

# Icebreaker One response to Governance of a Data Sharing Infrastructure Consultation

**FAO: Jeff Finch, Energy Sector Digitalisation Team [digitalisation@ofgem.gov.uk](mailto:digitalisation@ofgem.gov.uk)**

This is Icebreaker One's response to Ofgem's Governance of a Data Sharing Infrastructure consultation<sup>1</sup>. It can be published openly.

Please note that throughout this consultation, Icebreaker One uses the terms Open, Shared and Closed data as defined [here](#)<sup>2</sup>.

If you have any questions about our submission or require clarifications please do not hesitate to contact us via [openenergy@ib1.org](mailto:openenergy@ib1.org). Thank you for considering our submission.

## **Consultation / call for input response:**

**A1.1 Q1. Do you see potential uses for the DSI within your day-to-day operation in the energy sector?**

Through our UKRI Modernising Energy Data Access competition-winning programme Open Energy<sup>3</sup>, Icebreaker One (IB1) identified and articulated the need to make it straightforward to find, access and share energy data. Through three phases, IB1 convened 100s of organisations, 500+ public webinar attendees, and over 80 Steering and Advisory Group members to develop operational services for search and access control that are now live and market-facing, and have set the foundations for an Energy Trust Framework. Open Energy makes it easy to search for (via <https://openenergy.org.uk>), discover, access and securely share energy data using a Trust Framework<sup>4</sup> and any Schemes<sup>5</sup> which are built within the Trust Framework context. It covers Open Data, commercial Shared Data with pre-authorised access controls, and commercial Shared Data where access requires end-user permission/consent.

### ***What are Trust Frameworks and Schemes?***

Working on behalf of its public and private sector members, Icebreaker One operates Trust Frameworks and Schemes across a variety of sector specific and cross-sectoral

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<sup>1</sup> <https://www.ofgem.gov.uk/consultation/governance-data-sharing-infrastructure>

<sup>2</sup> <https://ib1.org/open-shared-closed/>

<sup>3</sup> <https://ib1.org/open-energy-uk/>

<sup>4</sup> <https://ib1.org/trust-frameworks/>

<sup>5</sup> <https://ib1.org/definitions/scheme/>

domains. Trust Frameworks<sup>6</sup> operate at the level of a defined governance domain (e.g. sector or geography) to collaboratively establish and maintain a light layer of identity management, governance, definitions, principles and Open Standards for data sharing.

Schemes<sup>7</sup> - which operate within a Trust Framework environment - are defined through structured programs to facilitate and govern the sharing of data among participating entities in the context of a specific use case, or set of related use cases. They collaboratively define the rules concerning what data can be shared, why (purpose), by whom (roles), and how (technical requirements, legal structure, etc). They also address the communications requirements of the Scheme and its relationship with the surrounding policy, regulatory, and legislative landscape. The structural operation of Schemes, linked to specific Trust Frameworks, is capable of supporting the progression of multiple data-sharing initiatives with distinct needs (e.g. security requirements, personal data protection etc), whilst ensuring interoperability, conceptual cohesion, open market development, transparency, and good governance principles (e.g. fairness, value-sharing, protection of data rights) across the wider Trust Framework domain.

The development of Trust Frameworks and Schemes by IB1 builds from existing bodies of knowledge and experience established by initiatives such as Open Banking, cross-sector governance initiatives such as the Smart Data Council, and expert knowledge bases within academic and industry research. Icebreaker One's work to date demonstrates that Trust Frameworks and Schemes provide a robust but flexible approach to the governance of data sharing infrastructure which is adaptable across multiple use cases, sectors, and governance domains. IB1 has worked with use cases and organisations spanning cross-sector spaces as well as energy, water, finance, insurance, transport, and supply chains sectors. It is working with Open Banking Limited on interoperability between Open Energy and Open Banking.

### ***Relevant energy use cases***

IB1 has identified and documented a wide range of use cases and benefits associated with trusted energy data sharing:

- IB1 is part of the governance design team for the DSI
- Electric Vehicles (EV) On-Street Charge Points<sup>8</sup>
- Electric Vehicles (EV) DNO Demand Management<sup>9</sup>
- Heating, Residential Property Developer<sup>10</sup>
- Local Authority LCT decision making<sup>11</sup>

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<sup>6</sup> <https://ib1.org/definitions/trust-framework/>

<sup>7</sup> <https://ib1.org/definitions/scheme/>

<sup>8</sup> <https://ib1.org/wp-content/uploads/2024/07/Office-of-Zero-Emission-Vehicles-Public-Electric-Vehicle-Use-Case-report-2022-05-10-PUBLIC-WEBSITE.pdf>

<sup>9</sup> [https://ib1.org/wp-content/uploads/2024/07/Research\\_-Open-Energy-EV-Use-Case-Report-2022-02-07-OPEN.pdf](https://ib1.org/wp-content/uploads/2024/07/Research_-Open-Energy-EV-Use-Case-Report-2022-02-07-OPEN.pdf)

<sup>10</sup> [https://ib1.org/wp-content/uploads/2024/07/Research\\_-Open-Energy-Heating-Use-Case-Report-2022-02-28-OPEN-WEBSITE.pdf](https://ib1.org/wp-content/uploads/2024/07/Research_-Open-Energy-Heating-Use-Case-Report-2022-02-28-OPEN-WEBSITE.pdf)

<sup>11</sup>

[https://ib1.org/wp-content/uploads/2024/07/Research\\_-MEDA-Open-Energy-Local-Authority-Use-Case-v1.0-Website-version-Public.pdf](https://ib1.org/wp-content/uploads/2024/07/Research_-MEDA-Open-Energy-Local-Authority-Use-Case-v1.0-Website-version-Public.pdf)

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- NIMBUS project: Using network innovation and meteorology to build for sustainability
    - [Discover Phase report](#)
    - [Alpha Phase report](#)
  - Rapid Evaluation Areal Connection Tool ([REACT](#)) project: to provide users the ability to view electricity grid requests in real-time, using an interactive visualisation map.
    - [Discover Phase report](#)
    - [Alpha Phase report](#)

Icebreaker One convenes the cross-sector Perseus Scheme ([ib1.org/perseus](https://ib1.org/perseus)) to enable automated carbon emissions reporting for every SME in the UK. It creates the rules and processes that make automated reporting possible to enable products and services such as accounting platforms, emissions calculators, and reporting software to be developed that deliver higher-quality emissions data at scale. Perseus convenes hundreds of cross-sector organisations to ensure user needs and barriers from across the supply chains are captured and incorporated into the Scheme.

The Scheme includes participants including SmartDCC, Perse, Sage, Visa, Lloyds Banking Group, to ensure strong alignment between the energy and financial sectors around Smart Data governance. It is additive to existing initiatives.

IB1 co-chairs the Stream initiative to ensure interoperability between the water and energy sectors and has launched a Water Sector Trust Framework to support the sector.

## A1.2 Q2. Do you have any comments on the funding mentioned within this section?

We welcome the commitment outlined in 2.49 to investigate the long-term business model for the DSI. Early agreement on a sustainable and fair revenue model for the long term will enable commercial considerations to be worked into the technology, legal and governance design while use of the DSI is at a smaller scale and changes can be more easily coordinated with members.

We have seen other data sharing infrastructure initiatives struggle and even fail once government or philanthropic support is withdrawn. Defining a commercial model that balances the cost and value to a wide spectrum of participants as well as to wider society is a complex task. **We recommend that a dedicated research stream is funded early in the MVP period to convene stakeholders and undertake discovery and design work to ensure the DSI can be self-sustaining when it reaches the business-as-usual stage.**

## Q3. Do you have any comments on the timeline shown?

The proposed timeline does not present clear justification for a 4 year interim governance period nor a clear vision for what a transition to 'steady state' from 2028

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might look like. We would appreciate if further information could be provided to justify the reasoning for why:

- Four years of interim governance was selected as a specific time period (acknowledging that the consultation outlines some flexibility to move to a longer term solution more quickly under certain conditions)
- A scope of how arrangements are envisaged to change in 2028 (i.e. whether a complete change of responsible organisation would be acceptable or whether this is anticipated to transition to business as usual within a similar structure)
- A general vision of how the change management to steady state might be arranged (e.g. Ofgem mandate or licence change, industry decision-making process, etc)
- The envisaged relationship between the technology assessment and the change to steady state governance, noting that it would not be appropriate for program governance to be determined primarily by technical architecture
- Why Ofgem has proposed an interim coordinator rather than a governance structure which is capable of iterating flexibly over time.

Icebreaker One has substantial experience of setting up and running robust, industry peer-reviewed governance processes for a range of programmes with different constellations of stakeholders, user needs, and technological arrangements. From our experience, the most successful models incorporate governance from a project's outset in a manner which leaves room/flexibility to iterate over time to suit programme needs. Such models also provide checks and balances from the outset, enabling programs to assess and respond to a wide range of socio-technical considerations rather than being shaped primarily by (changeable) technological factors.

As digitalisation of the energy sector, and indeed the wider economy, accelerates it is essential that any governance mechanism is built to function flexibly within a shifting technical landscape. It is also essential that any governance mechanism is built to be responsive to a full spectrum of social and environmental considerations shaping the operational landscape, for example including capacity to respond to forthcoming Net Zero 2030 milestones. The Smart Data Bill is anticipated to pass into primary legislation in 2025 and will accelerate the need for robust data sharing governance.

**While transparency and predictability of process is important to any governance mechanism, we would caution that 2028 provides an arbitrary milestone to reach a level of governance permanence that is unlikely to reflect ongoing change within the surrounding social, economic, technical and environmental landscapes. We suggest that existing initiatives, such as Open Energy, are already delivering elements of this solution and could accelerate the implementation of data sharing schemes.**

Q4. Do you agree with our short-term governance structure model where the Interim DSI Coordinator is responsible for leading the short-term governance (2024 – 2028) of the DSI?

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As outlined in the response to Q3, we **strongly recommend a model which builds governance into the project from its outset, allowing for iterative development where appropriate using consultative mechanisms**. If the points above are clarified it may be that Ofgem's proposal aligns with these recommendations, however this is not possible to assess without further information.

Furthermore, we recommend that the proposed governance vehicle is (re)assessed in consideration of the following two points.

Firstly, elements of the consultation are currently phrased in a manner which may risk data infrastructure governance decisions pushing contingencies onto wider elements of future digital governance (e.g. hardware, software, network infrastructure, cybersecurity, etc). This risk is heightened if the consultation is considered in light of proposals published in parallel by National Grid ESO, illustrating how DSI governance could be subsumed into a proposed 'Digitalisation Orchestrator' operated by the National Energy System Operator (NESO). When Ofgem makes its decision regarding DSI governance, it is vital that this decision is limited to the purview of **DSI governance only** and does not conflate, nor set definitive future expectations or structures for, the locus or type of governance applied to other domains of energy system digitalisation. We strongly suggest, drawing from a growing evidence base in academic research<sup>12</sup>, that digital governance is appropriately atomised, to avoid risk associated with homogenising the needs of different domains. This will help ensure that structures are built to effectively manage factors such as: relevant and balanced stakeholder engagement; vested interests and power dynamics; technological, design, or skills needs; integration with Net Zero and other policy goals; and relationships/interoperability between different digital governance domains within and across particular economic sectors. Further research, and open consultation, is required to achieve this effectively and transparently.

Secondly, relating specifically to governance of the DSI, we suggest that the governance needs of the Trust, Prepare and Share nodes are more transparently assessed prior to overarching decisions being made. This assessment should incorporate where there are clear differences between the needs of individual nodes (e.g. governance of data rights in the 'Trust' node is likely to implicate the involvement of legal professionals which may not be required to implement more technical aspects of the 'Share' node) and where there is a need for the nodes to act in concert (e.g. technical interoperability or security principles). This suggestion for atomisation is underpinned by the principle of **separating the governance of data rights from that of the technology(ies) that will be implemented to enable sharing**. While these elements will retain some crossover, it remains important that governance is genuinely sociotechnical and does not become unintentionally led by technological considerations by default.

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<sup>12</sup> e.g. Judson (2022)

[https://ore.exeter.ac.uk/repository/bitstream/handle/10871/135631/EmilyJudson\\_680030707\\_THESIS\\_FINAL\\_CORRECTED\\_2024.03.pdf?sequence=2&isAllowed=y](https://ore.exeter.ac.uk/repository/bitstream/handle/10871/135631/EmilyJudson_680030707_THESIS_FINAL_CORRECTED_2024.03.pdf?sequence=2&isAllowed=y)

In assessing where governance is approached separately/collectively, we suggest that Ofgem, or the proposed DSI governance body (and any subcontracted entities), may find it helpful to consider the below (non-exhaustive) factors such as:

- **Goals/aims:** How are goals defined and set? Who is involved? How is the balance of goals assessed across technical, socio-economic, and environmental domains? Is there potential for goal conflict across the different nodes and, if so, how will this be managed?
- **Coordination:** how will the DSI coordinate with developments within and beyond the energy sector? How will this feed into goals, design choices, and definition of technical/architectural parameters? How might this need to evolve over time?
- **Roles and responsibilities:** How are roles and responsibilities defined? Do these differ across each node or are the same roles/responsibilities universal?
- **Change management:** How will change management processes work across the DSI and component nodes? Are there different stakeholder or technical requirements for separate processes across different nodes? Are different stakeholders (i.e. with different roles or areas of expertise) required to co-construct and/or sign off changes to different parts of the DSI? (e.g. strategic, commercial or legal input may be needed to sign off changes to the Trust node, while more technical aspects of data preparation may require CTO/CDO input).
- **Communications:** If different stakeholders are involved in different nodes of the DSI, how are these stakeholders engaged and communicated with? Do they have different communication needs that must be built into governance processes or cadences?

**Q5. If not, state your reasons and propose an alternative governance model or improvements to our proposed solution.**

Our contributions are captured jointly within Q4 above. We further suggest that the options presented in Ofgem's consultation are revisited in light of a more atomised approach to governance, which is potentially overseen by the body proposed in the current consultation.

**We additionally suggest that Open Energy be formally considered as a vehicle for the governance of the Trust Framework node.** Open Energy, funded by public money and coordinated by the non-profit body Icebreaker One, has been specifically developed for this purpose using a combination of radically transparent methods of open working, extensive consultation with stakeholders, and the input of specific domain expertise from energy industry, academic, and Open Banking specialists. Icebreaker One has already been involved in the DSI as the governance advisory partner, and is involved in the MVP through inputting into the pilot development, and use case exploration. It already has DNO and energy sector members.

Our work to date provides strong justification that the DSI is compatible with the structural model of Trust Frameworks and Schemes initially developed through Open

Energy and subsequently advanced through Icebreaker One's programmes such as Perseus<sup>13</sup> and Stream<sup>14</sup>.

**Q6. Are there any additional governance roles that are not covered by the proposed governance model? If so, what are these?**

We have identified gaps in how the consultation currently presents the governance body's roles surrounding **how rules are established, overseen, enforced, and changed** within the DSI. These must be explicit and transparently codified roles of the governance body and must also detail under what circumstances any of these roles can be delegated and/or subcontracted to specialists.

Accordingly, we recommend that the roles are expanded to include **definition of processes and/or rules for the establishment, oversight, enforcement, and change of:**

- Stakeholder mapping, engagement and representation<sup>15</sup>
- Goal setting
- Defining success criteria (across technical, socio-economic, and environmental domains)
- Monitoring, reporting, and verification (MRV)
- Change management
- Communications
- Dispute resolution
- Liability and redress
- Any formal responsibilities towards meeting cross-economy policy goals such as:
  - Net zero
  - Industrial strategy
  - Social policy

We further recommend that roles are included to oversee – where not already covered by another body in the broader environment – the **definition of processes and/or rules for the establishment, oversight, enforcement, and change of:**

- Data rights

<sup>13</sup> Perseus is a cross-sector Scheme which aims to help unlock access to finance that reduces emissions faster by automating sustainability reporting for every SME business in the UK. The Perseus Pilot launches in November 2024 <https://ib1.org/perseus/>

<sup>14</sup> The Stream programme aims to stimulate innovation and collaboration through Open and Shared Data, with a vision to unlock water data for the benefit of customers, society, and the environment. <https://ib1.org/stream/>

<sup>15</sup> Including how to ensure appropriate balance of interests/views overall and in specific groups/projects (e.g. differences may be needed for particular advisory groups / research projects / use cases). We further suggest that the stakeholder engagement role is specified to include responsibilities to: 1) engage in collaborative design rather than technology 'acceptance', including setting out where engagement processes have meaningful power to affect change and how this will be achieved, and 2) incorporating a wider range of bodies than licensees, including bodies that will be impacted by the DSI, bodies that represent energy consumers, and bodies with specialist knowledge (e.g. third sector, academia, research institutes etc).

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- Adjacent agreements (e.g. DSI membership contracts / terms of use)
  - Guidelines (e.g. antitrust, fairness, transparency, publishing)

Finally, we suggest that the governance body should have an active and transparent role in **defining formal and informal relationships with adjacent bodies** in the **energy sector and beyond**. This role may include jointly establishing and maintaining:

- Channels of communication
- Obligations on reporting or information sharing
- Formal processes and roles for engagement (e.g. assignment of 'observer status' in certain governance fora)
- Approaches to sharing and/or allocating roles when approaching shared issues
- Appropriate accountability structures
- Approaches to reduce forum proliferation (and ensuring associated fair access to governance fora for smaller organisations with less resource)
- Approaches to contributing or responding to cross-sectoral policy and regulatory developments in a joined up manner.

The suggested role changes above imply a **set of associated responsibilities which are outlined in the sub-bullets**, some of which exceed the responsibilities stated explicitly within the current consultation. Many of these responsibilities are likely to constitute oversight rather than design/delivery, allowing for subcontracting arrangements to take place where required. **In addition to responsibilities outlined above, we suggest that the DSI governance body holds responsibilities for the oversight of:**

- User needs identification, testing, and convening
- Assessing and measuring impact across socio-economic, environmental, and technical domains
- Where impacts are undesirable, performing impact mitigation
- Ensuring cohesion (of procedural, legal, technical approaches)

Implicit across all our suggestions is the principle that key roles and responsibilities of the Interim DSI Coordinator – and indeed any longer term governance body – are expanded to explicitly include reference to the **wider socio-technical landscape**. We suggest that codifying these responsibilities would provide an improved balance between technical, social, and operational elements of the DSI governance, while also strengthening the mandate of the proposed body. While not all areas of responsibility need to be undertaken directly by the proposed governance body (e.g. it may be possible to subcontract an appropriate body to support stakeholder engagement) we strongly suggest that the following (non-exhaustive) points would benefit from more formalised oversight, governance integration, and appropriate resourcing :

- Data rights and surrounding legal structures governing the exchange of data and associated intellectual property
- Stakeholder engagement and communications



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- Cross-sector, policy and regulatory input/coordination (including social, economic, and environmental factors)

**Q7. Do you agree with the responsibilities of the interim DSI Coordinator? Are there any additional responsibilities that it should undertake?**

Our response to Q7 is integrated with the discussion of roles outlined in Q6 above.

**Q8. Do the proposed deliverables reflect the outputs that the Interim DSI Coordinator should focus on in the initial DSI stages? Do you suggest any additional deliverables?**

**IB1 strongly recommends that all deliverables below should be published openly, along with any accompanying processes, and methodologies.** We have further comments on specific deliverables outlined below:

- Annual report on existing and future use cases:
  - We request further information as to what the annual report will contain other than information regarding the use cases. This may include:
    - Any reporting on the progress of use case delivery
    - Any assessment of the impacts of delivering a use case (both pre-emptive assessment and measurement over time)
  - We request further information on:
    - The criteria on how use cases are gathered, defined and assessed
    - The prioritisation and funding criteria to deliver specific use cases
  - We suggest that engagement KPIs are published as part of annual report and alongside applicable knowledge base content (e.g. voting outcomes, issue resolution etc)
- Statement of staffing interim report (2026):
  - We suggest that this report should be transparent about subcontracting fees
  - We suggest the budget which is being worked against should be openly published
  - We suggest that this report should continue to be regularly published through the steady state governance mechanism
- Knowledge base:
  - The time frame for this deliverable is unclear and the baseline expectations for what a knowledge base would constitute, or how it would be managed (e.g. iteration) are not yet transparent.
  - We suggest that the knowledge base must be integrated with stakeholder engagement processes, bringing transparency for example to documentation of meeting minutes, votes, and decisions.
  - We suggest the evidence base, data, and accompanying processes, and methodologies should be published openly where possible
  - We suggest that the knowledge base must be accompanied by clear processes for change management
  - We suggest that funding structure and specification of new research should be published openly

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- We recommend that use cases must be findable, accessible, and have clearly articulated value/impacts and actors. This will require good information management.
  - Technology assessment (2028)
    - We suggest the assessment should be in relation to the identified use cases, address user needs, and address corresponding socio-technical landscape and fit
    - We suggest that the technology assessment is integrated with an assessment of economic feasibility in the short and longer term (e.g. transparency regarding capital expenditure, expected BAU running costs, and costs associated with expected iteration/adaptation)
    - We suggest that basic definitions/glossary of technologies assessed must be provided
    - We suggest that the landscape of potential technology providers should be assessed transparently, in line with a competitive, open market approach
    - We suggest that the assessment includes more in depth information setting out the DSI's tender/contracting processes (if this is not published elsewhere)

We also suggest that the DSI should have the following additional deliverables:

- Service desk
  - To assist DSI users with commercial, procedural and technical queries
  - To provide technical support in the case of bugs, security incidents or outages
  - To handle formal complaints and disputes
  - To assist in, or signpost appropriate external support for, legal queries
  - To signpost stakeholders to use cases
  - Potential account management function for high-volume users such as regulated entities
- A defined engagement programme and forum for ongoing DSI stakeholder participation. This may include processes for:
  - Eliciting new use cases
  - Co-designing solutions to selected use cases
  - Iteratively improving solutions to use cases
- Monitoring infrastructure
  - This constitutes a mix of technical and audit-based controls to ensure DSI is correctly operated, and used by members.

**Q9. Do you agree with us that the System Operator is the best option as the Interim DSI Coordinator? If no, explain your reasons and justify your proposed option.**

While we do not have in-principle objections to the System Operator (NESO) holding a DSI oversight function, we want to highlight the risk that this consultation requires respondents to make a decision on the basis of incomplete information (particularly

pertaining to governance atomisation, roles, responsibilities, and deliverables). We would be happy to reconsider our response once further information has been provided. We also strongly recommend that Ofgem consider a wider range of delivery bodies for the atomised roles, even if the System Operator is assigned the temporary governance/oversight role, it (or Ofgem) should be able to delegate or subcontract these roles to existing solutions. This is of additional importance when cross-sector governance is being considered.

**Q10. What assessment criteria do you foresee being required when transitioning from short-term governance to an enduring governance model?**

It is difficult to provide feedback on assessment criteria for transitioning to an enduring model before seeing how the interim governance model is working, and the degree to which the governance model will change after the interim governance period. However, we would suggest the following principles for inclusion:

- Ensure the governance model **reflects the socio-technical nature** of the energy sector, not just the technical side
- Ensure **sector integration**, and the importance of working with **cross-sector** efforts
- Reflect the importance of **clearly defined user needs**, the enduring governance model must match to these
- Identify a **transparent, sustainable and fair financial model**

**Q11. What suggestions or feedback do you have for refining these governance assessment criteria to better meet the requirements and challenges of digitalisation in the energy sector?**

We suggest including considerations of how digitalisation affects:

- Net zero and the wider environment
- Society
- Business models
- Customers

As the digital landscape develops further, we also suggest that assessment criteria may benefit from considering:

- How the DSI interacts with advances in the governance of algorithms, AI, and other emerging technologies
- How use cases are identified, developed, and assessed beyond the interim governance model (this also implicates assessment of how engagement and research are conducted and resourced in the longer term)
- How future resourcing and staffing needs are regularly checked in the longer term
- How tender and contracting relationships are assessed in the longer term