Marzia Zafar
Deputy Director for Digitalisation and Decentralisation
Energy System Design and Development
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Email: digitalisation@ofgem.gov.uk

**Energy Digitalisation Governance – Architectural Coordination**

Dear colleagues,

The net zero transition requires a fundamental digital transformation across the sector, clarifying terminology, ensuring interoperability, determining standards, and developing distributed data infrastructure. This will bring system benefits, supporting network companies to address demand growth, tackle decarbonisation and improve resilience. Ofgem is working to bring together licensees and other sector participants on key digitalisation projects with the goal of increasing efficiency, supporting decision making and unlocking new value and opportunities.

As the energy sector digitalises, we have identified an increasing risk of poor architectural coordination between existing and emergent energy digital public infrastructure. This uncoordinated activity has the potential to increase costs for consumers, even if positive outcomes relating to climate or growth are met. Ofgem and the Department for Energy Security and Net Zero (DESNZ), therefore, are working together to ensure digitalisation policy is coordinated within the energy sector. Ofgem and DESNZ will together set out a vision for digitalisation of the energy sector, including policy and technical coordination, in Q1 2026 as committed to in the Clean Flexibility Roadmap.[1]

## Background

As set out in the roadmap, "Strategic direction needs to be provided across the whole digitalisation landscape, underpinned with common tools, architecture and approaches. Coordination and governance of the different owners of key digital infrastructure through a clear governance framework is critical so that the different initiatives are designed for interoperability and avoid duplication." This letter focuses on those architectural elements, to understand their role in creating this coordinated digital landscape.

As important as it is to have a coherent strategic direction for energy system digitalisation, we also need to ensure that energy system digitalisation proceeds in a structured and coordinated way that minimises costs. Architectural coordination is currently being actioned through engagement between the delivery bodies of digitalisation projects underway. We consider that, in the sector today, there is no existing body or group that can provide

[1] clean-flexibility-roadmap.pdf

overall guidance and governance in architectural coordination, in an unbiased, logical, and altruistic manner.

We consider that there will come points of necessity, and of opportunity, for us as a community to make necessary, appropriate and collective decisions on our digital journey.

Ofgem's role does not currently lend itself, beyond the justification for the existence of a new digitalised energy structure, to the architectural and technological knowledge and coordination that would be required.

Making these important collective decisions in a clear and measured way, without bias and being inclusive of not just the energy industry but the overall utility system of the UK will shape digitalisation for the energy sector and potentially the "wider" economy.

Our technological world is in flux as innovative technologies, such as quantum computing and artificial intelligence, are rapidly being adopted, and our understanding of where they can aid our net zero goals develops. It is fundamental that digitalisation decision-making provides a space for innovators who will drive the step change to new services that will populate our future net zero world. The initiatives and elements needed for this transformation have been outlined by the National Energy System Operator in their Sector Digitalisation Plan.[2]

## Aims of this letter and next steps

This open letter outlines Ofgem's thoughts on how we garner the best from our current digitalisation projects and their architecture, how we ensure expediency and consideration in the growth, innovation, and competition of a digitalised energy sector. The need for clear information for, and feedback from, the sector is central to effective co-ordination.

Following the publication of this open letter, we intend to run a series of bilateral meetings, workshops, and other engagements to gather feedback on this letter's contents. If you are interested in discussing any of the content of this letter with us, or participating in bilaterals/workshops, then please get in touch with us. You can find details on where to send this feedback at the end of the letter. We will share this feedback with DESNZ as this feedback, alongside our own analysis, will provide the information that Ofgem and DESNZ need to deliver the Digitalisation Vision.

The Digitalisation Vision will outline how we intend to take work on architectural coordination forward, building on your feedback.

## Key questions of interest

This letter poses 5 fundamental questions for architectural coordination in the GB energy sector;

1. Where is there a need for architectural coordination across the sector to unlock the full value of energy system digitalisation?

2. What are the constituent elements of architectural coordination of digitalisation in the energy sector?

3. What value could a common digital architecture document for the energy sector provide?

[2] https://www.neso.energy/about/innovation/sector-digitalisation-plan

4. What function may be needed to deliver architectural coordination and how would it interact with functions/organisations that are delivering digital public infrastructure (DSI/NESO, Consumer Consent Solution/RECCo, Smart Metering Network/DCC, FMAR and SDR/Elexon)

5. Is coordination an ongoing task (including monitoring), or a temporary task to deliver the elements needed (from q2)? If temporary, where could responsibility for the elements sit on an ongoing basis?

At the end of this document are details of how to contact Ofgem with any contributory comments and responses or to register your interest in this area as a contributor.

*Question 1: Is there a need for architectural coordination across the sector to unlock the full value of energy system digitalisation?*

In July 2025, DESNZ, NESO and Ofgem published the Clean Flexibility Roadmap which hinges on the use of digital and digitalised systems as a key enabler to flexibility.[3] The Digitalisation Coordination action (page 74) states that "The complexity of the governance landscape challenges coordination, risking duplication, gaps and increased costs to consumers".

What this letter contends is that Digitalisation Coordination is not a natural outcome of the organic growth of digitalisation projects. Coordination will come from an intentionally created environment to ensure the right outcomes and those outcomes in line with the key priorities of the Clean Flexibility Roadmap, Clean Power 2030, and net zero ambitions.

In 2025 alone, Ofgem has taken decisions relating to; the delivery of the Data Sharing Infrastructure and appointing NESO as the Interim DSI Coordinator, the delivery of a Consumer Consent mechanism by RECCo, the delivery of a Flexibility Markets Asset Register (FMAR) by Elexon as the Market Facilitator.[4] We have also seen DESNZ decisions publications that drive the creation of; interoperability standards and exchange of tariff data through the SSES programme, a potential introduction of a Smart Data scheme in energy, and considerations of technical infrastructure for wider Asset Visibility.

Ofgem and DESNZ are managing delivery of these programmes, however, we consider that there is also a need to coordinate digital delivery of these pieces of infrastructure using a common architecture. Our current view is that Ofgem does not have the capabilities to undertake this coordination function, though this could be built over time.

These enabling pieces of infrastructure also provide the sector with opportunities to digitalise and put in place applications and services for their current and future benefit. At this time, more governance coordination and capability will be needed. Ungoverned access and use of digitalised services could lead to major cyber security issues regardless of how well-engineered relevant infrastructure is. Without direction and coordination, the opportunity for the duplication of effort, resources, testing and development could cause low and slow movement into a digitalised ecosystem.

*Question 2: What are the constituent elements of architectural coordination of digitalisation in the energy sector? and*

*Question 3: Is there a need for a common digital architecture document to be produced for the energy sector?*

Management and coordination of resources help us mitigate a limiting factor of digitalisation take up, which is skills and knowledge. The sector does not have balanced

[3] Clean flexibility roadmap - GOV.UK
4 Governance of the Data Sharing Infrastructure | Ofgem

access to resources to take advantage of digital infrastructure opportunities such as the DSI. This imbalance could concentrate the benefits of data and digital infrastructure across a small number of larger industry players.

This could slow down the energy sector in its efforts to grow and benefit from digitalisation and the use of the digital infrastructure. A digitalisation architectural function could help distribute, appropriately, the skills necessary to overcome many of the technical resource issues in this area. We consider that architectural coordination of digitalisation would need to reduce information asymmetry between industry parties.

To enable greater interoperability, both within the energy sector and across the economy, a coordinating function could be responsible for owning and managing industry data standards, including ontologies and foundation models.

We consider that to reduce duplication of spend by companies, there needs to be; 1) greater visibility of core digital functionality of the energy sector, 2) an understanding of roles and responsibilities for building digital infrastructure, and 3) opportunities for delivery organisations to share learnings on their delivery of digital infrastructure. This could be delivered through the form of a target digital architecture for the energy sector.

*Question 4: What function is needed to deliver architectural coordination and how would it interact with functions/organisations that are delivering digital public infrastructure (DSI/NESO, Consumer Consent Solution/RECCo, Smart Metering Network/DCC, FMAR and SDR/Elexon)*

A function could exist as part of an existing industry entity, a new industry entity (with noted legislative challenges to establish), a collection of industry parties, or an independent expert from outside the energy sector. These are not exhaustive and we welcome readers views on what function would most effectively deliver the outputs from question 2.

In terms of interaction with organisations responsible for delivery of digital public infrastructure, there would need to be collaboration between these entities and the architectural function. We would be interested in views on whether the function would need to hold delivery entities to account for non-delivery, deviation from architectural guidance, or for poor integration with other infrastructure.

*Question 5: Is coordination an ongoing task (including monitoring), or a temporary task to deliver the elements needed (from q2)? If temporary, where would responsibility for the elements sit on an ongoing basis?*

The answer to this question will likely rely on the constituent elements that stakeholders identify in question 2 of this open letter. Ongoing monitoring could be the responsibility of a dedicated architecture function, or it could be embedded within the regulatory framework (licences or codes primarily) and responsibility given to Ofgem.

## Conclusion

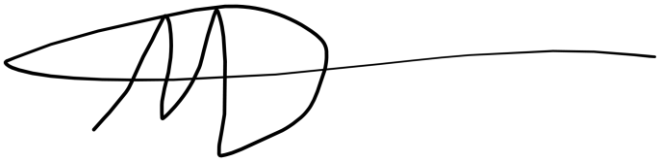
Digitalisation of the energy sector is continuing at pace, allowing us to modernise existing process in the energy sector (connections, strategic planning, settlement) whilst creating new tools and processes to support the evolution of the sector into the digitalised form we need to achieve net zero.

We consider that without architectural coordination function across digitalisation projects in the energy industry, our efforts to digitalise the energy sector may be hindered by duplication and /or fragmented development of digital infrastructure, which would make it

more difficult to achieve outcomes that address Ofgem's duties of consumer protection, net zero, and economic growth.

This open letter puts forward 5 key questions to answer if we are to address this issue. We will build on these 5 questions in the Digitalisation Vision and ensure architectural coordination of energy sector digitalisation is taken forward appropriately.

If you wish to reply to this document, make relevant comments, or participate in workshops on this topic, please email digitalisation@ofgem.gov.uk by Friday 5th December 2025.



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