Decision

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Governance of the Data Sharing Infrastructure Decision

Publication date:	1/04/2025
Contact:	Jeff Finch, Nicola Kirby, Ransford Amponsah
Team:	Energy System Digitalisation
Email:	digitalisation@ofgem.gov.uk

This document sets out our decision on the governance structure and roles for the Data Sharing Infrastructure, following on from our consultation issued on 26 July 2024.

We explain our decision-making process and the rationale for a decision to appoint National Energy System Operator Limited (NESO) as the Interim DSI Coordinator. We also summarise consultation responses. Non-confidential responses are published alongside this decision.

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Executive Summary

Background

Our energy system is becoming more complex as we progress towards net zero, and sector participants will require easier access to high quality data to fulfil their roles. A Data Sharing Infrastructure (DSI) is a decentralised technological solution that will enable secure and standardised data exchange between energy system participants. The National Energy System Operator (NESO) is currently progressing a pilot and minimum viable product (MVP) of the DSI.

In July 2024, we published a consultation on an interim governance structure for a DSI[1] that will be in place until end-2028. We sought views from stakeholders to inform our assessment of either NESO, Ofgem or an independent working group acting in the Interim DSI Coordinator role, and to understand which qualities are most important for short-term governance of the DSI. We received 49 responses to this consultation, and this document sets out our decision based on these responses.

Interim DSI Coordinator

The minded-to position reached in the consultation was that NESO would be best placed to take on the Interim DSI Coordinator role. The majority of responses agreed that NESO is the most appropriate choice for the role. However, respondents outlined some concerns with NESO taking on this role, particularly around independence, stakeholder engagement and digitalisation delivery. We propose that NESO is still best placed to take on this role, but with adequate oversight processes in place to ensure that any concerns with NESO are sufficiently mitigated. We outline these oversight processes, which include: Ofgem's assessment of NESO's IT project delivery, planned stakeholder engagement, NESO's commitments in RIIO-2, and performance monitoring.

Interim governance model

Responses were generally positive towards the governance model presented in our consultation, but recommended many additional roles, responsibilities and deliverables. We have used these recommendations to expand and refine the governance model, and have set out roles for Ofgem, the Interim DSI Coordinator and the Stakeholder Advisory Group in more detail.

Timeline and use cases

Many responses stated that DSI development is too slow, and industry will develop their own data sharing solutions more quickly. Responses also suggested that the initial use

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[1] [Governance of the Data Sharing Infrastructure](#)

cases, Outage Planning and Strategic Planning, do not deliver wide-enough value to the sector. We describe a new approach to use case development which creates the opportunity for additional use cases to be incorporated earlier in the process, in parallel with the use cases already set out for the DSI. This will allow the DSI to deliver greater value during the pilot and MVP stages, earlier than originally set out in our consultation. This approach will support rapid adoption of DSI and help to create an ecosystem of DSI users.

Funding

In our consultation we set out that DSI development and funding should be covered through NESO's baseline RIIO funding. Responses were generally supportive of this funding mechanism but called for further detail on many aspects related to funding. We consider that using NESO's baseline RIIO-2 funding mechanism to recover DSI development costs is appropriate. This funding will also be expected to cover costs related to NESO performing the Interim DSI Coordinator role up to the end of 2028. We remain committed to exploring long-term funding solutions that could apply following the Interim Period.

Next steps

Following this decision, Ofgem and NESO will follow several actions. NESO will operationalise the Interim DSI Coordinator role, including building working groups for DSI use cases. Ofgem, NESO, and Elexon (in their role as the flexibility market facilitator), will collaborate to establish a Flexibility Market Asset Registration as a DSI use case. Ofgem will continue to assess cost submissions where possible and any alternative long-term funding mechanisms for the DSI following the end of the Interim Period and begin assessing NESO's performance as the Interim DSI Coordinator. During the Interim Period (from now until end-2028) Ofgem will also assess options for enduring DSI governance.

1. Introduction

In this section we outline the background to the Data Sharing Infrastructure and the series of papers and commitments that led to our consultation. We summarise the decision-making process and set out the structure of this decision.

Context and related publications

1.1 As we progress towards Net Zero, our energy system is becoming more complex. Sector participants will require easier access to higher quality data to fulfil their roles in a system where network capacity needs to be more closely managed, millions more distributed assets are connected, and distributed flexibility plays a role. The Clean Power 2030 Action Plan[2] highlights the importance of data sharing and visibility in meeting the flexibility goals that will support clean power. A Data Sharing Infrastructure (DSI) is a decentralised technological solution that will help meet these challenges by enabling secure and standardised data exchange between energy system participants.

1.2 Ofgem, government, and Innovate UK have previously set out a vision to build foundational capabilities to enable sector-wide access to data in our joint Energy Digitalisation Strategy.[3] The Energy Digitalisation Taskforce (EDiT) report[4] then recommended the creation of a 'digital spine' – what we are now calling a DSI – for the energy system to enable seamless sharing of data between entities.

1.3 The Department for Energy Security and Net Zero (DESNZ) funded the Digital Spine Feasibility Study[5] in which an architecture for a DSI is proposed. NESO is progressing a pilot DSI using this architecture, as set out in the government's response to the Digital Spine Feasibility Study.[6] The feasibility study further supports the need for a robust DSI to achieve an affordable, resilient, and net zero energy system. This initiative also aligns with our broader strategy to enhance data availability, accessibility, and standardisation within the energy sector, as detailed in our Data Best Practice (DBP) Guidance.[7]

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[2] Clean Power 2030 Action Plan
[3] Digitalising our energy system for net zero: strategy and action plan
[4] Delivering a Digitalised Energy System
[5] Digital spine feasibility study: exploring a data sharing infrastructure for the energy system
[6] Digitalising the energy system
[7] Data Best Practice Guidance

The Data Sharing Infrastructure

1.4   The DSI is a socio-technical solution that enables secure and resilient data sharing at scale across the energy sector, between any participants. As outlined in the Digital Spine Feasibility Study, the DSI consists of three conceptual components:

- **Prepare:** comprises of software that can be deployed within an organisation's environment, which puts the information into a format that is common to the DSI community and allows for exchange of data.

- **Trust:** this is a combination of software controls and methodologies for the establishment of identities and access levels. Some of this is contractual and some is technical configuration.

- **Share:** provides the transmission level elements of the DSI. Commonly this would include Transport Layer Security (TLS), and any asymmetric encryption using digital certificates. These elements ensure that any information sent cannot be read as it traverses the internet.

1.5   NESO will be developing a pilot of the DSI followed by an MVP using the architecture described above. The pilot DSI is currently being developed, and the MVP is projected to begin development in mid-2025 and conclude in mid to late 2026.

1.6   The software is designed to be cloud agnostic and therefore used in a range of common computing infrastructure environments without recourse to specialist equipment. The specification of the computing infrastructure is defined by the Interim DSI Coordinator and should be set at an achievable level for most companies. This lowers the barriers to entry by keeping costs low, which encourages more diverse user groups, smaller companies and operations to gain benefit.

1.7   Together these elements aim to achieve a robust level of security and control for data exchange.

1.8   This technology is not new; however it has not been tested at this scale in the GB energy system. The pilot and early MVP stages will test that the DSI configuration can manage a variety of data from a variety of sources. These data sources are the 'use cases' of the DSI. During the MVP stage the bulk of data

sent and received across the DSI will be 'static' data.[8] We expect that the DSI will begin to able to incorporate dynamic data[8] over time, potentially within the Interim Period.

1.9   It is feasible that one data source may need a variation to the configuration of the DSI compared to another data source. In this way the DSI 'stack' will evolve to suit an increasing number of use cases. This is what will be developed and refined throughout MVP development, and continually over the enduring DSI solution.

Our decision-making process

1.10   In July 2024, we published a consultation on the short-term governance structure for a DSI.[9] This consultation was a critical step in the Future Systems and Network Regulation (FSNR) Framework Decision,[10] published in October 2023, in which Ofgem committed to develop a pathway towards the delivery of a DSI.

1.11   Our decision on the short-term governance of the DSI is informed by extensive stakeholder engagement and feedback received during the consultation period. We have carefully analysed and reviewed the 49 responses received and engaged further with some respondents to discuss their feedback in more detail. We sought views from stakeholders to inform our assessment of NESO, Ofgem and an independent working group, respectively, acting in the Interim DSI Coordinator role, and to understand which qualities are most important for short-term governance of the DSI.

1.12   The proposed governance model will cover the Interim Period from 2025 to the end of 2028, focusing on establishing provisional rules, roles, and mechanisms to facilitate initial data sharing activities while the infrastructure is being developed from pilot to MVP. This approach is consistent with the recommendations from the Energy Digitalisation Taskforce report,[4] which emphasises the need for robust digital governance to support the transition to a modern, decarbonised energy system.

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[8] Static data remains the same after it has been collected, e.g. the address of an asset. This is unlike dynamic data which continually changes over time, e.g. the amount of energy being generated by an asset.
[9] Governance of a Data Sharing Infrastructure Consultation, which ran from 26 July to 21 September 2024.
[10] Decision on frameworks for future systems and network regulation

1.13   Responses informed our decision-making process to determine which entity should lead short-term governance as the Interim DSI Coordinator, and how Ofgem should oversee the Interim DSI Coordinator. Our decision aims to ensure that the DSI governance framework is aligned with these strategic objectives, fostering a secure, efficient, and transparent data sharing environment.

Structure of decision

1.14   This decision document is structured as follows:

   (1) **Introduction (this section):** background and context to our consultation and this decision, our decision-making process and the structure of this decision.

   (2) **Interim DSI Coordinator:** consultation position, summary of responses and our key decisions relating to who should take on the Interim DSI Coordinator role, and mitigations to help minimise risks relating to this role.

   (3) **Interim governance model**: consultation position, summary of responses and our key decisions relating to the proposed governance model. This includes a more detailed governance model framework.

   (4) **Timeline and use cases:** consultation position, summary of responses and our key decisions relating to the timeline of DSI development and the use case development process.

   (5) **Funding:** consultation position, summary of responses and our key decisions relating to our proposed funding mechanism for the DSI. We also outline long-term funding options for further consideration.

   (6) **Next steps:** we outline the steps that we will be taking following publication of this decision. We also describe how we expect the governance to transition from the interim solution outlined in this decision to a long-term, business-as-usual DSI governance solution.

Decision-making stages

Date	Stage description
26/07/2024	Stage 1: Consultation on 'Governance of the Data Sharing Infrastructure' opened.
20/09/2024	Stage 2: Consultation closed, deadline for responses. Review of responses begins.

01/04/2025	Stage 3: Consultation decision (this document) published, alongside non-confidential responses.

General feedback

1.15   We believe that consultation is at the heart of good policy development. We are keen to receive your comments about this report. We'd also like to get your answers to these questions:

- Do you have any comments about the overall quality of this document?

- Do you have any comments about its tone and content?

- Was it easy to read and understand? Or could it have been better written?

- Are its conclusions balanced?

- Did it make reasoned recommendations?

- Any further comments

1.16   Please send any general feedback comments to digitalisation@ofgem.gov.uk.

2. Interim DSI Coordinator

In this section, we set out responses to our minded-to position that NESO should take on the Interim DSI Coordinator role. We have decided that NESO is still the best choice to take on this role, but with adequate oversight processes in place to ensure that stakeholders' concerns with NESO taking on this role are sufficiently mitigated. We outline these oversight processes, which include: Ofgem's assessment of NESO's IT project delivery, planned stakeholder engagement, NESO's commitments in RIIO-2, and performance monitoring.

2.1   In the consultation, we put forward three bodies that may take on the Interim DSI Coordinator role: Ofgem, NESO or an independent working group.

2.2   These options were assessed against five essential criteria for successful governance of the DSI:

- Interoperability and common standards

- Operational capability

- Independence

- Engagement

- Cybersecurity

2.3   Due to its existing role, industry knowledge and relationships, NESO performed well in the interoperability and common standards, operational capability, engagement and cybersecurity categories. The DSI objective to create more efficient data sharing between participants also supports NESO's statutory objectives in relation to net zero, security of supply, and an efficient, coordinated and economical energy system.

2.4   However, as the organisation delivering the DSI solution, NESO may lack independence as the Interim DSI Coordinator. The consultation stated that this risk could be mitigated with adequate oversight and appropriate controls from Ofgem.

2.5   Based on this assessment, the minded-to position reached in the consultation was that NESO would be best placed to take on the Interim DSI Coordinator role.

2.6   Responses to this proposal were mixed, but with a majority at least partially positive of NESO taking on the role. 16 responses agreed that NESO would be the best option to take on the Interim DSI Coordinator role. 18 responses were positive towards NESO being the Interim DSI Coordinator, provided that Ofgem

addresses some common concerns with NESO taking on this role. The main concerns stakeholders brought up in their responses were that NESO has a poor track record of IT and digitalisation project delivery, is unlikely to engage fully and transparently with the sector, and is unlikely to be fully independent from the DSI solution that they are developing.

2.7   9 responses disagreed with NESO taking on this role. The main reasons responses gave were that NESO has a poor track record of IT project delivery, there is a conflict of interest with NESO also delivering the solution, and that NESO lacks the knowledge required. Responses also commented that the level of oversight Ofgem will have in this space is unclear.

2.8   The remaining 6 responses were neutral or did not answer this question.

2.9   Responses that did not agree that NESO was the best option favoured an independent working group taking on the role of the Interim DSI Coordinator. This option was not chosen as the preferred option in our consultation as the Interim Period is relatively short and pilot DSI development is already underway by NESO, and putting a governance model in place is therefore urgent. There is a major risk that setting up an independent working group, securing membership with the necessary skills, and establishing relationships and trust with the full range of stakeholders would take too long to deliver benefits during the Interim Period.

2.10   Ofgem would also not necessarily have oversight over an independent working group unless a licensing or code framework was put in place, which would also hinder progress. While we agree that an independent working group could reduce the potential conflict of interest, the risk to the success of the DSI project overall is too large. We therefore do not consider that a viable alternative to NESO was presented by responses that were against NESO taking on the Interim DSI Coordinator role.

NESO as the Interim DSI Coordinator

2.11   We are confirming our decision to appoint NESO as the Interim DSI Coordinator. We understand the critiques of NESO that were brought up in consultee responses, so we have set out in the following paragraphs how Ofgem will oversee the Interim DSI Coordinator and assess performance to manage the main stakeholder concerns with NESO taking on this role.

2.12   Ofgem published a provisional assessment of ESO's[11] delivery of IT projects in November 2022.[12] This assessment found many issues with ESO's IT project delivery that increased delivery costs, time and associated risks and led to Ofgem taking significant intervention to oversee management of these costs.

2.13   A further assessment of ESO's IT capability and maturity undertaken as part of Ofgem's mid-scheme review of ESO's second business plan (BP2) performance[13] found that ESO had addressed many of Ofgem's previous concerns. While we understand the concern over NESO's past IT project delivery (as ESO), this evidence shows that NESO's performance has improved over the past 18 months, and we intend to work with NESO to drive further improvement. Additionally, the Government's Strategy and Policy Statement for energy policy in Great Britain set out the role for NESO to act as a digitalisation leader through being a data-led organisation, with strong digital and IT capabilities.[14]

2.14   Another criticism that stakeholders raised in responses to our consultation was that NESO may not fully and transparently engage with the sector. Responses linked this view to published reports that stated that ESO had a poor track record of transparency.[12,13] To ensure that high standards for engagement and transparency are met, we have set out requirements for the Interim DSI Coordinator in terms of engagement in Appendix 4.1, which we will expect NESO to meet in this role.

2.15   We are also planning a series of Ofgem- and NESO-led workshops beginning in Spring 2025 which will ensure that stakeholders are brought along throughout MVP development. These workshops may cover topics such as: the governance model, the process for incorporating new use cases, and how organisations can connect to the DSI. In this way Ofgem can support NESO through initial engagements with stakeholders to help establish an appropriate baseline for Interim DSI Coordinator engagement with the sector.

2.16   Ofgem's oversight mechanisms will provide additional assurance that NESO is acting appropriately as the Interim DSI Coordinator. As the DSI MVP is funded through NESO's baseline RIIO funding, Ofgem is able to evaluate costs and spend, and assess whether outputs are delivered to required standards.

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[11] ESO is the company (formerly known as National Grid Electricity System Operator Limited and now known as NESO) that, prior to 1 October 2024, carried out the electricity system operator role pursuant to its electricity transmission licence.
[12] RIIO-2 Business Plan 2 - ESO Draft Determinations
[13] Mid-scheme decision on ESO's BP2 performance
[14] Strategy and policy statement for energy policy in Great Britain

2.17   NESO recently published its draft RIIO-2 Business Plan 3[15] which states NESO's commitment to deliver on DESNZ and Ofgem's expectations for DSI delivery. NESO's Digitalisation Strategy and Action Plan[16] also sets out NESO's ambition to become a 'digital leader' by setting a standard for digital excellence across the energy sector. We believe that these strategic commitments in NESO's RIIO Business Plan and associated documents will provide Ofgem with the required levers to ensure that it performs strongly in the Interim DSI Coordinator role.

2.18   Given NESO's above commitments we do not think a licence condition is necessary at this time. However, we will keep under review whether licence modifications, for example a new licence condition setting out how NESO should act as the Interim DSI Coordinator, should be needed and may propose licence modifications in future.

2.19   Another concern with NESO acting as the Interim DSI Coordinator raised in consultee responses is that NESO may prioritise use cases that benefit its business priorities, instead of the wider energy sector. We believe that the use case development process set out in Section 4 provides sufficient opportunity for Ofgem, industry and the user community to recommend and develop use cases for prioritisation and influence use case development through the Stakeholder Advisory Group. See Section 4 for further information.

2.20   Should stakeholder feedback identify that the use case prioritisation is unbalanced across the Interim Period, Ofgem will reassess the process and explore whether further controls are necessary to ensure a balanced selection of use cases are introduced to the DSI.

2.21   Finally, Ofgem will closely evaluate NESO's performance as the Interim DSI Coordinator. In Section 3 and Appendix 3 we set out that Performance Auditing will be a key role of Ofgem in DSI governance, and this will be done by monitoring NESO's performance against the following metrics:

- Success of use cases

- Transparency of decision making

- Stakeholder trust and satisfaction

- Security

- Openness and breadth of engagement

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[15] Our RIIO-2 Business Plan - NESO
[16] 2024 Digitalisation Strategy and Action Plan - NESO

2.22   Ofgem will collate feedback from the Interim DSI Coordinator, Stakeholder Advisory Group, user community and other relevant stakeholders to inform this assessment. If NESO, in its capacity as the Interim DSI Coordinator, is not performing adequately, Ofgem will proactively recommend improvements. Poor performance as the Interim DSI Coordinator will be factored into Ofgem's decision-making relating to any enduring DSI governance roles following the Interim Period.

2.23   In summary, we consider that the above mechanisms are adequate to ensure that concerns about NESO that were raised in consultation responses do not impact the overall success of the DSI project.

Driving uptake and engagement

2.24   As stated in paragraph 2.15, the Interim DSI Coordinator will hold a series of industry and stakeholder workshops throughout 2025. These workshops will aim to educate, inspire and promote the use of the DSI as a primary mechanism in the drive for digitalisation.

2.25   The Interim DSI Coordinator will deliver these workshops, alongside NESO DSI programme staff and Ofgem. Workshop content should include outlining the governance model presented in this decision and NESO's plans to implement it as the Interim DSI Coordinator, the status of the DSI including lessons learned and the future view, use case types and the process for introducing these to the DSI, and how organisations can connect to the DSI. Workshops should also be used to develop a longlist of potential use cases. Ofgem expects DESNZ will be involved in these workshops, and, where appropriate, key stakeholders such as the National Cyber Security Centre (NCSC).

2.26   Ofgem anticipate these events may be scheduled at least once every quarter for the first 12 months after this decision is published and as required beyond that time.

3.   Interim governance model

The purpose of this section is to provide a high-level view of the Interim DSI governance model, its functional bodies and anticipated responsibilities, outputs and deliverables. Responses were generally positive towards the governance model presented in our consultation, but recommended many additional roles, responsibilities and deliverables. We have used these recommendations to expand and refine the governance model, and have set out roles for Ofgem, the Interim DSI Coordinator and the Stakeholder Advisory Group in more detail.

3.1   Putting an effective governance model in place is necessary to support the success of the DSI solution. In the consultation, we outlined a short-term governance model for the DSI which will be in place from 2025 through to the end of 2028, the Interim Period.

3.2   Three key bodies were proposed to be involved in interim DSI governance in our consultation: Ofgem, which sets out governance and provides oversight; an Interim DSI Coordinator, which leads DSI governance throughout the Interim Period; and a Stakeholder Advisory Group, which advises the Interim DSI Coordinator. In this section we also reference the delivery body, which creates or procures the DSI solution. The DSI delivery body here is NESO, as set out in the government's response to the Digital Spine Feasibility Study.[5]

3.3   The consultation proposed key roles and responsibilities of the Interim DSI Coordinator, summarised as:

- Architecture: procuring appropriate technological solutions for use cases.

- Technology: assessing future technologies to support continuous improvement.

- Cyber Security: working with relevant security services to ensure adequate security measures are considered.

- Tenders: producing tender documents and evaluating these in a fair and transparent way.

- Oversight: overseeing relevant delivery companies that are developing or providing services required to support the DSI.

3.4   Responses generally supported our proposed governance model and the creation of the Interim DSI Coordinator role. Stakeholders proposed many additional roles, responsibilities and deliverables that they see as important for Ofgem to set out for the Interim DSI Coordinator and other bodies involved in DSI governance. Key

functions proposed included dispute resolution processes, data governance, and funding support mechanisms.

3.5   In relation to the deliverables set out for the Interim DSI Coordinator, responses favoured continuous, open progress reporting over single reports to be created at the close of the Interim Period.

3.6   Responses also called for an overall digitalisation vision that shows how the DSI coordinates with wider digitalisation initiatives planned or underway in the energy sector.

3.7   Based on these responses, we will move forward with the creation of the Interim DSI Coordinator and Stakeholder Advisory Group roles. These roles, along with Ofgem, will have the primary roles and responsibilities as set out in paragraph 3.2 and 3.3 above. However, we have taken account of the additional roles, responsibilities and deliverables proposed by responses and used these to add more detail to the overall governance model. This is outlined below, and further detail can be found in Appendices 3 and 4.

Roles and responsibilities

Government/DESNZ

3.8   DESNZ provides the overall strategic direction for the sector which will influence use case prioritisation. DESNZ will also input on use case selection for Type 1 and Type 2 use cases, as explained in Section 4 of this document.

Ofgem

3.9   Ofgem's primary role will be to oversee the Interim DSI Coordinator. It will also agree on representatives to the Stakeholder Advisory Group with the Interim DSI Coordinator.

3.10   Ofgem's responsibilities in relation to DSI Governance are:

- Oversight

- Performance auditing: monitoring the performance of the Interim DSI Coordinator against the following performance metrics:

  o   Success of use cases

  o   Transparency of decision making

  o   Stakeholder trust and satisfaction

  o   Security

  o   Openness and breadth of engagement

- Setting appropriate funding mechanisms

- Dispute resolution, where required

3.11   Ofgem will deliver the following outputs across the Interim Period:

- Regulatory review

- Financial review

3.12   See Appendix 3 for further detail about these responsibilities and outputs.

Stakeholder Advisory Group

3.13   The primary role of the Stakeholder Advisory Group will be to inform the Interim DSI Coordinator and contribute to design, development and implementation of the DSI, including the Knowledge Base and Use Case Longlist.[17] Members of the Stakeholder Advisory Group should be jointly agreed upon by Ofgem and the Interim DSI Coordinator. This is to ensure the widest possible capture of potential use cases and take up on the DSI. This also alleviates any speculation on impartiality when identifying use cases.

3.14   To speed up the formation of this group, membership may be repurposed from existing groups that have been convened in the past. Membership of the Stakeholder Advisory Group should be reviewed by Ofgem and the Interim DSI Coordinator on an annual basis.

3.15   Members would include representatives from the following:

- Network licensees

- Industry experts

- Public bodies

- Security services, including the National Cyber Security Centre

- Consumer groups

- Research groups

- Other relevant parties

3.16   A key responsibility of the Stakeholder Advisory Group will be use case identification and promotion. The Stakeholder Advisory Group should work with the Interim DSI Coordinator and the DSI user community to identify appropriate Type 2 (see Section 4) use cases. This would be based upon the current and

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[17] See Appendix 4 for further information about the Knowledge Base and Use Case Longlist.

forward-looking capabilities of the DSI to support further use case outcomes or technological opportunities.

3.17 Stakeholder representatives will be encouraged to identify use cases for the DSI in their fields and promote incorporation into the Use Case Longlist.

Interim DSI Coordinator

3.18 The Interim DSI Coordinator has the primary role to coordinate the design and delivery of the DSI. It will do this by facilitating and engaging the delivery body, community of users, and Ofgem, and collaborating with the Stakeholder Advisory Group.

3.19 The responsibilities and outputs of the Interim DSI Coordinator are set out below. These have been separated into two categories, Design and Implementation. See Appendix 4 for further information about these responsibilities and outputs.

3.20 **Design:**

- Engagement and adoption

- Technology and architecture

- Funding facilitation

3.21 **Implementation:**

- Funding management and disbursement

- Data governance

- Security

- Performance management

- Programme management

3.22 Ofgem expects the Interim DSI Coordinator to produce several outputs throughout the Interim Period, listed below. These should be produced and updated continually throughout the Interim Period and published openly where possible. These outputs should be produced in collaboration with the Stakeholder Advisory Group.

3.23 **Outputs:**

- Knowledge base

- Vision and strategy

- Security assessment

- Stakeholder engagement plan

- Data catalogue – compliant with Data Best Practice[7]

- Use case longlist

Delivery body - NESO

3.24   NESO was appointed to deliver a pilot and MVP DSI by DESNZ in the government's response to the Digital Spine Feasibility Study.[6] The role set out below was not consulted upon in our consultation as it was already decided upon, but we include this information here for completeness and clarity in showing how this body fits in with the new roles and overall governance model we are proposing.

3.25   The primary role of the delivery body is to develop and/or procure components for the pilot and MVP DSI. It will then provide components, blueprints and connection advice to the community of users. NESO is currently developing a pilot and MVP DSI and we therefore refer to NESO as the delivery body in this case.

3.26   The delivery body has the following responsibilities:

- Develop and/or procure the DSI MVP.

- Provide connection advice and guidance for stakeholders.

3.27   The delivery body will also create the following outputs by the end of the Interim Period:

- Components: developing DSI components.

- Blueprints: publishing architectural blueprints for DSI components. These should be made available to allow for industry feedback and rapid, widespread adoption of the DSI.

- Lessons learned: regularly feed lessons learned back to the Interim DSI Coordinator for incorporation into the Knowledge Base.

User community

3.28   The user community is an important body to be considered in this governance model. Ofgem expects it will contribute significantly by recommending representatives from industry and research topics to the Stakeholder Advisory Group and providing valuable feedback on issues or concerns to the Interim DSI Coordinator. Given their importance as the ultimate DSI users, they play a key role in testing implementation approaches, ensuring the DSI is designed for easy uptake.

4.   Timeline and use cases

This section sets out the responses to the timeline for DSI development and initial use cases proposed in our consultation. We describe our decision for a new approach to use case development which creates the opportunity for additional use cases to be incorporated earlier in the process. This will allow the DSI to deliver greater value during the pilot and MVP stages, earlier than originally set out in our consultation.

Consultation position and responses

4.1   In our consultation, we described our support for NESO to develop Outage Planning as the pilot DSI use case and Strategic Planning as an MVP use case. Following these initial use cases, we stated that we expect NESO to develop a Connections Reform use case as a part of the MVP, and that we see the DSI supporting additional use cases beyond 2025 such as Smart Secure Energy Systems[18] and Flexibility Market Asset Registration (FMAR)[19].

4.2   The majority of responses saw one or more uses for the DSI in their organisation. Outside of facilitating or improving general data sharing practices, the most common use stakeholders saw for the DSI was enabling flexibility in some form. Other stakeholder priorities for the DSI that were listed in multiple responses were improving interoperability, testing synthetic or forecast data and identifying vulnerable customers. Several responses also stated that we should consider the 24 use cases listed in NESO's Virtual Energy System programme[20].

4.3   Responses to the timeline of DSI development presented in the consultation were mixed. 25 responses stated that they considered the timeline to be too slow as progress in this area is urgent, particularly in light of the Clean Power 2030 target,[2] and NESO's solution is too ambitious which will delay progress unnecessarily. Many of these responses state that industry will develop DSI more quickly and leave NESO's DSI solution behind.

4.4   In contrast, 9 responses stated that the proposed timelines are too ambitious as a great amount of progress still needs to be made in this area, use cases depend on

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[18] The Smart Secure Electricity Systems (SSES) programme is designed to create the technical and regulatory frameworks that enable domestic-scale energy smart appliances to flexibly contribute to demand management across the electricity grid.
[19] Flexibility Market Asset Registration (FMAR) seeks to create a common system for registering energy assets into flexibility markets. It will allow assets to be registered once for access to multiple markets. See Flexibility Market Asset Registration and Decision: flexibility market asset registration
[20] Virtual Energy System

wider developments in the energy sector, and adoption will be delayed due to varying technological capabilities.

4.5   On the proposed pilot and MVP use cases, many responses commented that these do not present enough value to the wider energy system and see beyond 2028 as too late for additional use cases, such as flexibility, to be introduced.

Use case types, ownership and prioritisation

4.6   Based on responses, we have revised the approach to use case adoption on the DSI that was presented in the consultation. Instead of progressing sequentially from a pilot stage through strategic use cases and ultimately to industry use cases, we are setting out a parallel approach, which would allow co-development of use cases in a phased model.

4.7   With this approach, we aim to speed up the time to operation for all use cases, increasing the potential take up and adoption of the DSI. Design, build, and delivery resources could also be used more efficiently through this approach.

4.8   In this context, we consider that a use case is where a series of users need access to one or more data products to deliver benefits. Use cases are not defined by the Interim DSI Coordinator. Use cases are recommended to the Interim DSI Coordinator by a use case owner, who is responsible for identifying use case information, such as the data products to be exchanged, frequency of exchange, actors involved, and level of access required by actors. The Interim DSI Coordinator would incorporate this information into the data catalogue so that it is visible to DSI users, where appropriate. The Interim DSI Coordinator would review use case information to identify where use cases require additional functionality on the DSI to operate, and will prioritise development of any additional functionalities appropriately.

4.9   We have categorised use cases into three types. These types are summarised in Figure 1 below and expanded on in following paragraphs.

Type 1 use cases:

4.10   Type 1 use cases are major strategic projects that are important to government, industry, and the wider energy sector. We expect they will require significant new functionality on the DSI and are likely to be resource intensive. Strategic Type 1 projects will likely provide the core functionality on the DSI that Type 2 and Type 3 use cases will make use of.

4.11   Type 1 use cases will be owned by whomever is responsible for the outputs of the use case. The Interim DSI Coordinator then develops the requirements that

enable these use cases. Ofgem and DESNZ have final approval of Type 1 use cases. Type 1 use cases may be proposed by Ofgem, DESNZ, NESO or relevant industry parties.
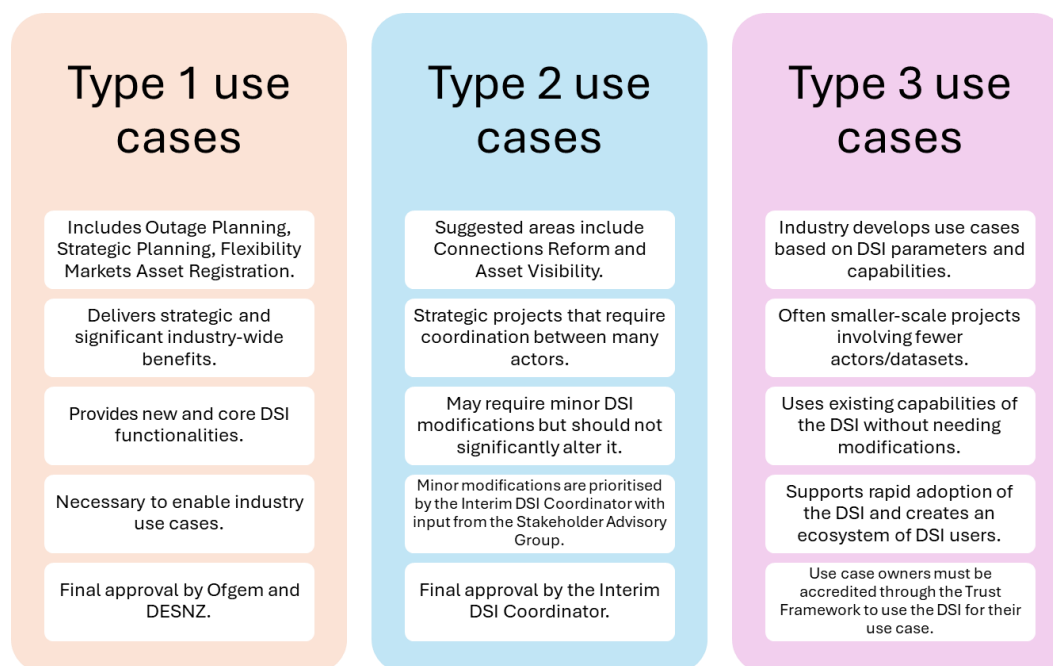
Type 1 use cases	Type 2 use cases	Type 3 use cases
Includes Outage Planning, Strategic Planning, Flexibility Markets Asset Registration.	Suggested areas include Connections Reform and Asset Visibility.	Industry develops use cases based on DSI parameters and capabilities.
Delivers strategic and significant industry-wide benefits.	Strategic projects that require coordination between many actors.	Often smaller-scale projects involving fewer actors/datasets.
Provides new and core DSI functionalities.	May require minor DSI modifications but should not significantly alter it.	Uses existing capabilities of the DSI without needing modifications.
Necessary to enable industry use cases.	Minor modifications are prioritised by the Interim DSI Coordinator with input from the Stakeholder Advisory Group.	Supports rapid adoption of the DSI and creates an ecosystem of DSI users.
Final approval by Ofgem and DESNZ.	Final approval by the Interim DSI Coordinator.	Use case owners must be accredited through the Trust Framework to use the DSI for their use case.

Figure 1 Use case types: examples, functions, purpose and development routes as described in 4.10 – 4.26.

Type 2 use cases:

4.12   Type 2 use cases are strategic use cases that require coordination between many actors but do not likely require significant additional functionality on the DSI. These use cases would leverage the functionalities made available by the Type 1 use cases. Type 2 use cases would be identified, put forward and owned by the industry party who is working to deliver this use case.

4.13   In some cases, Type 2 use cases may require a minor modification of the DSI technology to perform their function. The process for accumulating and prioritising any minor modifications that will be needed for delivery of Type 2 use cases will be created, communicated and managed by the Interim DSI Coordinator. Minor modification is not subject to review by Ofgem or DESNZ as it should not significantly alter the operation or scope of the DSI.

Type 3 use cases:

4.14   The aim of Type 3 use cases is to support rapid adoption of the DSI and help to create an ecosystem of DSI users. These use cases will be brought forward and owned by industry and will typically, but not always, involve a smaller number of actors or data sets to be exchanged. Once significant and minor

functionalities are developed and delivered through Type 1 and Type 2 use cases respectively, the DSI software will be made available across industry so that it can be tested through use cases that industry participants wish to bring forward. We envision that no new DSI functionalities will be introduced through Type 3 use cases.

4.15   All use cases and actors need to be accredited by the Trust Framework before data is exchanged using the DSI. This accreditation to the Trust Framework means the Interim DSI Coordinator can be satisfied that an organisation will identify and deliver use cases in a secure and legal manner. This allows companies to develop their own Type 3 use cases independently on the DSI without needing explicit sign off by the Interim DSI Coordinator.

4.16   If proposed Type 3 use cases fit within the 'guard rails' of the DSI by meeting the technological, functional, and Trust Framework requirements, implementation of these use cases should require little involvement from the Interim DSI Coordinator and be treated as 'business as usual'.

Use case development process

4.17   Figure 2 (below) illustrates the use case development process, showing how additional Type 2 and 3 use cases are incorporated to the DSI as it evolves from pilot, to MVP, to business-as-usual functioning.

4.18   The initial Type 1 DSI use cases will be highly strategic and will deliver significant industry-wide benefit within the parameters of the MVP. These are developed by NESO in collaboration with industry partners. Ofgem and DESNZ will have final sign-off on these use cases.

4.19   Ofgem has identified three initial Type 1 use cases:

- Outage Planning

- Strategic Planning

- Flexibility Market Asset Registration.

4.20   To maintain momentum, Type 2 use cases will commence in parallel with Type 1 use cases once sufficient functionality has been developed on the DSI. Type 2 use cases are also strategically important to the sector but will leverage the functionality offered on the DSI from Type 1 use cases. A longlist of potential use cases will be identified by the Stakeholder Advisory Group and maintained by the Interim DSI Coordinator, and the relevant stakeholders will act as use case owners.
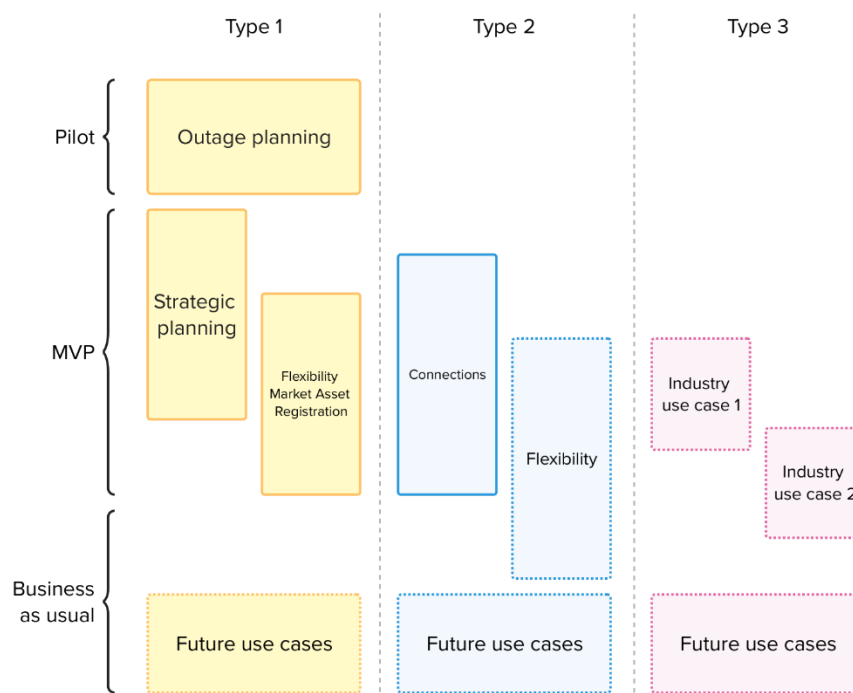
Figure 2: Ofgem's proposed timeline of DSI development, showing planned and example Type 1, Type 2 and Type 3 use cases as described in paragraphs 4.18 – 4.26.

4.21   The Interim DSI Coordinator will prioritise any minor modifications needed by Type 2 use cases. Ofgem and DESNZ may feed into prioritisation exercises, but the Interim DSI Coordinator will have final sign-off here.

4.22   Suggested themes for Type 2 use case areas are:

- Connections Reform

- Flexibility

- Asset Visibility.

4.23   Ofgem, DESNZ, NESO or industry parties may propose additional Type 1 or Type 2 use cases alongside those listed in 4.19 and 4.22.

4.24   As DSI technology development continues, further capability will be introduced. For the DSI to function effectively and maintain the confidence of its users it will be necessary to develop a technological and contractual Trust Framework. NESO has this development within its targets and Ofgem is closely observing this development.

4.25   Type 3 use cases can begin to be introduced to the DSI once the necessary functionalities have been created through Type 1 and Type 2 use cases and

relevant parties have become accredited through the Trust Framework. These, for example, are use cases that may be of smaller scale and value than Type 1 or Type 2 and could involve Communities of Interest creating networks (COINs) transferring smaller amounts of data, or operationally less frequently. Operation, functionality and security requirements will map to the existing capabilities of the DSI, i.e. no new functionality will be delivered through Type 3 use cases.

4.26   This type of use case aims to encourage higher levels of take up among industry by providing the option for industry to progress, where possible, use cases with minimal involvement of the Interim DSI Coordinator, Ofgem or DESNZ.

Use case delivery

4.27   The pilot of the DSI is currently being developed by NESO. The pilot will act as a proof-of-concept of the technology and will therefore focus on development of data preparation and data sharing technologies.

4.28   The DSI acts as the secure transmission method for all data traffic. Energy industry DSI use cases that utilise or process personally identifiable information of consumers will be subject to the requirements of current legislation. A use case owner should complete a Data Protection Impact Assessment (DPIA) and a security risk assessment for use of the DSI as advised by NCSC before implementing their use case. At all times the responsibility for the adherence to legislation and regulations around data sharing is the responsibility of the participants of the Trust Framework accessing and exchanging data using the DSI.

4.29   Currently, the DSI MVP delivery is anticipated to begin in mid-2025. At this stage we anticipate the Trust Framework will be under development. We expect that the DSI MVP will be delivered towards mid to late 2026.

4.30   During this time, we anticipate that two further strategic (Type 1) use cases may begin development in parallel with two associated Type 2 use cases (see Figure 2). Once the initial Data Preparation, Data Sharing and Trust Framework technologies are in place for the MVP, there will be a continuing function to approve and support use cases. This function will identify use cases that can progress using the technology as provided, or those that will require modifications on the DSI.

4.31   While the Interim DSI Coordinator will not act as a use case owner[21], some level of use case management will be required. This should include holding a longlist of potential Type 2 use cases identified by the Stakeholder Advisory Group, coordinating actors, and prioritising minor modifications to the DSI. This process should be inclusive of the stakeholder and user communities. Stakeholders, including the Interim DSI Coordinator, should justify any use cases put forward for prioritisation by presenting the need for adoption and delivery.

4.32   We expect that operational disputes around specific use cases will be resolved through stakeholder working groups, which Ofgem will feed into. Should any dispute fail to be resolved at the working group level, Ofgem will become involved in resolution efforts as a last resort.

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[21] While the Interim DSI Coordinator will not own use cases, NESO may propose and own use cases independently from the Interim DSI Coordinator role.

5. Funding

This section outlines our position on funding from the consultation, in that DSI development and funding throughout the Interim Period (until end-2028) should be covered through NESO's baseline RIIO funding. Responses were generally supportive of this funding mechanism but called for further detail on many aspects related to funding. We set out how the DSI will be funding throughout the Interim Period and our further thinking on enduring funding solutions.

5.1 In our consultation, we stated that we expect the DSI MVP to be funded through NESO's baseline RIIO funding mechanisms up until end-2028. We set out that we expect NESO to clarify costs on completion of the pilot phase of the DSI.

5.2 We also explored long-term funding options, beyond 2028. We stated that if the type of users connected to the DSI expands beyond regulated network monopolies, we may need to consider alternative cost-recovery mechanisms to avoid an outsized impact on consumer bills. Our consultation position was that costs to connect to the DSI should be minimised, but we are committing to further investigation of cost allocation for the DSI for both MVP and business-as-usual operation.

5.3 Responses were generally supportive of NESO's baseline RIIO funding mechanism being used for DSI development across the Interim Period. Many responses that were positive towards this funding mechanism included additional comments. The main comments are summarised below:

- Connection costs should be minimised to maximise uptake.

- A different funding mechanism should be considered following the Interim Period.

- Different funding proposals may be needed for different DSI participants, e.g. gas networks, or smaller organisations who do not have the same funding routes.

- Costs should be transparent to allow stakeholders to verify claimed funding.

5.4 Responses that were not supportive of this proposal had a number of comments or concerns. The main concerns from responses are summarised below:

- A number of responses did not support a centralised build model and therefore do not support the need for dedicated funding.

- There was the suggestion that this funding route may make energy more expensive in the long term.

- A number of responses were concerned that excessive costs will be passed down to consumers, and Ofgem would not be able to prevent this.

- Funding should be extended to non-regulated parties as well, to ensure systems can interface with the DSI.

5.5   Many responses – both positive and negative towards our funding proposal – called for more detail on different aspects of funding. In particular, stakeholders wanted to know which aspects of the DSI would be funded by each mechanism, how long-term funding will work, how DNOs will recover costs of adopting or connecting to the DSI, and how the DSI will be funded if NESO is not selected as Interim DSI Coordinator.

Short-term funding mechanism

5.6   NESO have indicated that they will be seeking funding through the price control review processes to deliver the MVP in their RIIO-2 Business Plan 3 (2025-2026)[15] which is their first RIIO-2 business plan as NESO. Respondents will be able to find detailed costing information through these review processes and published information by NESO.

5.7   Due to the largely positive nature of responses towards this funding mechanism, the scale of costs set out by NESO so far (see costs set out in Annex B of NESO's RIIO-2 Business Plan 3[22] for further details), and the lack of an alternative that is suitable for all cases, we consider that using NESO's baseline RIIO funding mechanism to recover DSI development costs is appropriate. This funding will also be expected to cover costs related to NESO performing the Interim DSI Coordinator role.

Long-term funding options

5.8   We remain committed to exploring long-term funding solutions for the DSI beyond the Interim Period. In particular, we will assess the scale of costs throughout the Interim Period and set out mechanisms for different organisations to recover these, and whether any funding support would need to be offered to smaller companies.

5.9   For enduring funding frameworks, we see several different areas of cost associated with the DSI:

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[22] [NESO RIIO-2 Business Plan 3 Digital, Data, and Technology Annex](#)

- Costs of the technology underpinning the DSI: e.g. costs of development and deployment of DSI components and ongoing costs of operation.

- Costs associated with organisations connecting to the DSI by deploying a data preparation node on their IT architecture. These costs should be minimised to avoid creating a barrier to entry for organisation who wish to connect. Funding options for these costs, and the above technology costs, will be able to be explored further once NESO has provided more information on the scale of these costs.

- Costs of developing new use cases. The requirements to support industry parties in use case development is put upon the Interim DSI Coordinator and its relevant engagement with the sector. These support costs may be recovered through NESO's baseline funding. We anticipate that actioning a Type 3 use case will be a similar process to code modifications, i.e. raised by an organisation without any specific funding attached. There may be multiple funding routes for subsequent development of a use case, for example but not limited to: through an enduring DSI Coordinator (which we will explore further throughout the Interim Period – see Section 6 for further information), Strategic Innovation Fund or privately funded.

- Costs associated with a user becoming an accredited member of the Trust Framework. The security requirements of becoming accredited under the Trust Framework will vary depending on use cases and the related data security requirements. Ofgem recognises that these costs may present a barrier to entry and will explore whether the enduring DSI Coordinator could provide a funding support option to smaller organisations.

5.10   A long-term funding option that we will also explore further is a 'user pays' model, where companies who obtain data through the DSI are charged based on either the volume or type of data they obtain.

5.11   We will be exploring this model as a primary concern with the proposed 'NESO baseline' funding model is that DSI operating costs are spread across all consumers. If the highest value DSI use cases are related to flexibility market participation, this creates a risk of cross-subsidisation of consumers (depending on scale of data transfer), though we note this cross-subsidisation may benefit all consumers in the medium to long term.

5.12   There is also a question of fairness versus innovation. In the 'NESO-funded' model, once companies become an accredited user of the DSI there are no additional costs to pay to maintain the DSI. This, dependent on scale, could

result in corporate subsidisation by consumers. We must balance this against the need to reduce barriers (cost) to entry for small, innovative, businesses.

5.13   We consider this to be an issue not limited to the DSI, but that is applicable to all digital infrastructure in the sector, which therefore warrants further consideration within Ofgem. Ofgem will assess this user pays model in relation to digitalisation in 2025/2026.

6.   Enduring governance and next steps

We outline the steps that we will be taking following publication of this decision. We set out our view of DSI interactions with other digitalisation initiatives in the energy sector. We describe how we expect the transition of governance from the interim solution outlined in this decision to a long-term, business-as-usual DSI governance solution. We also set out our plans to explore solutions for wider digitalisation governance in the energy sector.

Interactions of the DSI with other digitalisation initiatives

6.1   Responses called for Ofgem to set out how we see DSI and DSI governance interacting with wider digitalisation initiatives, both planned and underway in the energy sector. Below, we set out Ofgem's view of how DSI could interact with and could potentially enable a number of digitalisation initiatives, contributing to an overarching digitalisation vision.

6.2   Ofgem recognises there are potential interactions between the DSI, the Interim DSI Coordinator and other digital initiatives such as Consumer Consent, Flexibility Market Asset Registration (FMAR), the Market Facilitator, Smart Secure Electricity Systems (SSES), Asset Visibility, and Data Best Practice (DBP).

6.3   **Consumer Consent:** Ofgem's proposed Consumer Consent initiative[23] aims to develop a digital solution for managing consumer consent related to energy data sharing, giving consumers greater visibility and control over who accesses their data. The DSI could work in tandem with Consumer Consent where Consumer Consent's digital infrastructure obtains consent to share a consumer's energy or personal data.

6.4   The DSI, identity federated with the Consumer Consent digital infrastructure, would be able to confirm that consent to access or exchange a dataset has been authorised. By working in tandem with the Consumer Consent solution, on which a decision is expected in Spring 2025, the DSI could provide a secure infrastructure for managing consumer data, ensuring that consumers maintain control over who accesses their data securely and with explicit consent.

6.5   Additionally, the Interim DSI Coordinator is expected to work closely with any potential Consumer Consent delivery body to discuss potential technical

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[23] Ofgem published a [consultation](#) on a digital Consumer Consent solution in August 2024. A decision on this consultation is expected to be published in Spring 2025.

alignment and connectivity between the proposed Consumer Consent solution and the DSI. This includes leveraging DSI resources such as the Data Preparation Node (DPN) to securely exchange data and ensure compliance with relevant regulations and best practices.

6.6   **Flexibility Market Asset Registration (FMAR):** FMAR seeks to create a common system for registering small-scale energy assets into flexibility markets, ensuring that information about assets can flow to both market operators and participants.[19] It will allow assets to be registered once for access to multiple markets. The DSI could facilitate the flow of asset information to market operators and participants, enabling seamless participation of distributed energy assets in multiple markets. Ofgem sees FMAR as a Type 1 DSI use case, which the Interim DSI Coordinator would be expected to integrate into the DSI by working with the FMAR working groups and Elexon.

6.7   **Market Facilitator:** The Market Facilitator aims to align transmission and distribution flexibility market arrangements, reducing friction and improving market efficiency. The DSI could support the alignment of transmission and distribution market arrangements by providing a common data service. The DSI could enable data sharing between the Market Facilitator and other entities, supporting efficient market operations.

6.8   **Smart Secure Electricity Systems (SSES):** The SSES initiative aims to establish a regulatory regime for load control of energy smart appliances (ESAs). It creates technical and security frameworks that enables safe and secure provision of consumer-led flexibility from ESAs, e.g. electric vehicles (EV), EV charge points, heating technologies that fall under the smart mandate, battery energy storage systems.

6.9   **Asset Visibility:** DESNZ and Ofgem are committed to putting a policy framework in place to improve and support asset visibility. This aims to improve the visibility of low carbon energy assets, supporting better planning and optimisation. The DSI could support asset data transfer between market participants, improving data accessibility and utility.

6.10   **Data Best Practice (DBP):** Ofgem's DBP Guidance seeks to improve data visibility and interoperability across the energy sector by requiring licensed parties to adhere to principles that promote data interoperability, standardisation, and openness. The DSI would promote data visibility and interoperability across the energy sector by adhering to DBP principles and ensuring that data shared via

the DSI, and data generated through the operation of the DSI, also follows these principles.

6.11   Where DBP Guidance aims to triage data so that it can be safely released and published for the good of the whole system, DSI will provide a more secure environment to share system data too sensitive to publish openly with a more limited set of vetted participants, while operating under similar principles of interoperability and standardisation.

6.12   By addressing key challenges such as data accessibility, security, consumer trust, and interoperability, the DSI will support Ofgem and industry to create and benefit from a digitalised, data-driven energy sector. This will enable more efficient operation of the energy system, in support of the drive for both economic growth and consumer benefits from a net zero energy system.

Enduring governance of the DSI

6.13   While the consultation focused on an interim governance solution that will be in place until the end of 2028, we see the need to establish an enduring governance solution for the business-as-usual phase of DSI, post-2028. We expect that additional services will connect to the DSI throughout the Interim Period and beyond, ensuring its longevity.

6.14   The governance model, bodies involved, and the roles, responsibilities and relationships between these bodies in a long-term governance solution will depend on several factors. These include the success of the DSI in achieving a successful MVP and in garnering uptake within the sector and the success of NESO in the Interim DSI Coordinator role.

6.15   Enduring DSI governance was not a key focus of our consultation, however responses did provide some insight in this area. In particular, additional assessment criteria for the transition from an interim to a long-term governance solution were proposed in responses. A wide range of additional assessment criteria were proposed, but these broadly fall into six categories:

- Stakeholder views and experiences

- Organisational culture and practice

- Technological capability

- Long-term outlook

- Project management and progress

- Regulatory performance

6.16   Multiple responses also commented that the performance of NESO in the Interim Period should be assessed when considering who should act as the enduring governance body.

6.17   At this stage we do not have the knowledge to set out what an enduring governance model will look like, which bodies will be involved, what the long-term funding mechanisms will look like, or what changes to regulatory frameworks may be needed to support the enduring DSI model. As previously stated, the form of enduring governance will depend on DSI success and performance across the Interim Period. Ofgem will take stock of the key areas listed above when seeking feedback on the Interim DSI Coordinator's performance to ensure that stakeholder priorities for performance are incorporated.

Transition management

6.18   We are requiring the Interim DSI Coordinator to set out a plan for how the transition from interim governance to enduring governance will be managed. This plan should ensure that DSI governance continues without interruption whether NESO continues in a leading governance role or not. The Interim DSI Coordinator should prioritise transfer of the Knowledge Base and Use Case Longlist to minimise loss of knowledge during the transition.

Energy sector digitalisation governance

6.19   With a number of digitalisation projects being planned or introduced in the energy sector, Ofgem sees a role for an overarching governance solution. This will coordinate disparate digitalisation projects and ensure they are contributing to a shared overall vision. Failing to coordinate digitalisation efforts may lead to projects conflicting, duplication and increased costs.

6.20   Additionally, responses to our Governance of the Data Sharing Infrastructure consultation called for further detail on the concept of a Digitalisation Orchestrator[24] as set out in NESO's 2024 publication, 'Delivering energy sector digitalisation'.[25] Ofgem recognises the need to make clear its view of this area.

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[24] "A Digitalisation Orchestrator is proposed as an independent organisation responsible for coordinating the sector's shared digital energy system infrastructure. The Orchestrator is to ensure that the overall design of digital infrastructure is efficient and effective for consumers today and sustainable into the future" NESO, Delivering Energy Sector Digitalisation 2024
[25] Delivering Energy Sector Digitalisation

6.21   We are continuing to explore the concept of a Digitalisation Orchestrator and
        other digitalisation governance solutions. We aim to:

    •   Publish an open letter setting out why wider digitalisation governance is
        important, our current thinking, and our further work in this area (Q3
        2025).

    •   If appropriate, publish a consultation on digitalisation governance solutions,
        including the role of an Energy Digitalisation Orchestrator, to gather
        industry and stakeholder views on this topic and inform our thinking (early
        2026).

6.22   Should an Energy Digitalisation Orchestrator be created, we see that the
        enduring DSI governance, as well as other digitalisation governance solutions,
        may be subsumed within it in the long term. However, this will depend on the
        timelines for development of such a body, its capabilities, stakeholder views on
        this topic and the enduring DSI governance solution set following the Interim
        Period. These aspects will be considered by Ofgem when exploring options for
        enduring digitalisation governance.

Next steps

6.23   In summary, we are taking the following key decisions based on responses to
        our consultation:

    •   **Interim DSI Coordinator:** we will appoint NESO as the Interim DSI
        Coordinator, and ensure appropriate oversight mechanisms are in place.

    •   **Interim governance model**: we have set out the functions and outputs of
        key governance bodies in more detail.

    •   **Timeline and use cases:** we have created a new process for use case
        development that will speed up adoption and development of the DSI. Type
        1, Type 2 and Type 3 use cases will have different definitions and
        development processes.

    •   **Funding:** DSI development and the Interim DSI Coordinator role will be
        funded through NESO's baseline RIIO funding throughout the Interim
        Period (until end-2028). We will explore whether alternative funding
        mechanisms will be necessary in future.

6.24   Following this decision, the Interim DSI Coordinator and Ofgem will have several
        actions:

- NESO will operationalise the Interim DSI Coordinator role in 2025. Ofgem will have significant oversight of this operationalisation.

- Ofgem will continue to work with relevant teams across Ofgem, DESNZ, and NESO to help build appropriate Type 1 and Type 2 use cases for the DSI MVP.

- Ofgem are committing to developing a Flexibility Market Asset Registration Type 1 use case with NESO and Elexon as the Market Facilitator.

- Ofgem will continue to assess any cost submissions NESO makes regarding the DSI MVP or the Interim DSI Coordinator role, and will work with NESO to explore additional funding mechanisms as set out Section 5.

- Ofgem will begin assessing NESO's performance in the Interim DSI Coordinator role against the criteria set out in Appendix 3.

6.25   Ofgem will also begin assessing options for wider digitalisation governance, as set out in paragraphs 6.19 – 6.22.

Appendices

Index

Appendix 1 – Related publications

- [Business Plan 2 - ESO Draft Determinations](#) (Ofgem)

- [Clean Power 2030 Action Plan](#) (DESNZ)

- [Consumer Consent Solution Consultation](#) (Ofgem)

- [Data Best Practice Guidance](#) (Ofgem)

- [Decision on frameworks for future systems and network regulation](#) (Ofgem)

- [Decision: flexibility market asset registration](#) (Ofgem)

- [Delivering a Digitalised Energy System](#) (Energy Systems Catapult)

- [Delivering Energy Sector Digitalisation](#) (NESO)

- [Digital spine feasibility study: exploring a data sharing infrastructure for the energy system](#) (DESNZ)

- [Digitalisation Strategy and Action Plan](#) (NESO)

- [Digitalising our energy system for net zero: strategy and action plan](#) (DESNZ)

- [Digitalising the energy system](#) (DESNZ)

- [Flexibility Market Asset Registration](#) (Ofgem)

- [Governance of a Data Sharing Infrastructure Consultation](#) (Ofgem)

- [Mid-scheme decision on ESO's BP2 performance](#) (Ofgem)

- [NESO RIIO-2 Business Plan 3 Digital, Data, and Technology Annex](#) (NESO)

- [RIIO-2 Business Plan 2 - ESO Draft Determinations](#) (Ofgem)

- [Strategy and policy statement for energy policy in Great Britain](#) (DESNZ)

- [Virtual Energy System](#) (NESO)

Appendix 2 – Glossary

A2.1   **Consumer Consent (CC):** Aims to develop a digital solution for the granting and managing of consent for consumers to share their energy data. This is intended to empower the consumer and improve trust by giving consumers greater visibility and control over who accesses their data. See Ofgem's [consultation on a Consumer Consent solution](#) for further information.

A2.2   **Data Best Practice (DBP):** Principles and expectations for licensees to follow when preparing Digitalisation Strategies and Action Plans. Part of Ofgem's standards for data and digitalisation.

A2.3   **Data Sharing Infrastructure (DSI):** The socio-technical solution that provides the common data standards and legal framework to facilitate secure and resilient data sharing between any energy sector participant. This develops and delivers the Energy Digitalisation Taskforce recommendation for a Digital Spine, as further defined by the Digital Spine Feasibility Study. A pilot energy sector DSI is currently being developed by NESO.

A2.4   **Data Standards:** The rules and definitions by which a dataset is documented, structured and formatted. Common standards between datasets facilitate data aggregation, sharing and reuse.

A2.5   **Department for Energy Security and Net Zero (DESNZ):** DESNZ is focused on the energy portfolio from the former Department for Business, Energy and Industrial Strategy (BEIS). They are sometimes referred to as "Government" in this document.

A2.6   **Digital Spine:** A thin layer of interaction and interoperability across all players which enables data to be ingested, standardised and shared in near real time. Now referred to as a DSI.

A2.7   **Digitalisation Strategy and Action Plan (DSAP):** As part of RIIO-2 price controls and Ofgem's standards for data and digitalisation, relevant licensees must prepare and update Digitalisation Strategies and Digitalisation Action Plans detailing the strategic approach taken by an organisation and the organisation's plan to digitalise its Products and Services.

A2.8   **Distributed assets / Distributed Energy Resources (DER):** Small-scale power supply or demand resources that are connected to the grid. Examples include solar photovoltaic units, home batteries and small wind turbines.

A2.9   **Distribution Network Operator (DNO):** Licensed companies that own and operate the network of cables, transformers and towers that bring electricity from the national transmission network to businesses and homes.

A2.10   **Enduring governance:** The governance framework that will oversee the ongoing operation of the DSI once it is fully established after the Interim Period (2024 – 2028).

A2.11   **Energy Digitalisation Taskforce (EDiT):** EDiT was commissioned by the department formerly known as Department for Business, Energy and Industrial Strategy (BEIS, now DESNZ), Ofgem and Innovate UK to focus on modernising the energy system to unlock flexibility and drive clean growth towards net zero emissions by 2050. In 2022 it published a report containing six overarching recommendations and actions for DESNZ, Ofgem and industry to spur a digitalised energy system.

A2.12   **Flexibility Market Asset Registration (FMAR):** FMAR seeks to create a common system for registering energy assets into flexibility markets, ensuring that information about assets can flow to both market operators and participants. It will allow assets to be registered once for access to multiple markets. See Ofgem's [Flexibility Market Asset Registration consultation](#) and [related decision](#) for further information.

A2.13   **Future Systems and Networks Regulation (FSNR):** The framework for the next round of price controls. This was consulted on by Ofgem in March 2023 and a decision was published in October 2023.

A2.14   **Infrastructure:** The foundational systems enabling data sharing, including networks, databases, application programming interfaces (APIs), security protocols, and governance frameworks. Used when referring to underlying technical and regulatory frameworks that support data exchange.

A2.15   **Interim DSI Coordinator:** The body that will be responsible for overseeing initial DSI operations, setting policies, and resolving any issues during early stages.

A2.16   **Interim governance:** The governance framework that will oversee the initial operation of the DSI throughout the Interim Period, until the end of 2028.

A2.17   **Interim Period:** The transitional phase from 2025 to the end of 2028 during which provisional rules, roles, and mechanisms are established to facilitate initial data sharing activities while the DSI is being developed from pilot to Minimum Viable Product.

A2.18   **Knowledge Base:** a presumed-open collection of relevant DSI learnings. See A4.9 for further detail.

A2.19   **Minimum Viable Product (MVP):** A new product that is released with enough features to demonstrate the value of the product, prior to developing a more fully featured product. This allows for faster product development and delivery.

A2.20   **National Cyber Security Centre (NCSC):** The NCSC acts as a bridge between industry and government, providing a unified source of advice, guidance and support on cyber security, including the management of cyber security incidents.

A2.21   **NESO (National Energy System Operator Limited):** NESO (formerly known as Electricity System Operator, ESO) is an independent public body responsible for the strategic planning of Great Britain's electricity and gas networks and operating the electricity system. Designated as the Independent System Operator and Planner under the Energy Act 2023, its purpose is to help facilitate the country's transition to net zero, while ensuring the energy system remains reliable, efficient, and secure.

A2.22   **Net Zero Innovation Portfolio (NZIP):** The Net Zero Innovation Portfolio provides funding for low carbon technologies and systems, to help enable the UK to end its contribution to climate change.

A2.23   **RIIO:** Ofgem's model for price controls for the gas and electricity network companies of Great Britain. RIIO-2 is the second set of price controls implemented under our RIIO model and run from 1 April 2023 – 31 March 2028 for electricity distribution licensees and from 1 April 2021 – 31 March 2026 for transmission and gas distribution licensees. RIIO-3 price controls are currently under development and will apply from 1 April 2026 – 31 March 2031 for transmission and gas distribution licensees and from April 2028 for electricity distribution licensees.

A2.24   **Service:** A specific function or offering that allows users to access and use data, often through APIs or web portals. Used when describing individual components of data-sharing (e.g., API services, reporting tools). An example is a demand forecasting data service provided via an API.

A2.25   **Smart Secure Electricity Systems (SSES):** The Smart Secure Electricity Systems (SSES) Programme is designed to create the technical and regulatory frameworks that will enable domestic-scale energy smart appliances to be used flexibly by consumers to contribute to demand management across the electricity grid.

A2.26   **Strategic Innovation Fund (SIF):** The Strategic Innovation Fund (SIF) is a funding mechanism within the RIIO-2 network price control for the National Energy System Operator (was formerly known as Electricity System Operator, ESO), Electricity Transmission and Electricity Distribution, Gas Transmission and Gas Distribution sectors. In partnership with Innovate UK, Ofgem aims to find and fund ambitious, innovative projects with the potential to accelerate the transition to net zero.

A2.27   **Use case longlist:** a continually updated, presumed open longlist of Type 2 DSI use cases identified by the Stakeholder Advisory Group and through engagement with the community of users.

Appendix 3 – Ofgem's governance responsibilities and outputs expanded

Responsibilities

A3.1 **Oversight:**

- Maintains the strategic direction from government and ensures that the service benefits the industry overall.

- Considers and responds to the concerns of users and suggests remediation where appropriate.

- Accumulates and reviews feedback on the efficacy of the DSI and the DSI governance model across the Interim Period. Reviews and recommends any refinements to either that can increase efficiency and productivity.

A3.2 **Performance assessment:** monitoring the performance of the Interim DSI Coordinator against the following performance metrics:

- Success of use cases

- Transparency of decision making

- Stakeholder trust and satisfaction

- Security

- Openness and breadth of engagement

A3.3 **Sets funding mechanisms:** sets funding mechanisms and reviews these regularly to ensure they remain appropriate. During the Interim Period, this will be primarily leveraging existing funding mechanisms within NESO's price control. As set out in Section 5, Ofgem will consider and in future set the funding mechanisms that will apply for the enduring DSI following the Interim Period.

A3.4 **Use Case Resolution:** In evaluating the requirements for DSI use cases, the Interim DSI Coordinator may be unable to agree on prioritisation or progression with stakeholders. Ofgem expects that such disputes will be resolved in stakeholder working groups, in which Ofgem will likely be involved. Where disputes are unable to be resolved in this manner, both parties can seek the support of Ofgem in resolving the situation. Ofgem would aim to resolve the situation between the parties in an equitable and fair manner.

Outputs

A3.5 **Regulatory review:** a review of compliance with existing applicable policies and regulations throughout the Interim Period. This should also consider where modifications to the existing regulatory framework, e.g. potential licence conditions, may be required to aid the success of enduring governance following the Interim Period and test this with appropriate groups. This should be produced after 2028, following the end of the Interim Period.

A3.6 **Financial review:** an assessment of the value for money across the Interim Period. This should be a proactive review based in line with the reporting that the Interim DSI Coordinator will provide as part of their function.

Appendix 4 – The Interim DSI Coordinator's governance responsibilities and outputs expanded

Responsibilities

A4.1 **Engagement and adoption:**

- Significant and continuous engagement with industry, digitalisation technology providers and leaders, other utility sectors, international DSI providers, the user community and the Stakeholder Advisory Group. Engagement should focus on promoting the DSI, socialising use cases and benefits, exchanging learnings, communicating decision-making, sharing progress, and gathering feedback. Engagement should be done through open forums where possible.

- Coordination of the DSI design and implementation with wider digitalisation workstreams, including but not limited to Ofgem's Consumer Consent[23] and Flexibility Digital Infrastructure programmes.

- Capacity building: supporting DSI adoption through upskilling, sharing knowledge and facilities and improving processes.

- Facilitating, coordinating and recommending representatives for the Stakeholder Advisory Group.

- Reporting in regular, e.g. quarterly, updates to Ofgem on the status of:

  o Stakeholder engagement plans

  o Data catalogue

  o Security assessment

  o Knowledge base

  o Technology assessment

  o Vision and strategy (forward looking prospects)

A4.2 **Technology and architecture:**

- The Interim DSI Coordinator should own and maintain the technological development of the DSI and its future ability to support new or changing technologies and use cases.

- Provide information on technologies/vendors being used for data sharing.

- Provide technical support to the DSI user community. Where possible, appropriate and beneficial, seek support from technology providers to offer technical support and assistance.

- Creation of a modification/change control proposal mechanism for the DSI.

- Facilitate users to maintain and update components.

A4.3 **Funding facilitation:** the Interim DSI Coordinator will be responsible for securing and allocating funding through appropriate mechanisms agreed by Ofgem. It should also consider whether support will be needed for smaller, innovative companies who may wish to connect to the DSI and benefit from future use cases, and how this support may be provided.

A4.4 **Funding management and disbursement:**

- Ownership and overall management of the budget and finance for the development of the DSI functionality and continuing development throughout the Interim Period.

- Disbursement of funds to support the works required for the identified use cases and their adoption.

- A forward-looking assessment of funding requirements across the term of the Interim Period. This should consider any necessary conditions that may affect funding, and any funding-related issues that the user community may face in future.

A4.5 **Data governance[26]:**

- Agreement, implementation, extension and testing of common data standards to ensure interoperability between users of the DSI, based on information and advice from the Stakeholder Advisory Group.

- Data privacy: ensuring that different datasets are shared according to any relevant laws and regulations, including data retention and destruction policies.

- Creation of a continually updated, open (where possible) register of data assets available on the DSI.

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[26] It is expected that several of the listed data governance and security functions may be subsumed by the Trust Framework once in place. However, the Interim DSI Coordinator should show consideration of these functions in advance of Trust Framework creation.

- Guidelines and procedures around data sharing for users to follow based on Ofgem's Data Best Practice Guidance and advice from the Stakeholder Advisory Group.

A4.6   **Security:** Construct a robust and appropriate information security management system that provides a standard of achievable data security for all users. This should be done with involvement and advice of the National Cyber Security Centre (NCSC), and should include consideration of:

- User and privilege management: authentication, authorisation, access control and activity monitoring.

- Cybersecurity: ensuring DSI components meet cybersecurity requirements, legal requirements and the standards of the DSI.

- Non-cyber security: ensuring non-cyber security requirements are met, including physical, personnel and process security requirements.

- Contingency planning in case of failure of all or part of the DSI.

A4.7   **Performance management:** The Interim DSI Coordinator should define and agree tools, parameters and systems to allow for dynamic reporting of status and progress to Ofgem and the user community. It should also agree performance management parameters and associated Key Performance Indicators relevant to Ofgem's performance metrics stated in A3.2 above.

A4.8   **Programme management:**

- Project management, including planning specific goals to be achieved, required resources, timeline for actions and budget target for the Interim Period.

- Oversight of DSI components and connecting services.

- Use case process management and prioritisation.

- Decision making, in an open, transparent, fair and inclusive manner, taking into consideration advice and feedback from the Stakeholder Advisory Group, Ofgem, and the user community.

- Technical support, such as patching, upgrades and user support.

- Facilitating contractual arrangements between the delivery body and technology vendors.

- The Interim DSI Coordinator should also create an implementation plan for the transition from MVP (up to the end of 2028) to business as usual (post-2028).

Outputs

A4.9   **Knowledge base:** a presumed-open collection of relevant learnings, including but not limited to topics such as:

- Data standards and any equivalent accepted common working practices.

- Technology assessment: an assessment of existing and emergent tools and technologies, informed by the Stakeholder Advisory Group.

- International and cross-sector examples of data sharing infrastructures, and associated limitations and duplications.

- Impact assessments of future use cases for data users and data providers.

- Data mapping and catalogue, including definitions of data types and identifying where different types of data are exchanged between entities in the energy sector for proposed use cases.

These should begin to be produced as soon as possible during MVP development, and will be an ongoing and shared resource following this.

A4.10   **Vision and strategy:** an overall vision and strategy for the future of Data Sharing Infrastructure in the energy sector that can be used to guide investment, decision making and use case prioritisation. This will begin to be produced as soon as possible during MVP development and should be updated annually

A4.11   **Security assessment:** a security and cybersecurity framework based on engagement and advice from government security services. This should be produced as soon as possible during MVP development and updated with mitigative steps annually.

A4.12   **Stakeholder engagement plan:** this should include a stakeholder map and include regular, open forums for stakeholders and the user community, scheduled throughout the Interim Period. This should be produced as soon as possible during MVP development and updated quarterly.

A4.13   **Use case longlist:** a continually updated, presumed open longlist of Type 2 use cases identified by the Stakeholder Advisory Group and through engagement with the community of users. This should be produced as soon as possible during MVP development and will be updated on a continuous basis.