cost net zero transition.
- 2.3 This will be especially critical at distribution level where the transformation will happen on a local basis, with the uptake of electric vehicles (EVs) and heat pumps happening on a street-by-street, town-by-town basis and a growth of local generation of power. The changes needed to the energy system will need to take account of place-based understanding.
- 2.4 Additionally, the integration and efficient utilisation of low carbon energy resources will be key to keeping costs down for consumers. Without sufficient demand flexibility to match variable renewable output, there will be increased need for both network capacity and firm generation, at a significant cost to consumers. The delivery of coordinated markets for flexibility, at both local and national levels, will be key to achieving the levels of flexibility needed.
- 2.5 Finally, there will need to be transparent operational decisions made in real time for the deployment of resources, all of which need to be underpinned by open data and digital infrastructure.

### **Defining effective governance**

- 2.6 Effective governance arrangements are a critical enabler of the transition to a smart and flexible energy system, and we must ensure they accommodate

existing as well as evolving system needs. Our starting point is the electricity distribution system. This reflects the electricity system's importance for the delivery of a smart, flexible energy system but we recognise that changes to it will both drive and respond to changes in other energy systems.

2.7 By governance, we refer to the arrangements for how key energy system functions are delivered. In other words, being clear on the key roles and responsibilities for institutions that will ensure effective delivery of energy system planning, the market facilitation of flexible resources and real time operations of electricity networks.

2.8 In the Call for Input we set out criteria we consider need to be met for effective institutional and governance arrangements at a sub-national level. These criteria outline how we intend to assess whether existing and any potential future, arrangements are fit for purpose:

- *Accountability*: There is clarity on the roles and responsibilities being performed by institutions, with recourse for non-delivery.
- *Credibility*: Institutions are both trusted and perceived to be credible in delivering their respective roles and responsibilities.
- *Competence*: Institutions have the necessary skills and competencies to deliver their roles and responsibilities effectively.
- *Coordination*: There is effective coordination between institutions (not just at a sub-national level, but also with institutions at the national level), supported by robust engagement with stakeholders. A key consideration for the effectiveness of coordination is the extent to which information exchange is enabled or hindered to support delivery of the energy system functions.
- *Simplicity*: Institutional and governance arrangements are simple, such that stakeholders, such as market participants, can engage with a given set of arrangements.

2.9 In response to our Call for Input, stakeholders broadly agreed with our proposed criteria. Some respondents noted that an additional consideration for effective governance is adaptability. Given that the energy system continues to evolve, these respondents highlighted that arrangements should be able to be amended to address future needs if necessary. We have added a criterion to our list to reflect the importance of arrangements being able to evolve at pace.

- *Dynamic [NEW]*: Arrangements can be responsive to future changes to the system.

## **Status quo and suitability of current arrangements**

2.10 We consider current governance arrangements are not fully fit for purpose given the energy system changes that are needed to deliver net zero. In this section, we summarise the issues we articulated in the Call for Input and the extent to which stakeholder responses validated these concerns.

### **Energy system planning**

2.11 Our view set out in the Call for Input was that current governance arrangements for energy system planning give rise to issues of competence and credibility, accountability, and coordination. Taken together, these issues present barriers to delivering cost effective decarbonisation outcomes that reflect a sub-national context and priorities.

2.12 An example where these issues play out is that, under the status quo, network companies develop single energy vector plans, with significant variation in how regional context or priorities are factored in. There is information asymmetry over how forecasts are generated and the variance in approaches make it challenging to be confident in when the investment is needed or if consumers may end up paying for work that is not yet necessary in a region. These challenges are recognised by some network companies, who have expressed to us the limitations a single energy vector company faces in delivering a cross-vector plan due to their remit.

2.13 Whilst networks have expertise to plan their networks in a safe and reliable way, we know that efficient network planning decisions will increasingly rely on active consideration of system interactions between energy vectors at a local and national level. To ensure net zero is delivered in a cost effective way and reflects regional priorities, delivery needs to be inclusive. To address concerns of information asymmetry and the development of plans in silos, there needs to be clear roles, responsibilities and processes for the active participation and feed-in by other actors with relevant expertise, such as local government bodies.

2.14 In responses, stakeholders agreed that there is a lack of clear accountability/mandate for whole system planning, resourcing of institutions (insufficient skills/expertise or funding) and insufficient coordination across local actors and with the national framework. Key themes from the responses included:

- Misaligned local authority (LA) and DNO plans leading to perceived inefficient or disrupted investment.



- Needs are different for different regions, with recognition and facilitation needed of locally tailored opportunities/approaches.
- Need for the ability to democratise the development of the energy system, ensure greater community buy in and help LAs meet their net zero targets.
- Greater coordination and maximising cross-vector planning synergies can lead to a more efficient system which is attractive to investors.
- Opportunity to consider what arrangements might be best suited to coordinate functions across all energy vectors.
- Acknowledgement from DNOs on the need for coordinated planning but half of DNOs believed the issues posed in the Call for Input could be solved through existing arrangements and incentives as part of RIIO-ED2.

2.15 We therefore consider there is a significant case for change to reform the governance arrangements, with clear benefits that could be obtained. This is to ensure they are reflective of the requirements of a changing system and the need for cross-vector and regionally reflective approaches.

### **Market facilitation of flexible resources**

2.16 In the Call for Input, we set out our view that under current arrangements there are issues of credibility, coordination and simplicity. We posited that ineffective procurement processes driven forward in different ways by DNOs, coupled with a lack of coordination within and across flexibility markets, are acting as a barrier to the true value of flexibility being realised.

2.17 In responses, stakeholders were broadly in agreement with the concerns outlined, with two key messages coming across. The first is that there is a lack of consistency in approaches between DNOs and nationally, which generates friction for market participants. Secondly, the current processes for how the market is facilitated are not providing confidence to participants that they will be able to maximise the value they can provide to the system. Without this, there is a risk that less flexibility can be incorporated into the system, meaning it will be unable to meet the scale needed. Key themes from the responses included:

- No change could lead to very different models for how the distribution system is operated.
- DNOs are each creating their own processes and using different market platforms with different rules for market entry and operation, hampering investment potential for flexible assets.

- No concept of transactions across energy vectors (ie heat – electricity, etc).
- Need for improved data and digitalisation from standardisation. If consistency and standardisation improved, it would result in cost effective solutions based on existing processes.
- Need for improved coordination across markets and flexible opportunities.
- DNOs emphasised the work already being done through the Open Networks Project.

2.18 We therefore consider there is a strong case for change to reform the arrangements for how market facilitation is delivered, with clear benefits at stake. This is to ensure delivery is much more consistent to better leverage how markets can support local needs and coordinate at a national level.

### Real time operations

- 2.19 In the Call for Input, we outlined perceived issues around competence and credibility of DNOs performing system operation in the future. A key concern in the current arrangements is the extent to which there could be a perceived conflict of interest in the deployment of novel solutions (ie flexibility) over traditional asset solutions. We also raised a concern that there is insufficient operational coordination, and this can lead to concerns as to whether these operational decisions are economic and efficient for the system as a whole.
- 2.20 In responses there was a strong emphasis that DNOs and Gas Distribution Networks (GDNs) have clear accountability and competence for the operations of their network currently and this must be actively considered alongside any other issues in how the function is delivered. A key risk highlighted was that separation of activities between network and system operations may decrease efficiency. This risk was highlighted by both network companies and non-network company respondents.
- 2.21 The perceived conflict of interest between asset-based solutions and flexibility were raised by a minority of respondents. The concerns raised were relevant to activities within energy system planning and the market facilitation function also, rather than specifically the decision making towards real time. Albeit with an impact on the delivery of real time operations.
- 2.22 A key theme that emerged was a lack of transparency over decision making and inconsistency in approach, leading in some cases to the concern over conflicts of interest but also a lack of clarity over how different services were prioritised and what was informing the decisions being made. This lack of transparency resulted





in credibility concerns. Stakeholders raised the need for advanced system operation tools and greater network visibility to enhance decision making.

- 2.23 We do not consider there is a strong case for change to the arrangements for how real time operations are delivered, with responses indicating that operational reform costs would likely outweigh benefits. We consider also that reform to the arrangements for how planning is delivered, and market facilitation should support enhanced operational transparency and therefore effective delivery of real time operations.

### **Framework archetypes**

- 2.24 The scope of this review begins from the perspective of electricity distribution, due to the changes we are seeing and will continue to see at a local level across the electricity system. However, we consider the issues are either system wide or have system wide impacts, and therefore solutions must reflect this.
- 2.25 In the Call for Input, we described four framework models which represented potential archetypes for future arrangements (see Table 1). A key message from stakeholders is that any institutional and/or governance reform solution should go beyond within-organisation change (eg framework models 1 or 2) and target cross-organisational change (eg framework models 3 and 4).

Table 1 Framework models presented in the Call for Input

<p>1. Internal separation*</p>  <p>DNOs continue to perform electricity DSO roles as defined in RIIO-ED2 *Includes variant of legal separation</p>	<p>2. Independent Distribution System Operator</p>  <p>New independent institutions take on some of or all electricity distribution system operation (DSO) roles</p>
<p>3. RSP and Operator(s)</p>  <p>New regional institutions take on some of or all electricity DSO roles as well as wider cross-vector planning roles</p>	<p>4. Interacting Organisations</p>  <p>Roles are dispersed to create the clusters with the strongest functional synergies and existing core competencies</p>

**Key considerations in developing and evaluating reform options**

- 2.26 In addition to providing input on the nature and magnitude of issues under existing arrangements on a function specific basis, stakeholder responses have informed key considerations which have supported the development and initial evaluation of reform options.
- 2.27 We have consolidated these below and outline how we believe that they will be met under our proposals.

**We have developed a reform option which is targeted and proportionate to the issues with the current arrangements.**

- 2.28 Our evidence gathering validated governance-related concerns in some aspects of how the functions in scope are delivered, but not uniformly across all three. It was emphasised by stakeholders that whilst there was a case for change, it was critical to avoid creating high levels of complexity and that the addition of any new parties must not dilute responsibility for key activities such as maintaining reliability and quality of supply.
- 2.29 To ensure we can be targeted in reforming arrangements, we have undertaken mapping of the identified issues against the specific activities which comprise the functions in scope, with the support of LCP Delta and CEPA. In other words, we sought to identify the pain points within the current arrangements. This analysis allowed us to target the root cause of the issues within the functions and better understand the interactions between the functions.

**We have developed a reform option which we consider represents the best balance of costs and benefits.**

- 2.30 The benefits of a smart and flexible energy system are large. Whilst better governance will unlock some of these benefits, as was strongly emphasised in Call for Input responses, it is important to recognise that effective governance is an enabler and will need to be combined with other reforms for the maximum benefits to be realised. Stakeholders also raised the management of additional costs and the cost of loss of existing synergies/disruption as issues for consideration.
- 2.31 At present we are unable to do a full impact assessment, as we do not possess sufficient data relevant to the specific components of the proposed reform, and the detailed design and implementation will also have a bearing. This consultation should support us in gathering this evidence (see Appendix 1).
- 2.32 Whilst we are unable to undertake a full impact assessment, our evidence gathering, review of relevant literature and the data we do possess gives us confidence the reform is proportionate and represents the best balance of costs and benefits.
- 2.33 We have sought to minimise cost by tightly focusing reform on the areas of greatest benefit and ensuring reforms can respond dynamically to future change. It is critical for change to be clearly and tightly defined to help mitigate wider risks eg risks to security of supply.
- 2.34 To better understand the impact of our proposals, we will undertake a full impact assessment. Our proposed approach for conducting this is set out in Appendix 1. As part of this consultation, we welcome input and views from stakeholders on our proposed approach to the impact assessment, and we are calling for additional information and analysis which will support this assessment.

**We have developed a reform option that can realise benefits quickly.**

- 2.35 We consider that timeliness of implementation is critical to realise the benefits of reform given the pace of the change to the system. This is both to avoid further costs from issues becoming further entrenched or of higher magnitude, but also to maximise the benefits prize. For example, it is widely regarded that the benefits of decarbonisation are larger if it is done sooner (CCC Carbon Budget 6,<sup>5</sup>

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<sup>5</sup> The Sixth Carbon Budget – the UK’s path to Net Zero, <https://www.theccc.org.uk/publication/sixth-carbon-budget/>

Skidmore review).<sup>6</sup> By ensuring arrangements are fit for purpose as quickly as possible, we can support delivering a rapid low cost net zero transition.

- 2.36 This was emphasised within stakeholder responses, and it was highlighted that the development and evaluation of a suitable option should take account of the implementation pathway. We consider our proposed option is implementable within our vires, which would hasten the implementation pathway and ensure benefits are realised quickly.

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<sup>6</sup> Mission Zero: Independent Review of Net Zero, <https://www.gov.uk/government/publications/review-of-net-zero>

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## 3. Proposed governance reform: energy system planning

### Section summary

This section sets out our vision, proposal, rationale and the detailed design choices for energy system planning.

### Our vision

- 3.1 To achieve a cost effective transition to net zero, both for our sub-national energy networks and our communities, governance arrangements must strike the right balance in how energy system planning is undertaken to ensure there is transparency, clear accountability, democratic legitimacy, and a proportionate allocation of risk.
- 3.2 Our vision is for regional energy system planning to be fully "whole system", leading to coordinated development of the system across multiple vectors (electricity and gas – but also potentially heat, hydrogen, and so on). This should ensure investment is made when and where it is needed, driving forward decarbonisation at pace. It should result in a streamlined siting process and reduce risk to investors and consumers by making connection timeframes transparent.
- 3.3 This requires planning to be fully cognisant of the regional context. For example, local net zero ambitions, geography or demographic specifics will impact how and where low carbon technologies are rolled out and the impact they have on the system. Embedding a regional context within planning is key to ensuring we empower communities to realise their decarbonisation ambitions and achieve a fair and inclusive transition to net zero.
- 3.4 In empowering regions, we must ensure we do so in a way which is consistent across Great Britain. Both between regions, but also nationally. The regional energy system planning approach must be coherent and coordinated with national energy system planning (transmission). This coherence is critical to realising efficient, cost effective outcomes.

### Proposal

- 3.5 We propose to introduce RSPs based in regions across Great Britain, who would be responsible for undertaking regional energy system planning activities, as well as co-ordinating the input of other actors to the process.
- 3.6 To deliver this, we propose:

- Creating and assigning a new regional system planning role to a single accountable body for a region, who we consider should be a regulated entity.
- Ensuring RSPs are central to a framework of interacting organisations within each region, which all feed into regional energy system planning.
- That an RSP should be responsible for developing and owning a regional energy system plan, with other actors informing and being consulted in relation to their respective planning activities (ie network planning and spatial planning).

3.7 We propose RSPs should undertake strategic planning activities, which we define as a mixture of both subject-specific engagement and technical planning activities:

- Develop and own the critical planning assumptions, using inputs from local actors (eg DNOs, GDNs, LAs) and exogenous sources to develop key assumptions that inform system need eg EV uptake numbers and expected contribution to peak demand.
- Coordinate, facilitate and ensure effective participation between local actors (which ensures a place-based understanding is central to how the regional energy system is planned).
- Develop and own a regional whole system strategic plan that is coherent with national and local net zero ambitions and energy security priorities and that supports achieving the most cost effective decarbonisation outcomes, derived from and informing the individual sub-plans made by local actors.
- Provide independent technical analysis and advice to support decision making, primarily within price control setting, for example if different vectors' plans conflict and/or by identifying improvements and opportunities for whole system optimisation.

3.8 We propose existing and other actors must remain responsible for planning activities aligned to their existing competencies. By this, we mean network companies would remain responsible for network planning activities, but these would need to align to the regional energy system plan (ie by using the same key planning assumptions). Local/regional government would remain responsible for local spatial planning activities and local area energy planning activities.<sup>7</sup>

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<sup>7</sup> For the avoidance of doubt, our proposal does not prescribe the use of Local Area Energy Planning (LAEP) by all local authorities and this is an area for consideration by government.



- 3.9 It could be argued that having both existing actors and the RSPs undertaking “planning” is a duplication – but we see a clear distinction. The existing actors plan for their own assets and within their own competencies. We are proposing that the RSPs focus on their coordination and coherence: ensuring common starting points, facilitating dialogue and creating an independent strategic summary (the regional whole system strategic plan).
- 3.10 The output of the RSPs would be a key input to the distribution price control setting process for the justification of system/network need.
- 3.11 There are critical information links between functions. For example, an RSP's transparent planning outputs will be a key input to market participants in terms of the likely values for flexibility they will see, where and when (see Chapter 4). Similarly, the rich seam of ex post operational data (see Chapter 5) will inform (and likely confirm) planning assumptions about the deployment of investment capital, location, etc.

Q1. Do you agree with our proposal to introduce Regional System Planners as described, who would be accountable for regional energy system planning activities? If not, why not?

## **Rationale**

- 3.12 As articulated in Chapter 2, stakeholder responses to the Call for Input and our subsequent analysis have highlighted issues of insufficient accountability for a whole system regional planning approach and insufficient coordination, both between local actors and with national planning.
- 3.13 We recognise progress has been made in both areas and will continue to be driven by the RIIO-2 price controls, however we consider that such progress cannot overcome the limitations of the current roles and responsibilities.
- 3.14 We consider the proposed introduction of RSPs would streamline the current patchwork approach to regional energy system planning by introducing accountability for the activity and solidifying the process for how those with a democratic mandate interact and influence the more technocratic aspects of planning and vice versa. This should ensure that a place-based approach is at the heart of how the regional energy system is planned.
- 3.15 Ultimately, this should result in the relevant local actors, Ofgem, investors and flexibility market participants having confidence in system requirements. We consider this would enable long term investments, particularly in network

capacity, to be made with confidence and in anticipation of future need (ie strategic investment). Additionally, it would give the markets a clear signal on requirements and where flexibility is most needed. We consider this would drive greater transparency regarding system requirements and what the market can provide which would illuminate any bias in network companies' decision making (ie highlight conflicts of interest).

- 3.16 Overall, we consider that the proposed introduction of RSPs should support the transition to a net zero energy system in a cost effective manner. We recognise there is further detail to be developed and expand on this further below. We are interested in stakeholder's views on our proposal and the further considerations for its detailed design.

### Detailed design choices

- 3.17 A key issue identified with current arrangements is a lack of accountability. In seeking to rectify this we propose an independent actor is needed within a region which can look across multiple vectors to develop a whole system plan. An alternative could be to assign it to an existing actor within the system, which could address a lack of accountability. However, in developing a strategic plan for a region, we would expect RSPs to identify opportunities for cross-vector synergies or highlight conflicting vector plans and provide an impartial view of the optimal pathway. It should be a single source of truth for a region's requirements.
- 3.18 We therefore think it is critical that the actor is both independent and possesses a remit which enables it to look across the energy system. The institution's remit directly guides its remuneration. We propose the entity doing regional system planning should be regulated given its monopoly position, the costs it will incur, the risk it relays and to ensure recourse for non- or sub-standard delivery.
- 3.19 Whilst we think that accountability should lie with a single independent actor, this does not diminish the importance of other local actors to the process. RSPs should be a focal point within a group of interacting organisations. In the first instance, this will be network companies and local/regional government but can extend across multiple vectors, ie heat, hydrogen, carbon capture utilisation and storage, as the system evolves.
- 3.20 Regional coordination must ensure a place-based understanding of how the regional energy system is planned and that those with a democratic mandate have agency to reflect their regional context meaningfully within the process. We welcome stakeholder views on examples of partnership arrangements or best practice coordination structures.

- 3.21 To ensure consistency in how the RSPs role is delivered, we consider it should be a single entity across Great Britain that delivers it via multiple branches. We consider this strikes an effective balance between empowering a more decentralised approach, whilst delivering consistency and coherence both vertically (ie with transmission system planning) and horizontally (ie across regions) to deliver system efficiency and cost effective outcomes for all energy consumers.
- 3.22 We do not yet have a view on what the appropriate regional boundaries are, noting the existing complexities of the electricity distribution licence areas, gas distribution licence areas and local/regional government boundaries and devolution boundaries. To define the regional boundaries, we consider it necessary to first define the responsibilities of the RSPs and then to consider how the size of the region may impact the fidelity of the output. We consider by having a single entity with multiple branches there is scope for region sizes to be flexible to reflect the context of the area. For example, differing regional ambitions. This variability will be enabled by data standards and advanced digitalisation - different users should be able to access their own location-specific perspectives from common planning data.
- 3.23 The final consideration for the proposed delivery of the RSPs are the skills, expertise and digital infrastructure it must possess. It must have sufficient competence to fulfil its role and have credibility in doing so. To do this it would need sufficient expertise to model future supply and demand as well as understand the impact of such growth on the network, to identify system need. Given its role within interacting organisations, stakeholder engagement skills will be vital. Lastly, as noted in paragraph 3.22 we expect the foundations of the RSPs to be advanced data processes, including owning data standards, ensuring access permissions and ensuring consistent digitalisation. The responsible entity must have the necessary digital infrastructure and technical competence.
- 3.24 For these reasons, we consider that the lead option for delivering RSPs is the FSO due to its singularity within the system; the skills and expertise it will possess and can build and its established position as a regulated entity.<sup>8</sup> By having a consistent delivery body for strategic planning within the system, it should support consistency and coherence. We recognise an alternative could be to recommend the creation of a new entity to deliver RSPs, but we consider this less

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<sup>8</sup> The FSO would need to build specific distribution level capabilities.

favourable as it may add undue complexity within the overall system arrangements; it would need to build skills and expertise from scratch, and it would likely take significantly longer to implement.

- 3.25 We welcome stakeholder views on the further design considerations we have set out and particularly the extent to which you think the FSO would be a suitable delivery entity or whether there are alternative bodies we should consider.

- Q2. What are your views on the detailed design choice considerations described?
- Q3. Do you have views on the appropriate regional boundaries for the RSPs?
- Q4. Do you agree that the FSO has the characteristics to deliver the RSPs role? If not, what alternative entities would be suitable?

## **4. Proposed governance reform: market facilitation of flexible resources**

### **Section summary**

This section sets out our vision, proposal, rationale and the detailed design choices for market facilitation of flexible resources.

### **Our vision**

- 4.1 The use of both demand side and local generation flexibility are imperative to meet the scale of the decarbonisation challenge. We think open and transparent markets that are unbiased by the commercial interests of the buyer(s) are key to achieving the scale of flexibility needed and ensuring the most efficient solution for the energy system can be found.
- 4.2 The governance arrangements must ensure there are fair and transparent rules and processes for procuring flexibility services, that enable service providers to participate easily in open, transparent and coordinated markets. Smaller scale assets must also be able to participate on a level playing field with larger assets.
- 4.3 These processes should be standardised to reduce friction for market participants and there should be clear accountability for delivering this. There should be easy access to accurate and user-friendly market information that allows providers to respond to system needs.
- 4.4 This enhanced simplicity for market participation should support opportunities to easily stack revenue, leading to increased participation and liquidity within the market for short term balancing and services (where flexibility's value is highest). This should keep system costs down and support the delivery of a cost effective net zero energy system.
- 4.5 Our primary focus in this section is the facilitation of markets used in electricity distribution network management although we also consider alignment with electricity transmission. We consider the governance arrangements for distribution market facilitation should support open, coordinated markets overall that mesh smoothly.

### **Proposal**

- 4.6 We believe a single party needs to be empowered to take the lead and be held accountable for delivery. To achieve this, we propose:

- Creating and assigning a new market facilitator role to a single, expert actor
- In the first instance, we propose that the market facilitator should be responsible for delivering more joined up flexibility markets, tasked with:
  - (a) Reducing friction across distribution markets, by simplifying processes, reducing barriers to entry and ensuring consistency
  - (b) Aligning distribution and transmission market arrangements.

4.7 Specifically we propose the market facilitator should be responsible, at a minimum, for delivering the following activities:

- Data standards for product, asset and market data (and associated communication protocols for interoperable Application Programming Interface (APIs)).
- Standardised products, which are a basic first step to align product descriptions and attributes, enabling coordination across products to take place.
- Stacking rules, which enable one asset to know if it can deliver multiple products.
- Primacy rules, for when two operators call assets in the same grid area.
- Standardised contracts and pre-qualification, to reduce the friction of accessing markets.

4.8 This list of activities is not exhaustive, and the market facilitation role could expand as needed. The market facilitation role could also be extended to other energy vectors when it is appropriate to align or develop cross-vector flexibility markets, for instance to unlock the potential of hybrid heat pumps. While cross-vector flexibility is not at a meaningful scale at present, under some future scenarios it could play a significant role in the energy system.

4.9 Alongside the market facilitation role, we are proposing that market enabling infrastructure and platforms<sup>9</sup> take on the bulk of front-end market actions and become the main point of contact for flexibility services.

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<sup>9</sup> The term 'market enabling infrastructure and platforms' covers independent market platforms and public interest digital infrastructure, as explored in the Future of Distributed Flexibility Call for Input, also published 1 March 2023.

- 4.10 DNOs would have no substantive role in delivering market facilitation but would remain responsible for the procurement and dispatch of flexibility. This is discussed in more detail in Chapter 5.
- 4.11 Table 2 below sets out our proposals for the allocation of roles and responsibilities for the market facilitation of flexible resources.
- 4.12 We recognise further refinement will be needed on the detailed allocation of activities within this function. However, our proposal signals a clear direction of travel: a more simplified landscape delivered through a reduced role for DNOs in facilitating markets, creating a new market facilitator role and greater use of market-enabling infrastructure and platforms.

Table 2 Proposed roles and responsibilities for the market facilitation of flexible resources

Activities	Actors		
	Market facilitator	Market enabling infrastructure & platforms	DNO
Product development & standardisation	x		
Managing market rules (primacy & revenue stacking rules, contracts, processes, etc) <sup>10</sup>	x		
Engaging with market participants	x		
Customer registration and management		x	
Pre-qualification		x	
Identify and specify requirements			x
Submit requirements on platform			x
Hosting flexibility tenders		x	
Issue flexibility tenders		x	
Match trades		x	
Evaluating and selecting options			x
Inform successful participants		x	
Publish tender results		x	
Platform analytics		x	
Recording and publishing market data		x	x
Settlement, credit and clearing		x	
Market oversight	x		

4.13 As with regional planning, there are critical information links between market facilitation and the other functions. As described above, planning outputs are a key input that the market facilitator can check are feeding into market interactions (see Chapter 3). Similarly, there must be a real time flow of data to (ie procurement instructions) and from (ie market outcomes) system operation.

<sup>10</sup> We are not proposing that the market facilitator is responsible for enforcing market rules and processes. This would remain an Ofgem responsibility, where it pertains to regulated entities' obligations, informed by the market oversight performed by the market facilitator.



Q5. Do you agree with our proposal for a single, neutral expert entity to take on a central market facilitation role? If not, why not?

Q6. Do you agree with the allocation of roles and responsibilities set out in Table 2? If not, why not?

Q7. Are there other activities that are not listed in Table 2 that should be allocated to the market facilitator or other actors?

## **Rationale**

- 4.14 There is a clear message from our engagement to date: current distribution flexibility market arrangements are not fit for purpose. Essential work to align flexibility markets is not progressing at the necessary pace or being implemented consistently. This has created complex, uncoordinated, and hard to navigate markets, where revenue stacking is incredibly difficult. This prevents the full value of flexibility from being unlocked and acts as a barrier to a smart, flexible energy system.
- 4.15 At present, work to align flexibility markets is delivered through the Open Networks Project by the Energy Networks Association (ENA), on behalf of its members. This means accountability is split across multiple parties, with different priorities and capabilities. In addition, the ENA cannot hold DNOs (its members) to account for slow progress or inconsistent implementation of deliverables. Lastly, as an unregulated entity, the ENA itself cannot be held to account.
- 4.16 Instead, we believe that assigning a market facilitation role to a single, expert entity is necessary to ensure that accountability for developing and monitoring the implementation of key outputs sits with one party. This has the added benefit of consolidating market facilitation expertise in one entity, minimising duplication. This should support increased coordination across transmission and distribution markets. As the activities and requirements of the system evolve in the future, the market facilitator role could be extended, offering significant optionality.
- 4.17 Activities should be delivered by the institutions best placed to perform them, now and in the future, with roles and responsibilities allocated accordingly. Market actions are not a core DNO competency and should instead be delivered by market enabling infrastructure and platforms wherever possible, freeing up DNOs to focus on their core areas.
- 4.18 Overall, the proposed arrangements for market facilitation:

- Provide clear accountability for delivery of key outputs, ensuring that rules and processes across flexibility markets are developed and implemented in a transparent and consistent way.
- Allocate roles and responsibilities to the institutions best placed to deliver them, freeing up DNOs to focus on areas of core competency.
- Target the barriers to the growth of flexibility, as identified through the local governance Call for Input responses and subsequent engagement.

4.19 This will deliver consistent, easy to access distribution flexibility markets and make it easier to stack revenue, reducing friction and allowing markets to deliver value more easily. In turn, this will increase participation and market liquidity, helping unlock the value of distributed energy resources (DER) and consumer-owned energy resources (CER) for the energy system.

### **Detailed design choices**

4.20 As with the delivery of energy system planning, we consider a root cause of the issues within the current arrangements is a lack of singular accountability. Our view is that this should be addressed through the creation of a market facilitator. We consider this body must have sufficient independence to be accountable for decision making and delivery at pace. A single decision maker should have the final say on defining deliverables. They must possess sufficient credibility to do this and drive buy-in from other participants.

4.21 Therefore, it must be an expert body. The market facilitator should have, or be well placed to develop, flexibility market design expertise, so it can facilitate and drive technical discussions. In particular, it should have the ability to align distribution and transmission market arrangements.

4.22 Lastly it must conduct open, participatory processes with wide stakeholder representation. Discussions should be convened in an open manner with equitable access for all stakeholders and decision making processes should be transparent. Sellers, technology providers and buyers all need to be involved.

4.23 We have considered three options in detail for taking on the market facilitator role. A potential candidate would be the FSO. Ofgem expects it to have ambition and strategic vision and there are close synergies with its current proposed role. The FSO can be held accountable and has relevant expertise. It is also well positioned to align distribution and transmission markets. However, as a flexibility buyer within the market itself, we recognise that impartiality could be a concern.

We welcome responses on the materiality of this issue and whether it should be the lead option.

- 4.24 We also considered the ENA as a candidate, but we do not consider it possesses the characteristics needed. Although it has relevant expertise, pace of delivery through the Open Networks Project has been slow and the membership representation is limiting. The ENA has insufficient decision making power as it cannot hold its own members to account and lacks accountability itself as an unregulated entity. The challenges with the current approach are discussed in paragraph 4.15 above.
- 4.25 Finally, we have considered whether a neutral third party would be suitable. They could be fully impartial, opposed to the FSO, but would still need to have the requisite expertise. A new entity could be created, or an existing entity could take on a new role. Relevant existing entities include trade associations, independent market platforms, and code administrators. There is no obvious existing candidate with the capabilities to deliver this role, so extensive capacity building would be required in this scenario. This option would also separate distribution market facilitation from electricity transmission, making aligning all of the market arrangements more challenging.
- 4.26 The regulatory approach to a third party taking on this role would also require further specific consideration. An unregulated entity could be difficult to hold to account, but regulating a new entity requires creating or extending duties.
- 4.27 As such, assigning the market facilitator role to a neutral third party represents significant challenges. We consider the FSO as the candidate that most aligns to the characteristics we consider the market facilitator should possess. We note however the impartiality risk we have highlighted from it also being a market buyer.
- 4.28 We welcome views on the characteristics we have described for the market facilitator role and the options for delivering it, along with any alternative suggestions.

- Q8. What are your views on our options for allocating the market facilitator role?
- Q9. Are there other options for allocating the market facilitator role you think we should consider? If so, what advantages do they offer relative the options presented?



## 5. Proposed governance reform: real time operations

### Section summary

This section sets out our vision, proposal, rationale, and the detailed design choices on real time operations.

### Our vision

- 5.1 Real time operations of the distribution system and network should deliver reliable and transparent operation underpinned by efficient decision making. As the system evolves, so will the requirements placed on DNOs. Increasing volumes of DER, such as small-scale sources of generation and storage, have changed what used to be a simpler one-way flow of electricity down to the end consumer. DNOs will need to consider the potential for DER to both cause and alleviate network constraints, requiring more active management locally to maintain system stability and manage network congestion.
- 5.2 To fulfil the requirements of the changing system, enhancements to network visibility and monitoring will need to inform operational decision making. There should be transparent processes for the sharing of operational data across DNOs, with external third parties and with the FSO.
- 5.3 Effective delivery of real time operations means that in addition to managing planned and unexpected technical issues on the network, any conflicts between market instructions or consumer choices are surfaced and dealt with. Central to achieving this is effective coordination with other key actors in the sub-national and national system.
- 5.4 For the avoidance of doubt, when referring to real time operations, we mean the real time operation of the power system rather than operating the assets connected to it. Our scope does not consider behind the meter operation. That said, clarity on the roles and responsibilities for operating the power system in real time should make it easier to clarify how assets can and should be operated behind the meter, even if that is out of scope for this work.

### Proposal

- 5.5 We are not proposing creating legally separate or independent distribution system operators. While some stakeholders continue to hold concerns that DNOs favour network solutions over non-network solutions, on balance, and based on the current evidence, we do not believe separation is justified relative to the cost and

- disruption it would entail. Therefore, we do not propose changing the roles and responsibilities for real time operations. This ensures that accountability for reliability and safety sits with one entity, the DNO.
- 5.6 That does not mean there is no change relative to the status quo. As articulated in Chapter 2, there is a clear message from industry that operational decisions need to be more transparent and that significant improvements in operational coordination are needed. We expect DNOs to rise to the challenge.
- 5.7 RIIO-ED2 will represent a step change for DNOs with regards to data and digitalisation. DNOs will be modernising their internal data processes and capabilities and complying with new data standards. This means DNOs will be able to gather and share more information about their network and their decision making.
- 5.8 DNOs and GDNs will be required to share their operational insights to enable effective planning. Our proposals for regional energy system planning entail ongoing operational planning with RSPs, requiring two-way information flows. This will be supported by the enhanced data and digitalisation requirements, as well as the behaviours driven by the Smart Optimisation Output licence obligation.
- 5.9 For these reasons we expect much greater transparency thereby meaning decision making is open, visible, and auditable.
- 5.10 In retaining real time operations, including procurement and dispatch, DNOs will be required to work closely with the FSO to ensure actions taken on the distribution and transmission network are coordinated. Operational coordination is not currently being delivered effectively. This needs to change.
- 5.11 Improvements will be supported by primacy and stacking rules that the market facilitator will be responsible for developing. Ultimately however, responsibility for successful coordination will remain with the DNOs and FSO. We do not consider effective operational coordination to be a 'nice to have'. We see it as a core function of an effective system operator and expect RIIO-ED2 investments to translate into concrete improvements.
- 5.12 There may also be an increasing need to undertake cross-vector operational coordination, and, again, we expect DNOs and GDNs to do more; proactively engaging with each other and acting as required.
- 5.13 As part of our overall package of reform we will consider whether further tools are needed to ensure the behaviours and outcomes that we expect are delivered.

5.14 Ultimately, we expect all parties to do more to ensure they are working together effectively. Real time operations will be directly informed by the outcomes of the dynamic markets hosted by the neutral market facilitator. The ex post outcomes of markets will both inform future planning and confirm (or adapt) the in-flight investment plans. As such, the data flows must be based on a common ontology, accessible, secure and of transparent origin. We wish to ensure the proposed arrangements support this; we also explore this in our Future of Distributed Flexibility Call for Input.

## **Rationale**

5.15 DNOs currently provide high levels of reliability and we did not identify a strong benefits case from reallocating real time operations from the Call for Input responses. In contrast, the cost of separation and duplicating control rooms is significant. As such, we do not believe that a fundamental restructuring of institutional arrangements for real time operations is warranted.

5.16 Our proposals help mitigate the potential for conflicts of interest. Our analysis of the activities within each of the functions, to identify the specific pain points, suggests that a potential conflict of interest would be more likely to impact activities within the planning and market facilitation functions, as the relevant decision making is not in real time. RSPs will help build confidence in network requirements while standardised market facilitation will improve transparency on what the market can offer. RIIO-ED2 investments will also enhance DNO capability to ensure they are fit for the future. Lastly, our proposals provide certainty and clarity on the DNO role, enabling DNOs to focus on their core duties.

5.17 We believe this is a proportionate approach to the issues identified in our engagement relative to the potential benefits, costs and risks that reassigning real time operations would represent. Combined with our proposals on planning and markets, alongside RIIO-ED2 investments in data and digitalisation, this will ensure we have a safe, reliable system, with greater transparency around decision making and clear rules in place to prevent conflicting actions between the transmission and distribution level. That said, we reserve the right to review this position if evidence emerges in the future that shows DNOs are underperforming or falling short of our expectations.

## Detailed design choices

- 5.18 In developing our proposals, we considered the case for further separation or whether centralisation of procurement and/or dispatch was needed. As discussed in our rationale, we did not identify a case for change and consider the risks to system reliability too high presently.
- 5.19 The counterfactual in RIIO-ED2 is functional separation, which all DNOs are pursuing to comply with our baseline expectations, as set out in the Business Plan Guidance<sup>11</sup> and DSO Incentive Governance Document.<sup>12</sup> This includes, at a minimum, executive-level accountability and board level visibility of key DSO decisions, clear and separate decision making frameworks, and independent oversight. These requirements are not affected by our proposals, and we expect DNOs to continue to comply with them.

Q10. Do you agree that DNOs should retain responsibility for real time operations? If not, why not?

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<sup>11</sup> RIIO-ED2 Business Plan guidance, <https://www.ofgem.gov.uk/publications/riio-ed2-business-plan-guidance>

<sup>12</sup> DSO Incentive Guidance Document, <https://www.ofgem.gov.uk/publications/decision-proposed-modifications-riio-2-electricity-distribution-licences>

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## 6. Next steps

### Section summary

This section describes our next steps towards a decision later in 2023.

### Next steps

- 6.1 This consultation will be open for ten weeks and will close on 10 May 2023. We encourage responses from all interested stakeholders.
- 6.2 We will analyse stakeholder responses and carry out a programme of stakeholder engagement both during and after the consultation period. We aim to publish our decision later in 2023.
- 6.3 Following publication of the decision document, the work will enter its implementation phase. Detailed next steps will depend on the conclusions we reach and will be outlined in our decision document. If necessary, we will consult further on the implementation process.

### Policy interactions

- 6.4 There are numerous policy interactions within the scope of our review. As noted in Chapter 2, we consider that 'dynamism' is part of the criteria for effective governance to ensure that future reforms can be accommodated within the arrangements. In addition, we are confident our proposed package of reform is coherent with the direction of current reforms underway. We will continue to actively consider the interactions as we develop our reforms. These interactions include:
  - Local Area Energy Planning
  - Levelling up
  - Review of Electricity Market Arrangements (REMA)<sup>13</sup>
  - RII0-ED2 Price Control
  - FSO implementation
  - Future Strategic Network Regulation (FSNR)<sup>14</sup>

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<sup>13</sup> Review of electricity market arrangements, <https://www.gov.uk/government/consultations/review-of-electricity-market-arrangements>

<sup>14</sup> Open Letter: Future Systems and Network Regulation, <https://www.ofgem.gov.uk/publications/open-letter-future-systems-and-network-regulation>

- Access Significant Code Review (SCR)<sup>15</sup>
- Future of Distributed Flexibility
- Heat decarbonisation (including hydrogen policy, heat networks and zoning)
- Industry and Ofgem-led connections reform
- Distribution Use of System (DUoS) Reform

## **How implementation could be progressed**

- 6.5 We consider that there is a risk of inaction regarding the reform of governance arrangements and that any reform must ensure a timely implementation to maximise the benefits on offer and ensure issues do not become further entrenched.
- 6.6 By 'timely implementation', we suggest that effective institutional arrangements need to be in place and delivering benefits by the end of the decade. To achieve this, we believe governance reform must be delivered in time for the setting of the next electricity distribution price control in 2028. That said, and reflecting the clear stakeholder feedback that there are diminishing benefits the longer we wait, we will implement our proposed package of reforms earlier wherever possible.
- 6.7 In Chapters 3, 4 and 5, we outline in greater detail the proposal and detailed design choices for each function. We consider that the two new roles proposed have strong synergies with the FSO's national functions, and we consider the FSO a likely viable candidate for delivery. This would require the FSO to develop a local/regional presence and the capability and expertise relevant to the distribution system. We will use consultation responses and further engagement to explore the extent to which the FSO would be suitable for the two new roles.
- 6.8 We believe our reform package can be introduced within our existing powers, which will speed up implementation, however we will continue to test and engage on this.

## **How we will assess impacts of reform**

- 6.9 In Chapter 2 we set out the strategic case for change, along with the key considerations in developing and evaluating reform options. In Appendix 1 we

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<sup>15</sup> Access and Forward-Looking Charges Significant Code Review: Decision and Direction, <https://www.ofgem.gov.uk/publications/access-and-forward-looking-charges-significant-code-review-decision-and-direction>

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have outlined how we intend to conduct the impact assessment, which is summarised here.

6.10 In our approach to the impact assessment, we propose measuring the impacts of reaching the proposed end state vs the counterfactual. There are three main steps to this process:

- Setting the counterfactual
- Identifying benefits
- Identifying costs

6.11 We welcome comments on the impact assessment methodology set out in Appendix 1. In particular, we welcome responses to our questions, along with data or information on the costs and benefits of our proposals.

Q11. What is your view on our proposed approach to the undertaking of an impact assessment as outlined in Appendix 1?

Q12. What is your view on the most appropriate measure of benefits against the counterfactual?

Q13. How should we attribute these benefits between the governance changes in the proposed option, and other changes required to achieve the benefits? We particularly welcome analysis from bodies that have undertaken an assessment of benefits, specifically how those benefits might be attributed to different policy reforms that are required to achieve those benefits.

Q14. What additional costs might arise from our governance proposals? We welcome views both on the activities that may arise and cause additional costs to be incurred, as well as the best way to estimate the size of the costs associated with those activities.

Q15. What additional costs may arise from sharing functions with several interacting organisations? We welcome views on set up cost, lost synergies, and implementation barriers.

## **Appendix 1 – Impact assessment approach**

A1.1 This consultation sets out the case for change to governance arrangements and the proposed direction of travel. In doing so, we have reviewed existing distribution system operation arrangements and identified several barriers to achieving full efficiency caused by the current governance arrangements. We have set out key principles and objectives that any new governance arrangements must meet, and our rationale for how our proposals would meet these objectives.

A1.2 To support us coming to a decision on whether to implement our proposed option, we intend to undertake an impact assessment. We will seek to identify the costs and benefits that can be directly and indirectly attributed to our proposals for the RSP and market facilitator roles, as well as any interactions with real time operations.

A1.3 Following extensive engagement, our view of the proposed package of reform is that it would contribute to achieving significant benefits associated with better coordination and delivery of energy system planning at the sub-national level and more accessible flexibility markets. To design our proposed option, we have explored several options (the archetypes included in the Call for Input) and have discounted options that would not meet our key objectives. Specifically we are ensuring that the effective governance criteria is met, delivering coordinated whole systems planning that facilitates long-term investment decisions, accessible flexibility markets and reliable, transparent operations.

A1.4 Our initial view is that a development of the ‘interacting organisations’ framework is the most suitable option for future arrangements. This option is proportionate to the issues, achievable at pace, cross-vector, coherent with national governance and should be effective in delivering the priority benefits we and our stakeholders see. We also consider it adaptable to future change, which we consider important given other significant ongoing reforms including potential market changes (‘REMA’).<sup>16</sup>

A1.5 A review of the relevant and most recent literature (see Identifying Benefits section below) illustrates that the scope for benefits from better planning and coordination at the whole system level are significant. The net benefits range from £0.9-3.2bn/year<sup>17</sup> to £163-252bn over a 25-year-period.<sup>18</sup> While the scope and methods followed by these studies are not comparable, they give a high-level view of the scope of

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<sup>16</sup> <https://www.gov.uk/government/consultations/review-of-electricity-market-arrangements>

<sup>17</sup> Benefits of Flexibility of Smart Local Energy Systems in Supporting National Decarbonisation, <https://www.energyrev.org.uk/outputs/insights-and-tools/benefits-of-flexibility-of-smart-local-energy-systems-in-supporting-national-decarbonisation>

<sup>18</sup> Building a Governance Framework for Coordinated Local Area Energy Planning, <https://es.catapult.org.uk/report/governance-framework-for-coordinated-local-area-energy-planning/>

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improvement in efficiency that might arise from delivering energy system planning and market facilitation better. We consider our governance reform a key enabler of such delivery.

A1.6 The benefits directly attributable to our governance proposals are hard to quantify because, often, our proposals would be enablers of other changes and policies. For example, a faster roll out of EVs due to reduced network constraints could be a result of additional flexibility in the system and/or coordinated whole system planning. In other cases, the scope of benefits from the proposed option goes beyond what could be achieved by just focusing on what is possible within the remit of the DNOs, for example enabling more efficient cross-vector regional and local planning.

A1.7 At this stage we have set out the methodology we intend to follow, and the information we are seeking from stakeholders to inform our assessment.

### **Setting the counterfactual**

A1.8 In our approach to the impact assessment, we propose measuring impacts of reaching the proposed end state vs the counterfactual. In this case, the counterfactual would be the implementation of existing policies, including those required within RIIO-ED2, but no additional independent regional system planning activities and no independent market facilitator. Our counterfactual would also make assumptions regarding the limitations of the current arrangements that we have identified in this consultation.

A1.9 We have set out the minimum requirements for DSO functions in the RIIO-ED2 Business Plan Guidance.<sup>19</sup> Under RIIO-ED2, DSO performance is incentivised ex post based on a review of a DNO's delivery of its DSO activities in line with three evaluation criteria: stakeholder survey, performance panel assessment and outturn performance metrics.

A1.10 In addition, under the counterfactual we would use the scope of regional/local planning and coordination activities across energy vectors within the Smart Optimisation Output licence obligation in RIIO-ED2.

A1.11 In addition to the RIIO-ED2 arrangements, the Open Networks Project is already providing coordination across DNOs and with the ESO. Therefore, in the baseline there will be coordination, but with some concerns about the speed of implementation,

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<sup>19</sup> <https://www.ofgem.gov.uk/publications/riio-ed2-business-plan-guidance>

consistency between market arrangements by different DNOs and a lack of independent advice/decision making.

## Identifying benefits

A1.12 The benefits form part of the wider benefits of the policies to allow more flexibility and whole system optimisation. We looked at recent research papers such as: Flexibility in Great Britain by the Carbon Trust and Imperial College London<sup>20</sup>, Future World Impact Assessment by Baringa<sup>21</sup>, Benefits of Flexibility of Smart Local Energy Systems in Supporting National Decarbonisation by EnergyRev<sup>22</sup> and Building a Governance Framework for Coordinated Local Area Energy Planning by Energy Systems Catapult<sup>23</sup>. The studies we looked at suggest large benefits, but those are based on a package of measures which are not directly comparable with these proposals. In some instances, these benefits include other matters that should be accounted for in the counterfactual, including the benefits of achieving net zero.

A1.13 In our consultation document we have identified a number of areas where our proposals would generate additional benefits with respect to counterfactual. For example:

- Flexibility (provision, connections, synergies)
- Data quality improvements
- Improved market participation of flexible resources
- Deferred reinforcement/decarbonisation synergies
- Transparency of decision making
- Increased stakeholder confidence
- Whole system benefits

A1.14 We recognise that some of the outcomes generating benefits would also take place under the counterfactual. At the impact assessment stage, we will need to make low, medium, and high assumptions about the attribution of these benefits to our proposals. For example, what proportion of network investment would be avoided or deferred by an independent RSP compared to the counterfactual.

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<sup>20</sup> Flexibility in Great Britain, <https://publications.carbontrust.com/flex-gb/>

<sup>21</sup> Future World Impact Assessment, <https://www.energynetworks.org/assets/images/Resource%20library/ON19-WS3-Baringa%20Future%20World%20Impact%20Assessment%20report-PUBLISHED%20060319.pdf>

<sup>22</sup> <https://www.energyrev.org.uk/outputs/insights-and-tools/benefits-of-flexibility-of-smart-local-energy-systems-in-supporting-national-decarbonisation>

<sup>23</sup> <https://es.catapult.org.uk/report/governance-framework-for-coordinated-local-area-energy-planning/>

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A1.15 It may be difficult to attribute these benefits in a robust manner. We are considering measurement but seek views from different stakeholders on approaches to measure what can be linked to governance. For example by utilising previous studies in more detail and considering what benefits can be attributed to the proposed governance arrangements. In some cases, we may only be able to demonstrate potential benefits in qualitative terms, which we would consider alongside the quantifiable benefits.

### **Identifying costs**

A1.16 In the absence of transitional costs, transferring roles between organisations should result in net zero cost. We would like to have a better understanding of what transitional costs would result from our proposed option.

A1.17 Measuring costs directly will be challenging. DNOs would need to continue some of the functions. The costs would reflect potential double-counting and inefficiencies that result from setting up additional bodies and the need to transfer information between them.

A1.18 In a previous request for information (RFI), we measured some of the transitional costs associated with ownership unbundling, which turned out to be significant. We expect the proposed package in this consultation to be less costly than ownership unbundling, and we would like stakeholders to identify any costs that would be additional to the cost of delivering the functions under the counterfactual.

A1.19 Depending on the information collected in the responses to the consultation, we will decide whether to follow up with another RFI to DNOs. We welcome more detailed feedback from other organisations too as the implementation of these measures would go beyond the remit of the DNOs.

### **Summary**

A1.20 As set out above, we intend to carry out an impact assessment to support our decision making and ensure that we have sufficient confidence that benefits would outweigh costs. As part of this, we would be considering both attribution of benefits to our policies and evidence of effectiveness in achieving these.

A1.21 We are seeking evidence on the following questions, as outlined in Chapter 6.

Q11 What is your view on our proposed approach to the undertaking of an impact assessment as outlined in Appendix 1?

Q12 What is your view on the most appropriate measure of benefits against the counterfactual from the package of measures designed to enhanced flexibility, of which our governance proposals are a key enabler?

Q13 How should we attribute these benefits between the governance changes in the proposed option, and other changes required to achieve the benefits? We particularly welcome analysis from bodies that have undertaken an assessment of benefits - specifically how those benefits might be attributed to different policy reforms that are required to achieve those benefits.

Q14 What additional costs might arise from our governance proposals? We welcome views both on the activities that may arise and cause additional costs to be incurred, as well as the best way to estimate the size of the costs associated with those activities.

Q15 What additional costs may arise from sharing functions with a number of interacting organisations? We welcome views on set up cost, lost synergies, and implementation barriers.



## Appendix 2 - Glossary

Term	Description
Consumer-owned energy resource (CER)	CER are a collective term for consumer owned energy system assets. These can include demand, storage and generation assets include EV charging, heat pumps, white goods, batteries, and rooftop solar or wind.
Cross-vector	Considering the impacts and efficiencies needed between vectors, eg electricity, gas, heat, transport, rather than just the best outcome for one part.
Decentralisation	Refers both to the general trend of smaller scale sources of generation and storage, but also a trend towards decisions being made at a smaller scale when it comes to the energy transition.
Decentralised Assets	Decentralised assets, include small-scale sources of generation and storage.
Digitalisation	The use of digital technologies to change an organisation's operating model and provide new revenue or equivalent value-creating opportunities; it is the process of moving to a digital business/organisation.
Distributed energy resource (DER)	Any energy asset connected to the local distribution network, as opposed to the transmission network, as well as combined heat and power schemes of any scale.
Distribution network operator (DNO)	A DNO is a company that operates the electricity distribution network, which includes all parts of the network from 132kV down to 230V in England and Wales. In Scotland 132kV is considered to be a part of transmission rather than distribution so their operation is not included in the DNOs' activities. There are 14 DNO licensees that are subject to RIIO price controls. These are owned by six different groups.
Distribution system	The system of low voltage electric lines and low-pressure pipelines providing for the transfer of electricity and gas within specific regions of GB

Distribution system operation (DSO)	The set of activities that are needed to support the transition to a smarter, flexible and digitally enabled local energy system. DNOs have been building capabilities in planning, operating and market facilitation of flexible resources to drive more efficient development and use of the decarbonising electricity system. This differs from the more traditional responsibility of a DNO, which is to take power from the transmission network and deliver it at safe, lower voltages to homes and businesses.
Distribution Use of System (DUoS)	DUoS is a cost paid by suppliers to DNOs for the building and maintenance of the local distribution network. Suppliers then pass this DUoS charge on to energy consumers
Energy Networks Association	The Energy Networks Association represents the companies which operate the electricity wires, gas pipes and energy system in the UK and Ireland.
Flexibility markets	Flexibility Market refers to the arena of Flexibility Service procurement processes across various market operators within GB. This includes DNO local flexibility markets, ESO Frequency and Ancillary services, Balancing Mechanism, Wholesale Market, Capacity Market, P2P services (ie PPAs) etc.
Flexibility services	The communicated need (usually via the contractual right) to define desired parameter values of a grid-connected asset's control system for a specified duration of time.
Future System Operator (FSO)	In July 2021 BEIS and Ofgem launched the FSO consultation and subsequently confirmed the decision to create an independent FSO in April 2022. The FSO will take on all the main existing roles and responsibilities of National Grid ESO and the longer-term planning, forecasting and market strategy functions in respect of gas (but not real time gas system operation or Network Emergency Coordinator functions).
Gas distribution network (GDN)	GDNs transport gas from the National Transmission System to final consumers and to connected system exit points. There are eight network areas managed by four companies that are subject to RIIO price controls.

Local Area Energy Planning (LAEP)	A collective-term for more detailed plans, usually undertaken by local or combined authorities. Whilst there is no one definition, LAEPs usually use data, analysis and modelling to develop a strategy, before developing an action / delivery plan to meet the objectives of the strategy.
Network visibility	The ability of DNOs to collect and utilise data related to the operation of their network in planning and operational timescales.
Planning	Any activity that involves taking a forward look, rather than considering options / issues as and when they occur.
Place-based approach	A bottom-up approach of looking at the needs and requirements of a local area and applying this lens to how decisions are made.
Pre-qualification	The steps a flexibility service provider is required to undertake prior to being able to participate in local flexibility tenders, such as registering onto a DNO's Dynamic Purchasing System, a credit check and completing a pre-qualification questionnaire.
Price control	The control developed by the regulator to set targets and allowed revenues for network companies. The characteristics and mechanisms are developed by the regulator in the price control review period depending on network company performance over the last control period and predicted expenditure (companies' business plans) in the next.
Primacy rules	Primacy rules refer to the decision framework for coordinating market operators access to the same assets.
Regional Energy System Planning	A whole-system planning capability that rigorously evaluates the trade-offs across the whole system in a regional area, as well as maximising synergies.
RIIO Electricity Distribution Price Control (RIIO-ED2)	The price control applying to the electricity distribution network operators. It runs from 1 April 2023 to 31 March 2028.

Smart Optimisation Output licence condition	The Smart Optimisation Output licence obligation is a new output within RIIO-ED2, formed of two parts; a collaboration plan and a system visualisation interface. These outputs will enable effective collaboration with stakeholders by ensuring a more holistic and open approach to the sharing of network data and strategies, to both inform the DNO's own strategic planning activities and to support the creation of least cost decarbonisation pathways for electricity, heat and transport, at a regional level, in partnership with others.
Spatial Planning	Statutory obligations of the Planning Authority within local government.
Stacking rules	Stacking rules enable an asset to know if it can deliver multiple products.
Transmission system	The system of high voltage electric lines and high-pressure pipelines providing for the bulk transfer of electricity and gas across GB.
Whole system	An approach that considers the gas, electricity (transmission and distribution) networks as well as the impact the heat and transport sectors have on the system as a whole.