Consultation

Consumer Consent Solution Consultation

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We are consulting on the development of a digital solution that will enable consumers to share their energy data with trusted third parties to receive tailored services to manage their energy bills. This will encompass the granting of consent, and the more complex aspects of managing, reviewing, and revoking consent.[1]

We would like views from people with an interest in energy supply, consumer advocacy groups, third party service or delivery providers, and innovators. We particularly welcome responses from those with a background in protecting vulnerable consumers. We would also welcome responses from other stakeholders and the public.

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

[1] "References to the "Authority", "Ofgem", "we", "us" and "our" are used interchangeably in this document. The Authority refers to GEMA, the Gas and Electricity Markets Authority. The Office of Gas and Electricity Markets (Ofgem) supports GEMA in its day-to-day work."

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Foreword by Marzia Zafar

Deputy Director, Ofgem

Consumers are the heart of the energy sector. Consumers are increasingly looking to trusted third parties for alternative solutions using data to save them time and money. We believe this data, shared securely with trusted third parties under a clear and standardised consent mechanism, is key to turbo-charging the journey to net zero by engaging consumers as a driving force behind decarbonisation.

Consider Open Banking. Launched in 2017, it now has over 6 million active users, representing around 11% of those using banking, and has quickly become a trusted and understood service that gives people control over their finance, as well as driving down costs and supplying important insights. It is recognised internationally as a success, with many other countries considering similar open standards. We aim to learn from the journey Open Banking has taken to date, and continues to take, and develop a consent solution that is as easy to use, ubiquitous, and effective.

The issue of consumers being able to consistently grant and manage consent to share their energy data was highlighted by the Energy Digitalisation Taskforce report. Decarbonisation of the energy sector by 2030 will require consumer engagement to achieve flexibility and decentralisation and we intend this work to play a critical role in that.

To be successful, this solution must be trusted by industry and, more importantly, trusted and understood by consumers. Security, accessibility, ease of use, lowest possible friction, and trust must be the touchstones of design and deployment. Trust bears repeating. Consumers must trust, and have good reason to trust, this system as it will be their data they share. To help the system earn consumers' trust, we have worked with, and will continue to work with a wide range of consumer advocacy groups, such as Citizen's Advice and 'Which?', to ensure the consumer is at the heart of every decision made.

Finally, we welcome your input to this consultation, and look forward to bringing together a simple, low friction consumer journey that can empower consumers to become active participants in the energy system.

Marzia Zafar

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Executive Summary

As Great Britain's energy system decarbonises, the complexity required to balance the intermittency of renewables and increased multi-directional generation and demand is increasing exponentially. Achieving net zero whilst minimising the effect on consumer bills and maintaining energy security requires digitalisation and effective use of data.

The ability to grant and manage consent gives consumers more agency in a rapidly changing retail market, and the opportunity to benefit directly and measurably from the choices they make regarding who uses their data and for what purposes. Robust governance, a tested Trust Framework or similar mechanism, and the ability to withdraw consent in real time will be key elements of any solution design.

We are working with industry to build a digital solution enabling consumers to provide and manage their consent to share their energy data with trusted third parties. This work will encompass the granting of consent, and the more complex aspects of managing, reviewing, and revoking consent. The solution must be more than a streamlined way to grant consent. It must also allow consumers to understand where their consent is held and manage consent on demand. We have proposed Design Principles and the features we would require of any technical solution in section 3 and have invited comment and views on these. These principles are;

- Simple and Low Friction
- Interoperable
- Agile, Flexible, and Scalable
- Transparent and Informative
- Inclusive by Design
- Secure by Design

In addition to these principles, we delve into what we have termed the essential functions of the solution, wherein we explore options for the data models, methods and levels of access control, accessibility, and some indicative user journeys, to ensure the design is consumer-focused from the start.

We have identified three potential delivery bodies for the consent solution – ElectraLink Ltd ('ElectraLink'), the Retail Energy Code Company Ltd ('RECCo') and Smart DCC Ltd, also known as the Smart Data Communication Company ('the DCC').

Our proposal is that RECCo be the selected Delivery Body who will develop a digital solution which fits the Design Principles. We also propose that Supply Licensees be obligated to record consent granted via the solution through a licence condition, to ensure 'one version of the truth'.

1. Introduction

What are we consulting on?

Market Context

1.1 The foundation of a zero-carbon energy system is a consumer's ability to use data and technology for a lower and greener bill. To date the consumer cannot easily and securely share energy data with market providers. Consumers produce and own their data. Consumer energy data and any benefit from it must accrue to the consumers, as well as the wider energy system and the public good. Consumer trust in the energy sector is paramount, and a robust solution for obtaining informed consent holds a key role in this[2].

1.2 Clear, system-wide consent processes will put control of data into the hands of consumers and reduce barriers for them to participate in the envisioned future. It will be a critical enabler in maximising the value of flexibility markets and allowing the system to balance the intermittency of renewable generation which will replace carbon-intensive generation. Data sharing is already playing a key role in enabling emerging flexibility markets, improving grid efficiency, and increasing consumer knowledge and participation in the energy system. However, there are inefficiencies within the energy system creating friction for data sharing processes.

1.3 Consent is a lawful basis for processing Personal Data under UK GDPR.[3] However, current approaches deployed in the sector to retrieve and provide consent are not standardised and are therefore inconsistent, causing barriers to emerge for new market entrants who need to develop their own consent solutions.

1.4 Initiated by the recommendations made in the 2021 Energy Digitalisation Taskforce report,[4] this Ofgem project aims to provide a standardised and system-wide consent process for organisations and consumers alike, alongside a consumer-facing interface (such as a dashboard or digital wallet) that would contain all the consumer's permissions data in one location.

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[2] Data Sharing in a Digital Future: Consumer Consent | Ofgem
[3] Consent is defined in Article 4(11) of UK GDPR. Consent means any freely given specific, informed and unambiguous indication of the data subject's wishes by which he or she, by a statement or by a clear affirmative action, signifies agreement to the processing of personal data relating to him or he.
[4] ESC Energy Digitalisation Taskforce Report 2021 (PDF)

1.5 When building the proposals in this consultation, we considered implementations of consent solutions globally, including Open Banking, the European Commission's 'Common Reference Model',[5] Estonia's 'Estfeed',[6] Denmark's 'Eloverblik',[7] Australia's 'Consumer Data Right',[8] and the USA's 'Green Button – Connect My Data'.[9]

1.6 We are looking for industry to develop a consent solution that includes a consumer-facing interface, such as a dashboard or portal, where a consumer can view all their existing energy data sharing permissions. The solution will also include backend technologies that enable existing and new market entrants to utilise this consent solution as their consent management system, thus removing the need to build their own system and ensuring that consumers aren't faced with numerous different methods for obtaining consent. We consider this solution will help build consumer trust, increase consumer engagement and lower barriers to healthy competition in the energy market.

1.7 We have fully considered the feedback provided for our November 2023 Call For Input (CFI).[10] Further details on the results of the CFI are to be found in Section 2 and all non-confidential responses to the CFI will be published alongside this consultation. Broadly, the opinion of industry was supportive of a consent solution, but needed more information on solution design. We aim to provide some of this information within this consultation, with full information to be provided by the proposed Delivery Body.

What to expect from this consultation

1.8 In this consultation, we will first set out the results of our CFI and describe how that input helped shape our approach. We will then detail our vision for a standardised and system-wide consent solution, including its Design Principles and expected standards. We are seeking your views on which organisation should deliver the proposed solution and your thoughts on the proposed funding models for the solution, amongst other details.

[5] Common reference model for smart metering data access in EU
[6] Estfeed: data exchange platform by Elering
[7] Electricity Overview
[8] Consumer Data Right for Energy - DCCEEW
[9] Green Button - Connect My Data
[10] Data Sharing in a Digital Future | Ofgem

1.9 Following this consultation, a Delivery Body will be selected in a Decision Document that will be published in late 2024/early 2025, depending on consultation responses.

1.10 In this consultation we refer to consumers. In terms of scope, this is taken to mean domestic consumers, microbusinesses, and small businesses.[11] Our proposed solution will target these groups,[12,13] as our view is that larger businesses often have greater visibility of their data and already engage with the type of services we would like to see enter the domestic and small business market, however there is scope to expand in the future, please see paragraph 5.14 for more detail.

Results from our Call for Input

1.11 Here we will discuss the results of our CFI, published in November 2023. We will provide an overview of the CFI's objectives, a breakdown of the results, and how these results impacted the direction of the project.

Our Vision for the Consent Solution

1.12 Here we will demonstrate our vision for the consent solution, including Design Principles, essential functions and proposed funding models.

1.13 The section of this document relating to these essential functions is necessarily technical in nature. However, we are seeking views from more than a purely technocratic set of respondents and so have provided a glossary to explain technical terms in plain language.

Implementation of the Consumer Consent Solution

1.14 Following this consultation process, based upon the input received, a Delivery Body will be selected to produce the consent solution. Within this section of the consultation, we will first outline the Delivery Body's objectives and remit. We will then describe how we identified the three potential Delivery Body options – RECCo, ElectraLink, and Smart DCC. We will also provide a description of the three potential delivery bodies, along with some key considerations for each, and

[11] A new threshold for businesses accessing the Energy Ombudsman: summary of consultation responses and next steps
[12] Your company will be 'small' if it has any 2 of the following: a turnover of £10.2 million or less, £5.1 million or less on its balance sheet, 50 employees or less; following the UK Government definition as a threshold for accessing the Energy Ombudsman.
[13] Prepare annual accounts for a private limited company: Micro-entities, small and dormant companies - GOV.UK

ask for the reader's views as to which entity will be best placed to perform the Delivery Body role.

Landscape – Current and Future

1.15 Here, we will explore how the consumer consent solution will fit with existing and planned data initiatives both from Ofgem and other agencies. We will examine and discuss our vision for expected synergies and detail where we see this work progressing, with indicative timelines and further detail on when we will publish our decision.

Related Publications

1.16 Data Sharing in a Digital Future | Ofgem[14]

1.17 Governance of the Data Sharing Infrastructure | Ofgem[15]

1.18 Flexibility Market Asset Registration | Ofgem[16]

Consultation Stages

1.19 This consultation was launched on 9 August 2024. It will be open to responses for eight weeks, until 4 October 2024. After the consultation period ends, all responses will be considered and weighted appropriately, with each response evaluated on its own merits. All non-confidential responses will be published alongside this publication. Please let us know in your response whether you'd like your response to be treated as confidential or non-confidential. The last step of the consultation process will be the decision taking into account the input received, which will occur Winter 2024/25.

[14] Data Sharing in a Digital Future, published 30/11/23. This project's previous publication, referred to as 'CFI' in this document.
[15] Governance of the Data Sharing Infrastructure, published 26/07/24.
[16] Flexibility Market Asset Registration, published 29/07/24.

Consultation Stages

Stage 1	Stage 2	Stage 3	Stage 4
Consultation opens.	Consultation closes (awaiting decision). Deadline for responses.	Responses reviewed and published.	Consultation decision/policy statement.
09/08/2024	04/10/24	Winter 2024/25	Winter 2024/25

How to respond

1.20 We want to hear from anyone interested in this consultation. Please send your response to the person or team named on this document's front page.

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

1.22 We will publish non-confidential responses on our website at www.ofgem.gov.uk/consultations.

Your response, data and confidentiality

1.23 You can ask us to keep your response, or parts of your response, confidential. We'll respect this request for confidentiality, subject to any obligations upon us to disclose information, for example, under the Freedom of Information Act 2000, the Environmental Information Regulations 2004, statutory directions, court orders, government regulations, necessary disclosure to the selected Delivery Body or the Department for Energy Security and Net Zero (DESNZ), or otherwise where you give us explicit permission to disclose. If you do want us to keep your response confidential, please clearly mark this on your response and explain why.

1.24 If you wish us to keep part of your response confidential, please clearly mark those parts of your response that you do wish to be kept confidential and those that you do not wish to be kept confidential. Please put the confidential material in a separate appendix to your response. If necessary, we'll get in touch with you to discuss which parts of the information in your response should be kept confidential, and which can be published, and we may ask for the reasons behind the decision.

1.25 If the information you give in your response contains Personal Data under the General Data Protection Regulation (Regulation (EU) 2016/679) as maintained in assimilated law following the UK's withdrawal from the European Union ("UK GDPR"), the Gas and Electricity Markets Authority will be the Data Controller for the purposes of UK GDPR. Ofgem uses the information in responses in performing its statutory functions and in accordance with section 105 of the Utilities Act 2000. Please refer to our Privacy Notice on consultations, see Appendix 4.

1.26 If you wish to respond confidentially, we'll keep your response itself confidential within the bounds of paragraph 1.23, but we will publish the number (without the names) of confidential responses we receive. We won't link responses to respondents if we publish a summary of responses, and we will evaluate each response on its own merits without undermining your right to confidentiality.

General feedback

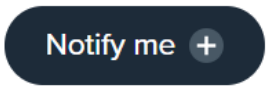
1.27 We believe that consultation is at the heart of good policy development. We welcome any comments about how we've run this consultation. We'd also like to get your answers to these questions:

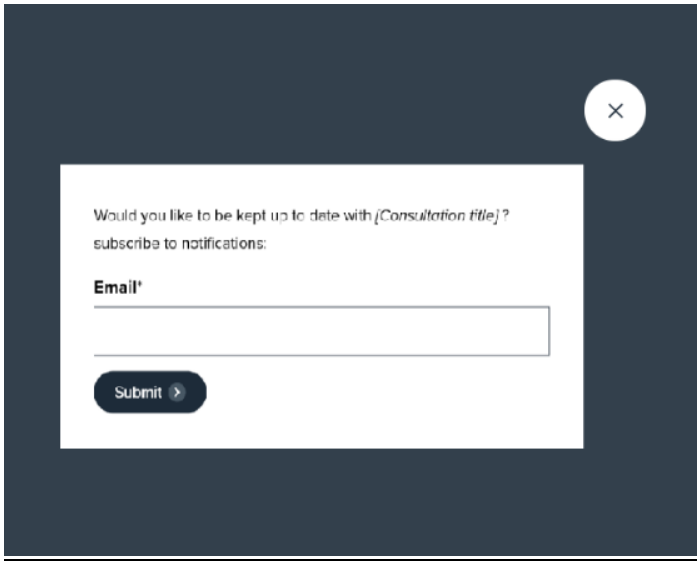
1. Do you have any comments about the overall process of this consultation?
2. Do you have any comments about its tone and content?
3. Was it easy to read and understand? Or could it have been better written?
4. Were its conclusions balanced?
5. Did it make reasoned recommendations for improvement?
6. Any further comments?

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

How to track the progress of the consultation

You can track the progress of a consultation from upcoming to decision status using the 'notify me' function on a consultation page when published on our website.
Ofgem.gov.uk/consultations





Once subscribed to the notifications for a particular consultation, you will receive an email to notify you when it has changed status. Our consultation stages are:

Upcoming > **Open** > **Closed** (awaiting decision) > **Closed** (with decision).

2. Results from our Call for Input

Section summary

In this section we will discuss our findings from our CFI we published in November, Data Sharing in a Digital Future. We will discuss our objectives we proposed with this project, views from respondents and how they have shaped our thinking for this consultation document.

Introduction

2.1 In November 2023, we published a CFI on consumer consent in the energy sector, entitled 'Data Sharing in a Digital Future: Consumer Consent'.[17] In our CFI, we asked key stakeholders for input on how we should try to achieve our project objectives; namely providing consumers with more control over their data and permissions, and making consent an enabler, rather than a barrier, to innovation. We asked stakeholders for their insights on current consent mechanisms, other forms of retrieving consumer data, and whether they thought a solution was justified. Most importantly, we asked stakeholders to choose a preferred option out of three potential consent solutions.

- Option 1 was a technical solution, such as a consumer-facing dashboard or digital wallet.
- Option 2 was an Ofgem-developed principles-based framework for industry to follow, akin to Data Best Practice Guidance.[18,19]
- Option 3 was a voluntary, industry-developed code of practice, akin to the Confidence Code.[20,21]

Views from industry and respondents

2.2 We received 38 responses to our November CFI, comprised of eight third party intermediaries (TPIs), six suppliers, six networks, five non-profits/trade bodies.

[17] Data Sharing in a Digital Future: Consumer Consent | Ofgem
[18] Ofgem's Data Best Practice Guidance is intended to create interoperability in data across the energy sector, with the aim of maximising the value of the data to enable the decentralisation and decarbonisation of the energy system to meet the UK Government's legal obligation to achieve Net Zero carbon emissions by 2050.
[19] Decision on updates to Data Best Practice Guidance and Digitalisation Strategy and Action Plan Guidance | Ofgem
[20] The Confidence Code is a voluntary code of practice that governs independent price comparison websites offering an energy comparison and switching service.
[21] Revised Ofgem Confidence Code: December 2017 | Ofgem

four code bodies, two consumer groups, one university, one regulator and five other organisations.

2.3 A large majority of respondents agreed that a solution is required (87%), and that the scattered approach to consumer consent needs to change. A majority of respondents stated that Option 1, the technical solution, should be the adopted approach (53%).

2.4 A broad range of stakeholders approved of Option 1, including suppliers, network companies, academia and a consumer group. We consider that the positive support for Option 1, alongside the extensive support for a digital solution more generally, justify our intervention to propose a solution for industry to implement.

2.5 Not all respondents agreed that Option 1 should be progressed. We will outline those views in this section and, through our proposals in this document, show how our consultation addresses those concerns.

Feedback: emerging themes

2.6 Respondents said the benefits must be made clear and upfront and consumers must see the value in using a consent solution. Consumers will engage in outcomes, rather than with the solution itself.

2.7 Respondents asked that we take lessons from the smart meter rollout campaign Additionally, respondents agreed that we should learn from the rollout of Open Banking as a proven mechanism for obtaining and managing consent.

2.8 Respondents expressed the need for a significant marketing endeavour, alongside a clear framework on how we will educate and upskill consumers to use the consent solution.

2.9 Respondents wanted to see a collaborative approach to the development of a solution, requiring input from multiple sectors and consumer-facing organisations.

2.10 Respondents stated that any consent solution developed must be simple, inclusive, accessible, transparent, and low friction.

2.11 The elements of design requested and highlighted by respondents – low friction, simple, inclusive, transparent and accessible - have formed the basis of the Design Principles we detail in Section 2.

Feedback: concerns raised

2.12 Whilst 53% of stakeholders voted for Option 1, 18% voted for one of the alternative options: Option 2 (5%), Option 3 (8%), a combination of Option 2 and 3 (5%). A total of 29% provided no preference.

2.13 Many of the respondents that provided no preference cited their requirements for further detail prior to endorsement. Due to this, we hosted workshops in the spring to provide more detail, as outlined below. We produced Design Principles for an optimal solution and suggested technical specifications such as cybersecurity and accessibility requirements. We examined funding and governance models, and worked closely with Citizens Advice to ensure we kept the consumer perspective front and centre of the project. Lastly, but most significantly, we have included as many details requested in the CFI responses as possible within this consultation, and we are seeking your views once more.

How responses have informed this consultation

Workshops and further engagement

2.14 We aimed to address stakeholder questions and concerns raised in the CFI responses by testing industry thinking in two workshops. Each workshop was attended by approximately fifty stakeholders from a range of industry participants. In the first workshop we discussed our analysis and emerging themes from the CFI, and then how this has started to shape our thinking on proposed Design Principles and technical standards. The second workshop focused on the consumer journey and the three potential delivery bodies outlined in this consultation presented their visions for a consent solution.

2.15 Our CFI analysis has set our framework for delivery: the solution requires a Delivery Body with the capabilities and cooperation skills to source a technical solution, adopt a Trust Framework and work with a consortium of key contributors.[22]

2.16 In this consultation we will clarify the further details required as referenced in the CFI responses. This will include our vision for the consent solution, potential delivery bodies, funding mechanisms, access control, Trust Frameworks, marketing and education. This will allow us to answer any questions asked in the CFI responses, and request feedback and gather a consensus from industry.

[22] UK digital identity and attributes trust framework - beta version - GOV.UK

Assessments: Impact versus Costs and Benefits

2.17 We acknowledge the view of multiple respondents that there was further work to be completed on assessing the need for intervention, the benefit of Ofgem acting to standardise the process for granting and managing consumer consent, and the likely cost to establish value for money.

2.18 We have collated previous Impact Assessments conducted on similar projects; namely the Market-wide Half-Hourly Settlement Impact Assessment, the MiData Impact Assessment, the Pensions Dashboard Impact Assessment, and the QR code on bills Impact Assessment, and settled on Design Principles informed by our engagement and workshops to improve the positive impact and reduce the negative impact of this policy as much as practicable.[23,24,25,26] We are of the view that these previous impact assessments constitute the majority of what would be required of an impact assessment of the proposals made in this consultation.

2.19 We have considered and assessed our duty under S5A of the Utilities Act 2000.[27], which requires us to carry out an assessment of an 'important' proposal. The nature of the proposed policy – selection of one of three Delivery Bodies to design, develop, and deploy a technical solution for consumer consent – is such that assessing the costs, benefits and impacts are not practical at this stage, due to not having a final technical design of the solution.

2.20 Due the incomplete nature of the information available, we do not consider this to be an 'important' proposal under S5a of the Utilities Act 2000, however, we are minded to publish a more detailed assessment of the costs, benefits, and impacts of the proposed policy in conjunction with the delivery body. This has the benefit of enabling sufficient level of detail to fully assess the impact of the policy, while minimising assumptions around costs, and building on previous assessments of impacts of similar proposals.

2.21 We propose to publish, alongside the selected Delivery Body this assessment as soon as practicable following our decision in the winter of 2024/25.

2.22 Under the Equality Act 2010, Ofgem, as a public authority, is required to have due regard to factors set out in the act in respect of persons who share relevant

[23] QR Impact Assessment - Updated (PDF)
[24] Pensions Dashboards Impact Assessment - Impact Assessment
[25] Impact Assessment for midata
[26] MHHS Final Impact Assessment | Ofgem
[27] Utilities Act 2000

characteristics.[28,29] In our view, age and disability appear to be the most likely relevant protected characteristics of persons who could potentially experience digital disadvantage and be impacted by this policy proposal. In light of this, we considered the potential challenges and impacts and worked with groups specialising in digital disadvantage to consider mitigations to these challenges. Our work in this area will continue to develop until a decision has been made.

Proposed Decision

2.23 There has been a clear majority of respondents to our CFI, and attendees of our industry workshops, who support a solution to the issue of consumer consent, as outlined in paragraph 2.12. This showed us that there was considerable appetite for intervention and that most of the industry shared our understanding of the need to progress this work to the stage of formal consultation. Consequently, we are proposing to advance this workstream. This will involve developing a consent solution that includes a consumer-facing interface, such as a dashboard or digital wallet, and an accompanying framework for consent management.

2.24 We propose that a Delivery Body be selected through this consultation, based upon criteria listed herein, to deliver the solution. The Delivery Body will work with Ofgem and obtain input from other organisations with expertise in consumer advocacy, security, accessibility, and other necessary expertise.

[28] Equality Act 2010 (legislation.gov.uk)
[29] Equality Act 2010 (legislation.gov.uk)

3. Our Vision for the Consent Solution

Section summary

This section outlines a high-level vision for the digital solution we expect the selected Delivery Body to design, develop and deploy. Whilst this section will outline our Design Principles and some guiding factors for the Delivery Body to consider when implementing the solution, we aim to avoid mandating technical specifics or data modelling. We consider it most effective to have the selected Delivery Body able to use its expertise to choose the majority of the solution design.

Introduction

3.1 During our initial CFI, we established five Core Principles which ought to underpin any consumer consent solution. These were:

- Consumers should be able to trust that data sharing is safe and secure.
- Organisations need to clearly outline the value and benefits of data sharing in a way that all consumers can understand.
- It should be clear to consumers what they are giving consent for and to whom – this needs to be explained upfront and not hidden in legalistic language or fine print.
- The process should be accessible for all, and not leave the digitally excluded behind.
- The consent solution should have the capability for cross sector operation with potential to benefit consumers within and beyond the energy sector.

3.2 Utilising the input received from the CFI, we have evolved these initial Core Principles through a series of engagements and workshops attended by industry, academia, innovators, tech companies and consumer advocacy groups into a set of expectations. These include Design Principles, for the Delivery Body to apply to the consumer consent solution. We do not propose to be overly prescriptive with these expectations and do not consider them exhaustive. The eventual solution will need to be sufficiently agile to adapt to future changes.

Design Principles

3.3 In selecting these principles, we built on the responses to the CFI, and engagement in the workshops to create Design Principles which will apply to the

technical design of the solution. We also intend these principles to apply to a Usage Governance Mechanism, such as a Trust Framework.

3.4 These are indicative principles to be applied by the Delivery Body and would be considered a minimum standard, with further development expected through the lifetime of the solution. They are listed below, with further detail in each subsection. Any proposed solution must be:

a) Simple and Low Friction
b) Interoperable
c) Agile, Flexible, and Scalable
d) Transparent and Informative
e) Inclusive by Design
f) Secure by Design

Simple and Low Friction

3.5 The solution will require some positive friction, which could be described as necessary barriers, such as information to inform consent and the ability to review, manage, and confirm consent. However, to avoid drop-off or consent fatigue, there should be no negative friction (unnecessary barriers), such as any marketing, and as little data entry as possible by both consumers and accredited users, as infrequently as possible.

3.6 Simplicity of design will be a key principle of the User Experience (UX).[30] We envision the design of the UX will be on the application layer whereas the underlying protocol ought to enable this simplicity of design and differentiation of UX. This will require minimum extraneous complexity, 'feature creep',[31] or data 'bloat';[32] when additional data is collected or transmitted over and above what is required for the smooth function of the solution.

Interoperable

3.7 To ensure the solution is launched as soon as possible, the initial solution will be a Minimum Viable Product (MVP). The MVP will include a consumer-facing interface and consent management framework for industry. However, the interface and framework will be limited to the sharing of half-hourly smart meter

[30] What is User Experience (UX) Design? | IxDF
[31] Feature creep is a term used in software design for the excessive ongoing expansion or addition of new features during the design of a product, beyond the basic function
[32] Managing Bloat in a Database

(or Advanced Meter,[33] where applicable) consumption data at this early stage, with the prospect of expansion to other datasets, such as tariff data, in the near future.

3.8 This decision will be made at the Delivery Body's discretion and will not require another Ofgem consultation. The consent solution must be open to future expansion and interoperability, including an openness to distributed implementation via, and compatibility with, Application Programming Interfaces (API). While there is currently no common standard for APIs within the energy sector, a Delivery Body ought to consider Data Best Practice Principles (DBP) and seek to increase commonality through selecting an existing and commonly used standard and encouraging promulgation. The Delivery Body may benefit from using industry fora to promote a common standard for APIs within this project. The OpenAPI Initiative would be an example of this.[34]

3.9 The solution should use a single protocol; designed to be simple, scalable, and low weight. The potential for innovation and differentiation should be at the UX design and application layer, with a standard API between the two.

Agile, Flexible, and Scalable

3.10 The creation of the solution will require iteration. One approach the Delivery Body could take is to develop an initial or 'alpha' phase product in conjunction with a trusted partner with a controlled group of consumers who can be assisted through the process of managing their consent. One possible option would be for the Delivery Body to deploy the solution alongside Citizen's Advice, a local housing authority or another consumer advocacy group, to allow for tailored support for consumers.

3.11 Design will necessarily start as an MVP, in granting consent to share consumption data, and iterate through time of use tariff data, Energy Smart Appliance (ESA) data and further. This will need to consider the Market-wide Half-Hourly Settlement (MHHS) work to ensure alignment. Further details for how this will be achieved are in paragraphs 5.13–5.15. Additionally, the solution will need to be readily scalable to prevent delays in service provision if demands increase.

[33] The solution is dataset agnostic, and while we anticipate SMETS1 and SMETS2 will be the primary generators of data, we would consider Advanced Meters. However, we aim to obtain data from data networks, such as Smart DCC's smart network and Elexon's Data Integration Platform, rather than directly from the devices themselves.
[34] Open API Initiative

Transparent and Informative

3.12 For consent to be valid, and to minimise regret from consumers, it must be fully informed. The Information Commissioner's Office (ICO) has set out what will be required for consent to be considered 'specific and informed',[35] and we would expect the solution to meet these requirements as a minimum standard. Any User Interface (UI) platform displayed by a consent seeker will be required to meet these standards under the Usage Government Mechanism, and become an accredited user, before seeking consent.

3.13 Further to this, the level of information provided must be consistent through the user journey and transparent as to purposes for data sharing, when changing, and must cover all onward data-sharing. All information should be in clear, accessible language, which will be covered in more detail below.

Inclusive by Design

3.14 Government standards for accessible design state that UI needs to be Perceivable, Operable, Understandable, and Robust (POUR) to ensure accessibility.[36] While the UI to obtain consent will not necessarily be under the control of the Delivery Body, the consent management platform will be. Each organisation which seeks to become an accredited user will be able to design their own UI, to allow for differentiation of offer from participants in the market. However, they will be required to demonstrate that the UI meets accessibility rules as set out in the Usage Governance Mechanism. For more details on user governance, see paragraphs 3.34-3.37.

3.15 Similarly, any UI will need to meet standards aimed at ensuring inclusivity to all consumer groups and increasing usage by as diverse a demographic as possible. These standards would be set by the Delivery Body and included in the selected Usage Governance Mechanism. Monitoring of the Delivery Body's accessibility standards would be conducted by Ofgem and held to the same standards.

3.16 in addition to the language used in UI; we would require the language in specification documents, agreements, and any content which may be read by users of the solution must be clear, concise, and non-technical, where possible.

[35] What is valid consent? | ICO
[36] Understanding the POUR Principles of Accessibility - IA Labs

We would expect standards applied to be on a par with those of Centre for Excellence in Universal Design.[37]

Secure by Design

3.17 When the Delivery Body designs the Protocol, API layer, Data Architecture, and all technical aspects of the solution; it must be preceded by a robust risk analysis of cyber threats.[38] We would expect this to be conducted with input from the National Cyber Security Centre (NCSC).

3.18 Given the necessity for Personally Identifiable Information (PII) to be processed via the solution in order to link consent to an individual, we would require the Delivery Body to work with the ICO to entrench protections for consumers from the design phase. This would involve the Delivery Body creating, producing, and maintaining a Data Protection Impact Assessment (DPIA) and working with the ICO.

3.19 Throughout the design phase, we would expect to see periodic checks, held to an agreed and appropriate, consistent standard, to ensure that cyber security protections remained fit for purpose, and that the cadence of these checks continue throughout the lifecycle of the solution. Further to this, responsibility for cyber security and protection of information should be clearly accountable and reported at board level.

3.20 Depending on the final design architecture, as selected by the Delivery Body, there may be additional cyber security measures required of data providers, accredited users, or other parties engaged in the consent granting process. These would be outlined in any usage governance framework, and adherence demonstrated prior to onboarding.

3.21 Assurance and monitoring of the selected Delivery Body will be conducted by Ofgem. The specific standard expected, and compliance framework, will be set out in the Decision Document and codified in the eventual regulatory framework.

Q1. Do you agree with the proposed Design Principles? Would you recommend any additional Design Principles?

[37] Use clear and simple language - Centre for Excellence in Universal Design
[38] Risk management - NCSC

Essential Functions for the Solution

Centralised, Decentralised or Hybrid?

3.22 This section necessarily delves into technical language and specific terms used in data science. Any terms you may be unfamiliar with are explained in the Glossary in Appendix 2.

3.23 During the workshops and other engagements, we noted the strength and depth of opinions regarding whether a solution is centralised, decentralised, or a hybrid of the two. There are merits to each and Ofgem has considered the value of either a centralised, decentralised, or hybrid model. . We outline our interpretation of centralised, decentralised, and hybrid consent models below.

3.24 Discussions in the workshops expressed a preference for a decentralised model, however, we have opened up the question in this consultation, and are asking whether this key decision of design should be set by Ofgem or decided by the Delivery Body.

3.25 Access to varying types of data is a well understood issue in the energy sector. Previous approaches have relied upon Centralised Data Repositories - either structured repositories, known as data warehouses, or unstructured repositories, where the data is in raw or native formats, known as Data Lakes. Centralised Data Repositories involve a single point of access (either physical or virtual, such as through a gateway,) to a single owner's dataset that they are willing to share on a limited basis with a set of rigid access frameworks around this data.

3.26 In considering a centralised solution, it is helpful to visualise the design through an example of what it could look like, as per Figure 1 below.

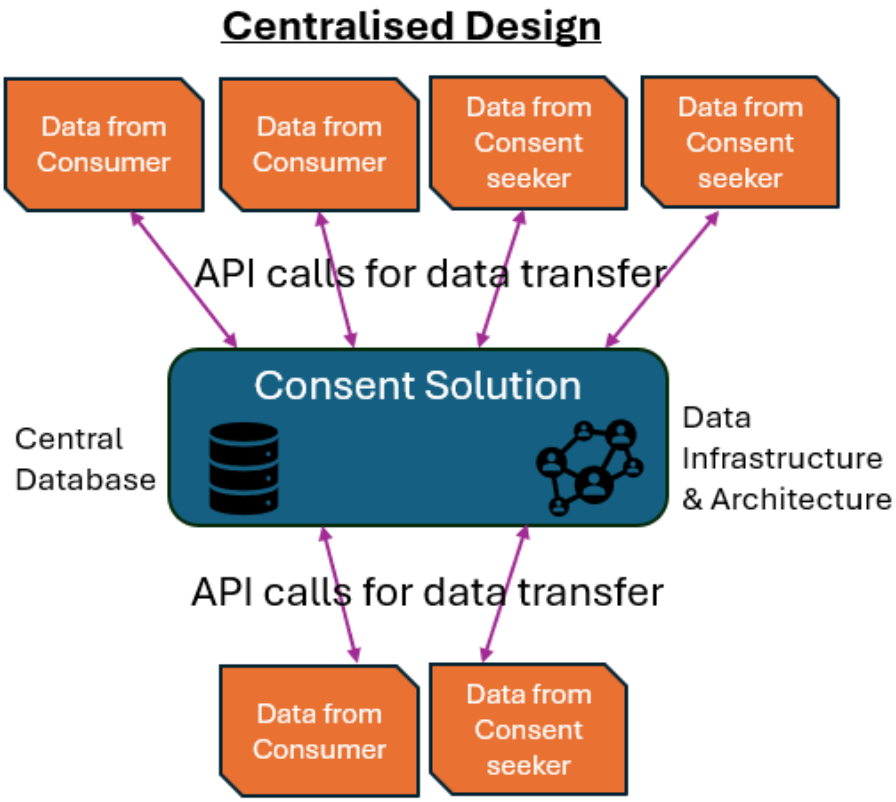


Figure 1*:* Diagram of a centralised Data Architecture.

3.27 While the centralised approach can be an effective solution, there are several challenges;

- They provide a single ownership platform where data and user access are managed by the owner, creating a single point of failure.
- Centralised approach tends to lack flexibility and struggles to accommodate new or previously unthought of users. This is at odds with the intent to 'future proof' the consent solution as much as is practicable and less preferable for the period of anticipated change in the energy sector.
- Centralised repositories are complex to set up, can be challenging to retrofit to allow for new cases, and are less suited to the multiple use cases we expect this solution to apply to.
- The contractual requirements to allow storage and access to data within centralised repositories are similarly complex to set up and can delay or restrict access to data unnecessarily.
- There exists a potential risk that a centralised approach could provide adverse competitive advantage or a lack of plurality in market control.

- The single point of access and challenges in adding new users or use cases makes a centralised approach more secure, but at the expense of agility, flexibility, and scalability

3.28 By contrast, a Decentralised Design involves core participant data remaining within the participant's governance, and other known participants having access to a standardised version of the data in an agreed format. In the case of a consumer, it may be an application which can respond to Protocol calls to send or receive packets of data. Each will hold their own data, but can draw on other databases through the Protocol, creating on-call completeness. Each authorised provider will have a complete copy of the Data Architecture, API layer, and Protocols. While there are concerns that multiple instances of architecture and databases could increase the likelihood of misuse, these would be mitigated by a robust Usage Governance Mechanism, and automatic deauthorisation Protocols.

3.29 Decentralisation has the advantage of being significantly more scalable, flexible and agile than any centralised model could be, at the expense of centralised control and potential expense of a more secure border to the data. A visualisation can be seen in Figure 2, below.

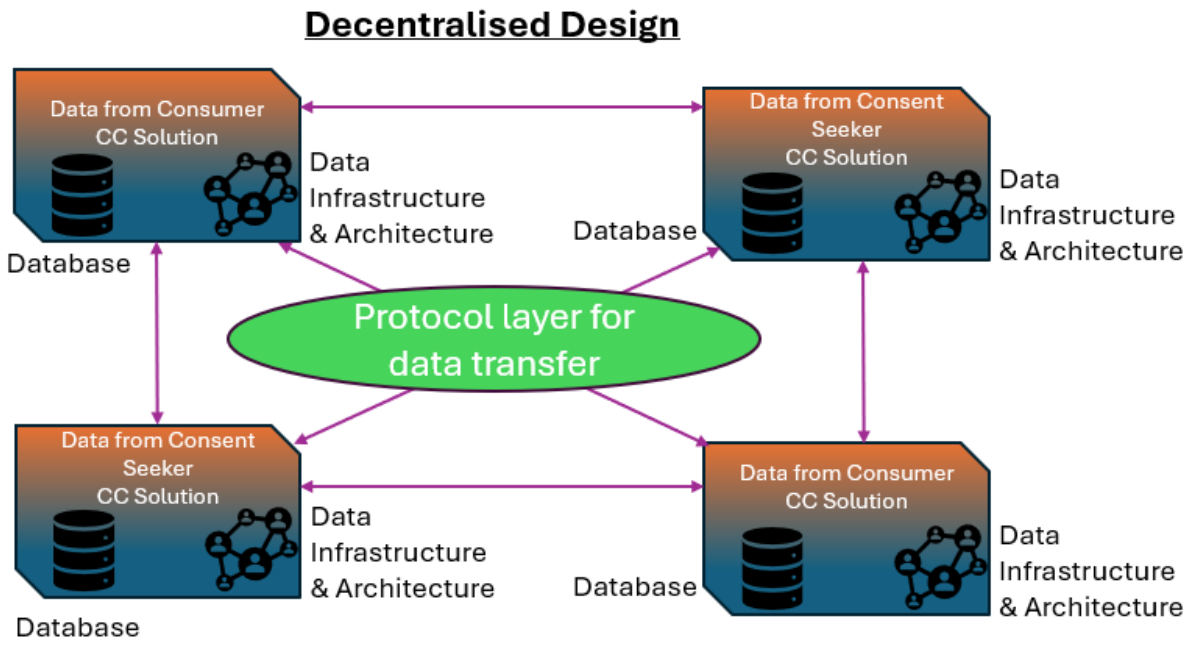


Figure 2*:* A diagram of decentralised Data Architecture.

3.30 Finally, there is a hybrid model, sometimes known as a hub and spoke model, which describes multiple instances of the data held, as the decentralised model, which are transferred through a single instance of Data Architecture, through

Extract, Transform, Load (ETL) sections, which are held either on the boundary of the user's data space, or on the boundary of the central 'hub'. An example of this can be seen in Figure 3, below.

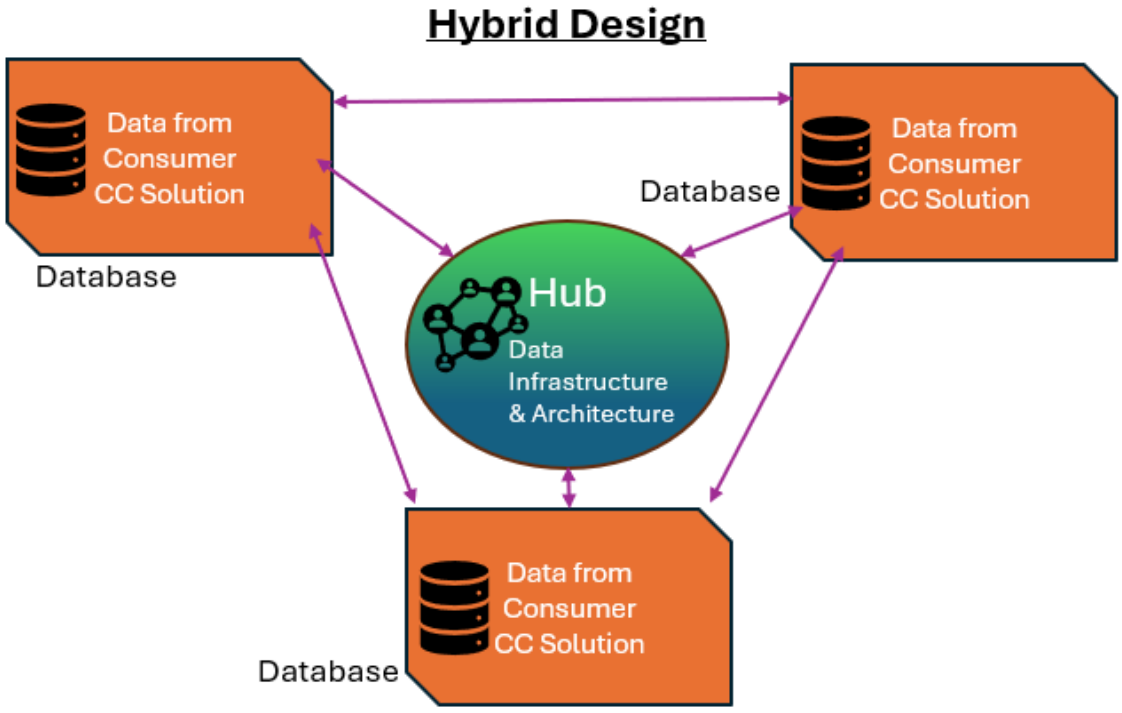


Figure 3: A diagram of a hybrid Data Architecture.

3.31 Hybrid models are a compromise between fully centralised models and fully decentralised. In most deployed Data Architecture, there is an element of hybridisation; in that few models are ever purely centralised or decentralised. The combined approach allows a degree of scalability and flexibility not found in a purely centralised model, while retaining the security and access control which may be weak in a purely decentralised model.

3.32 Given the changes in digital technology and the use of data since initial explorations of consumer consent, and the anticipated changes to the energy sector, we are increasingly minded to take the position that a centralised model is cumbersome, not scalable, and unfit for the future we anticipate.

3.33 There are, however, considerations of security and trust to consider for any decentralised model, namely around access control and deletion of data by all parties. In addition, consideration must be given to the trust extended to, and conduct of those acting as custodian of the data, even temporarily. To mitigate these concerns, we would expect a robust form of Usage Governance Mechanism, such as a Trust Framework to be deployed within the solution if a decentralised

design was chosen.[39] We would expect the Delivery Body to have a robust set of accreditation steps to allow consent seekers to become authorised providers under the framework, but not to place excess barriers to accreditation.

3.34 There are examples of tried and tested Trust Frameworks already deployed, with Open Banking being a well-known example of a deployed Trust Framework,[40] therefore we would not expect the Delivery Body to create a new Trust Framework from first principles. However, we would expect a robust analysis of options, in conjunction with ICO, Ofgem, and NCSC prior to selection.

Q2. Do you have a preference between the centralised, decentralised or hybrid models? Please elaborate.

Access Control

3.35 Access control for both consumers and accredited users will require multi-factor authentication to gain access. Examples abound in Open Banking regarding how best to access and verify identity, including one-time passcodes for mobile phones, platforms such as Yoti,[41] organisations such as Stripe for online verification,[42] bank statements and bills can also be used to verify residences. We would expect the Delivery Body to consider existing UK Government schemes, such as the Digital Identity work for suitability.[43]

3.36 For security, we propose to require the Delivery Body to demonstrate to consumers and organisations alike that they have a clear commitment to data security and are able to evidence recent accreditation to a security standard such as ISO 27001.[44]

3.37 For those seeking to obtain consent from consumers through the solution, we would expect access control to be dependent on adherence to the relevant Usage Governance Mechanism and require significantly more authentication friction prior to access. There should be a register of authorised providers to ensure integrity and increase consumer trust. However, we would expect the service provider to do their utmost to reduce barriers to entry for prospective consent seekers who

[39] Definition: Trust Framework ► Icebreaker One
[40] Have your say on draft Open Banking Standard v4.0 - Open Banking
[41] On a mission to become the world's most trusted identity platform • Yoti
[42] Stripe Identity | Identify Verification for Payments
[43] Enabling the use of digital identities in the UK - GOV.UK
[44] ISO/IEC 27001:2022 - Information security, cybersecurity and privacy protection

want to become authorised providers as many innovators in this space may lack the resources to overcome high barriers to entry.

- While each potential Delivery Body presented their own indicative or demonstration of a consumer journey during the second workshop, we have designed Figures 4 & 5 to show how we envision a potential user journey for granting consent (Figure 4) and managing consent (Figure 5).

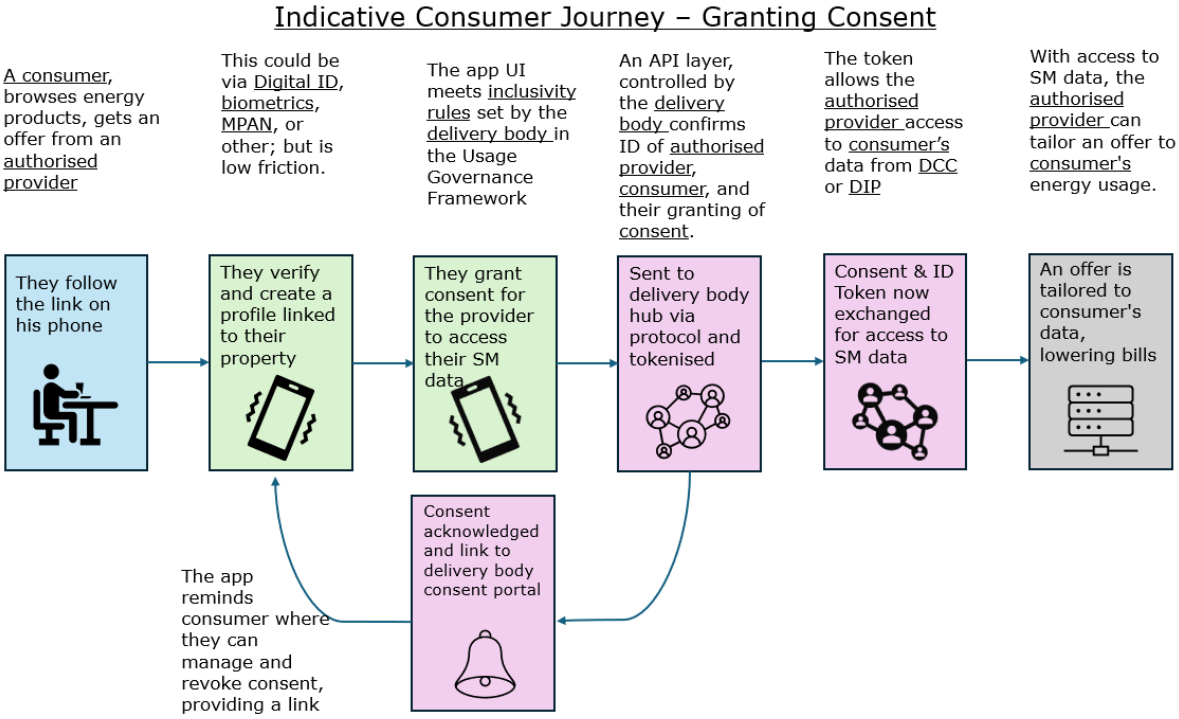


Figure 4: A diagram covering the indicative consumer journey for granting consent. A screen reader accessible version of this diagram is available in text format below.

- Step 1: A consumer browses energy products and receives an offer from an authorised provider. They follow the link on their phone.
- Step 2: They verify and create a profile linked to their property. This could be via Digital ID, biometrics, MPAN or other; but it is low friction.
- Step 3: They grant consent for the provider to access their smart meter data. The app UI meets inclusivity rules set by the Delivery Body in the Usage Governance Framework.
- Step 4: Their consent is then sent to the Delivery Body hub via protocol and tokenised. An API layer, controlled by the Delivery Body, confirms ID of authorised provider, consumer and their granting of consent.
- Note: the consumer will be sent an acknowledgement of their consent and a link to the Delivery Body's consent solution, where the consumer will be able to manage and revoke consent.

- Step 5: The consent and ID token is now exchanged for access to smart meter data. The token allows the authorised provider access to the consumer's data from Smart DCC or Elexon's Data Integration Platform.
- Step 6: An offer is tailored to the consumer's data, potentially lowering their bills. With access to smart meter data, the authorised provider can tailor their offers based on the consumer's energy usage.

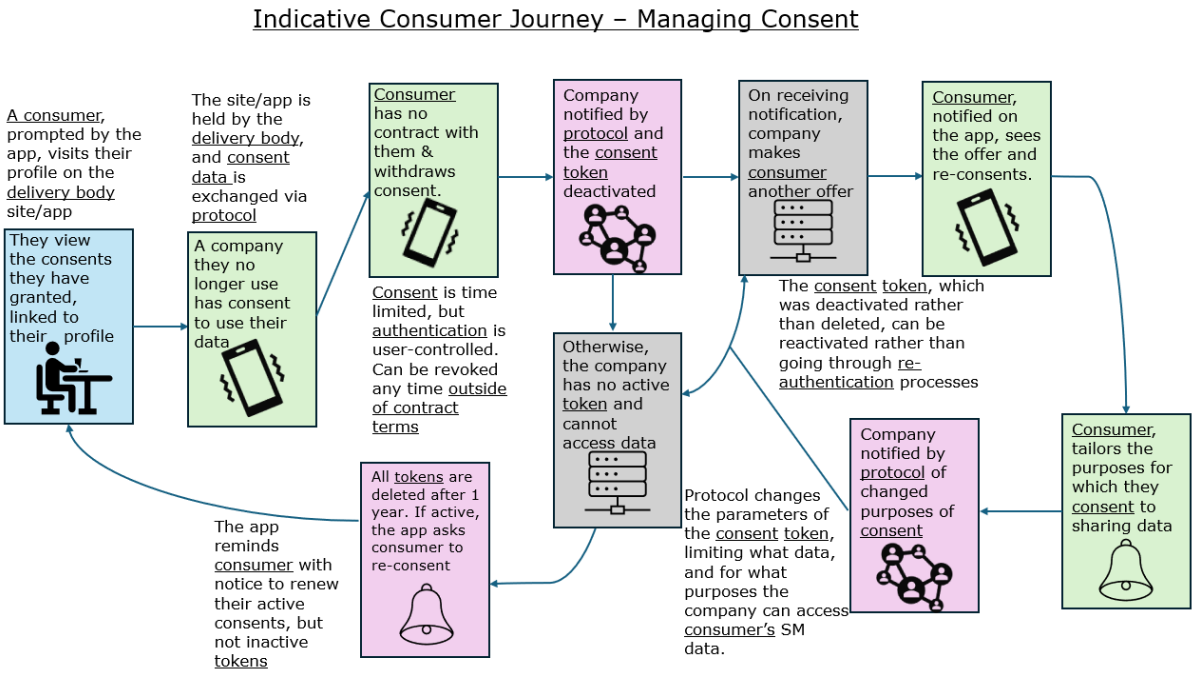


Figure 5: A diagram covering the indicative consumer journey for managing consent. A screen reader accessible version of this diagram is available in text format below.

- Step 1: A consumer is prompted by the app and visits their profile on the delivery body site/app. The app reminds them with a notice to renew their active consents, but not inactive tokens.
- Step 2: A company they no longer use has consent to use their data. The site/app is held by the Delivery Body and the consent data is exchanged via a protocol.
- Step 3: The consumer has no contract with them and withdraws consent. Consent is time limited, but authentication is user controlled. This can be revoked any time outside of contract terms.
- Step 4: The company is notified by protocol and the consent token is deactivated.
- Step 5: On receiving the notification the company makes the consumer another offer.
- Step 6a: The consumer is notified on the app and reconsents. The consent token, which was deactivated rather than deleted, can be reactivated rather than going through a reauthentication process. The consumer then tailors the purposes for

which they give consent to share data. The company is notified by protocol of changed purposes of consent. The protocol changes the parameters of the consent token, limiting what data and for what purposes the company can access the consumer's smart meter data.

- Step 6b: If the consumer does not reconsent, or the company does not make another offer, the company no longer has an active token and cannot access the consumer's energy data.
- Note: all tokens are deleted after one year. If active, the app asks consumers to reconsent.

3.38 Illustrated below in Figure 6 we show an indicative example of the journey of a consent seeker, aiming to become an authorised provider and obtain consent to access a consumer's energy data through their consent. The app reminds consumers with notice to renew their active consents, but not inactive tokens.

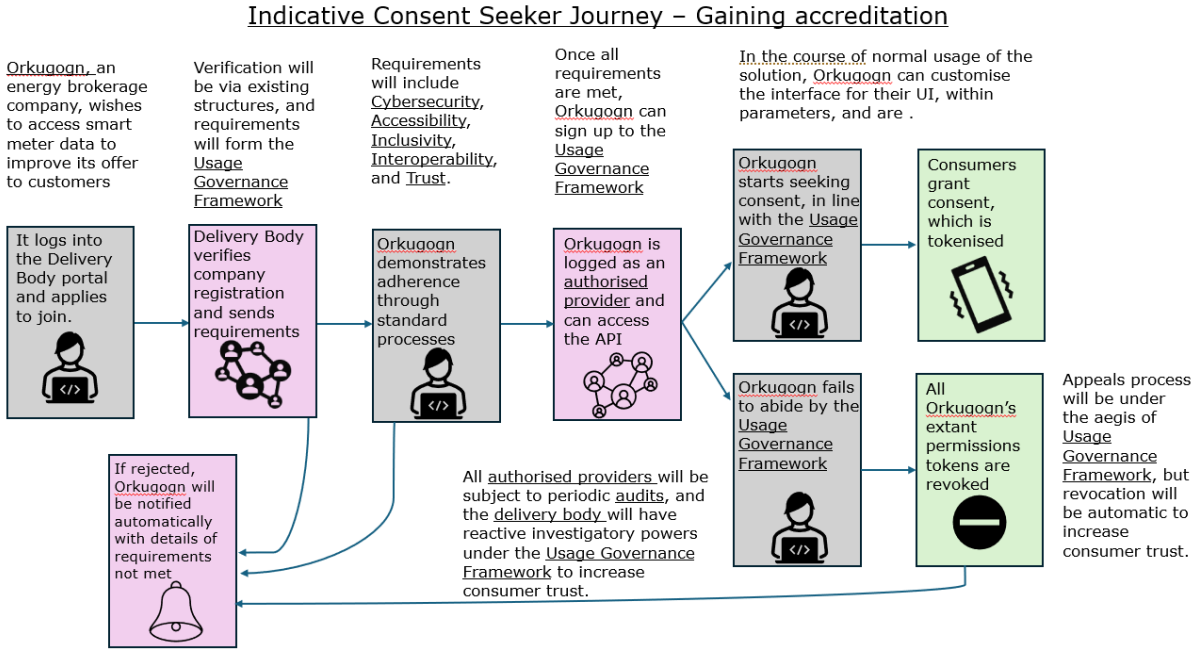


Figure 6: A diagram covering the indicative accreditation journey of a consent seeker. A screen reader accessible version of this diagram is available in text format below.

- Step 1: Orkugogn, an energy brokerage company, wishes to access smart meter data to improve its offers to customers. It logs into the Delivery Body portal and applies to join.
- Step 2: The Delivery Body then verifies the company's registration and sends requirements. This verification will be via existing structures, and requirements will form the Usage Governance Framework.

- Step 3: Orkugogn demonstrates adherence through standard processes. Requirements will include cybersecurity, accessibility, inclusivity, interoperability and trust.
- Step 4: Orkugogn is logged as an authorised provider and can access the API. Once all requirements are met, Orkugogn can sign up to the Usage Governance Framework. All authorised providers will be subject to periodic audits, and the Delivery Body will have reactive investigatory powers under the Usage Governance Framework to increase consumer trust.
- Step 5a: Ideally, Orkugogn starts seeking consent in line with the Usage Governance Framework and consumers begin granting consent, which is tokenised.
- Step 5b: Alternatively, Orkugogn fails to abide by the Usage Governance Framework, and all Orkugogn's extant permissions tokens are revoked. An appeals process will be under the aegis of the Usage Governance Framework, but revocation will be automatic to increase consumer trust. If rejected, Orkugogn will be notified automatically with details or requirements not met.

3.39 Our vision for the consent solution is that it will be data-source agnostic. Whether through Tokens and Protocols, or through another Data Architecture, the aim is that consent will not be dependent on where the data comes from. Initially, during the MVP, we propose the data made accessible through the consent solution will be smart meter consumption data, but we would encourage the Delivery Body to expand this initial offering to cover more, as detailed in paragraph 5.13.

3.40 The approach of focusing solely on consent, effectively creating a permissions management platform, would allow for mechanisms, such as Tokenisation of consent. Authentication Tokens are covered in more detail in the glossary, however, being able to 'Tokenise' a user's identity and scale and scope of their consent to a company has the potential to significantly increase the scalability of the solution.

3.41 This approach has the benefit of keeping the exchange of PII to the minimum required, for any exchanges of consent, even between authorised providers under the Usage Governance Mechanism.

3.42 These positions reflect Ofgem's considerations as to the most effective and practical design of a technical solutions, however we welcome views from all respondents

Q3. Do you consider the security measures referenced in this section, including the access control measures, will meet the requirements of a consent solution holding consumer data? Which additional protections would you recommend?

Accessibility

3.43 While we expect the Delivery Body to have control over the Protocol and API layers - and less direct control of consumer-interfacing applications and UX for granting consent – we would expect a requirement for clear, concise communications from any organisation participating in the consumer consent solution when creating consumer-interfacing applications. This would be explicit in the Usage Governance Mechanism and would be expected to be a criterion to be met before accreditation. Supervision of accreditation and membership of the Usage Governance Mechanism would be under the aegis of the Delivery Body as part of the requirements set by Ofgem.

3.44 The Delivery Body would retain direct control over the proposed consent management platform. This would be accessible via an application or similar mechanism, such as a mobile wallet. The immediate benefits to this are that consumers are more likely to be familiar with the design and concept, and the technology is tested and proven. We would require this solution, in whatever form, to be compliant with the standards of clear, concise communication.

3.45 The standards which we would expect the Delivery Body to deploy will include, but not be limited to, Web Content Accessibility Guidelines (WCAG) 2.2,[45] which contains 13 specific guidelines, with detailed success criteria. For accessibility and creating interactive platforms which are as accessible as possible for those with disabilities, vulnerabilities or additional needs, we would expect to see requirements to follow the Web Accessibility Initiative – Accessible Rich Internet Applications suite of web standards (WAI-ARIA).[46]

Q4. Do you consider these standards are sufficient parameters to ensure inclusivity, accessibility and interoperability for the consent solution? Which standards would you recommend?

[45] Web Content Accessibility Guidelines (WCAG) 2.2
[46] WAI-ARIA Overview | Web Accessibility Initiative (WAI) | W3C

Timeline

3.46 In terms of timelines for this project, we aim to publish a Consultation Decision Document in Winter 24/25.

Gantt	Summer 2024	Autumn 2024	Winter 2024/25	2025 & Winter/Spring 2026	Summer 2026
Consultation Opened					
Consultation Closed & Reviewed					
Delivery Body Announced					
Solution Development				Scoping and design (3 months), MVP progression (6 months), user testing (6 months), refinement and security (6 months)	
MVP Launch					

3.47 Whilst we are not specifying the technical design of this solution, we consider it appropriate for Ofgem to have oversight over final proposals by the Delivery Body. This will allow us to ensure the solution is delivered at a cost that is value for money for consumers.

3.48 We aim to review and approve or reject the solution agreed between Ofgem and the Delivery Body shortly after our consultation decision is published. Criteria for approval will be provided as part of the Decision Document.

3.49 If the proposed solution does not meet our requirements, the Delivery Body will have an additional period to submit a revised solution for approval. Once a

solution is approved, we expect work to commence immediately on developing a consumer consent solution.

3.50 As mentioned in paragraph 2.20, we commit to work with the selected Delivery Body to produce a Cost and Benefits Analysis (CBA) which will cover both the potential impact of the proposed policy as opposed to a do-nothing approach and the predicted costs of designing, developing and deploying a technical solution.

4. Implementation of the Consumer Consent Solution

Section summary

Following this consultation process, based upon the input received, we propose to select a Delivery Body to produce the consent solution. We will first outline this Delivery Body's objectives and remit. We will then describe how we identified the three potential Delivery Body options – RECCo, ElectraLink, and Smart DCC. We will also provide a description of the three proposed delivery bodies, along with some key considerations for each, and ask for the reader's preferred entity. Our minded-to position is to appoint RECCo as the Delivery Body.

Introduction

4.1 To deliver a successful and sustainable consent solution, a Delivery Body is required to develop, implement and maintain the solution. At the beginning of this section, we detail the criteria used to identify three organisations as potential delivery bodies for the consent solution. Following our details of the sifting process, we will describe the analysis criteria used to compare the three remaining organisations and provide the analysis itself.

Selection Criteria

4.2 We began our search for a Delivery Body by seeking to identify a pool of appropriate candidates. We would then go on to reduce the number in this pool as described by our sifting process below.

4.3 Our analysis of the CFI results and subsequent workshops, combined with our research of international implementations of consent solutions within energy systems revealed that experience within the energy industry, particularly experience of consumer data handling, was fundamental to the delivery of the solution. Alongside this experience of consumer data handling, the organisations should be familiar with the requirements of UK GDPR,[47] which is essential to the success of this solution. Speed of delivery is also key, and those already in the industry would require less knowledge acquisition and should have foundational infrastructure in place, such as energy data transfer mechanisms and industry connections, to begin developing the solution.

[47] UK GDPR guidance and resources | ICO

4.4 This significantly reduced the number of organisations that could deliver the solution. Following this initial sift, we considered that organisations that were specifically involved in the retail energy sector were most appropriate, with the understanding that organisations that regularly engage with a broad range of retail sector stakeholders would be most suitable due to the unique position the Delivery Body would hold within the industry. This includes suppliers, code bodies and third parties (such as Demand Side Response Service Providers, or DSRSPs), but excludes DNOs. Additionally, we consider that the Delivery Body should be a licensee, created under licence, or be within scope to become a licensee. This is to ensure regulatory oversight and accountability of the Delivery Body. This filter removed most third parties.

4.5 We assessed the independence of organisations by analysing their governance structures and ownership models, and by reviewing any relevant past organisational decisions. This led us to consider that the Delivery Body should not be an energy supplier or a DSRSP, due to the competitive implications of a market participant operating a monopoly solution for consent provision. Lastly, we increased the criteria based upon organisational capabilities, where we reviewed past successes in delivering new products or services and whether we considered the organisations would have the capacity to prioritise the consent solution, as this would be a large-scale and resource-intensive project. This led us to three organisations: ElectraLink,[48] RECCo,[49] and Smart DCC.[50]

Analysis Criteria

4.6 We assessed the prospective delivery bodies against four essential criteria and provided each organisation with a RAG (red/amber/green) rating against each of the criteria. The criteria are summarised below.

Implementation and Governance

4.7 Two of the major themes in the input received from our CFI were the importance of speed of delivery and the need for well-constructed and suitable governance. We decided to assess the three delivery bodies against the criteria of implementation and governance, emphasising the speed at which the

[48] About Us - ElectraLink
[49] About Us - Retail Energy Code Company
[50] What is the DCC? | Smart DCC

organisation would be able to deliver the solution, in addition to the efficiency and stability of the governance structures that would be implemented.

Independence

4.8 The consent solution should be delivered by a suitably independent organisation within the energy sector that will allow for a diverse range of perspectives. It should be able to balance the needs of government, industry and the consumer. This was assessed using organisational governance structures, ownership models and a review of past organisational decisions.

Operational Capabilities

4.9 The Delivery Body should have the resources, technological understanding, organisational knowledge and industry expertise to deliver and maintain the consent solution, with cooperation from industry. Although we have already assessed these three organisations on their operational capabilities during sifting, and believe all three could deliver a consent solution, this is a comparative and risk-based exercise.

4.10 We have assessed the three organisations based upon the following: their position within the industry (their level of exposure to and expertise within the appropriate systems and markets); their history of adopting new products, services or technologies with agility; and a consideration of their organisational capacity – whether the organisations could deliver the most optimal consent solution alongside their other programmes and services.

Engagement

4.11 The Delivery Body should have a presence within the retail energy sector, demonstrating the ability to cultivate relationships with a multitude of stakeholders. We expect the Delivery Body to cooperate with organisations for the consent solution's production. Additionally, we expect the Delivery Body to have a continued discourse with industry stakeholders, consumers and government to ensure the solution's maintenance and iterative improvement.

Funding

4.12 The funding of the proposed solution was another major theme within our CFI responses. Although we have not assessed or RAG-rated each Delivery Body's funding models, we describe them for your assessment of their suitability in delivering and governing the consent solution.

4.13 Cost recovery for the development, deployment and maintenance of a consumer consent solution will depend on which Delivery Body is selected. Ofgem is mindful that the funding model will necessarily be dependent on the Delivery Body selected, as each have proposed different funding approaches, depending on their own placement and revenue streams.

4.14 Ofgem has a duty to protect the interests of existing and future energy consumers, and we would expect considerations of fairness to be at the forefront of any funding decision and would want to avoid a presumption of any increase to consumer bills. We would expect to see those who benefit most from the consumer consent solution to pay and to avoid regressive costs. The example of Open Banking funding, wherein the general principle was that larger, incumbent banks paid initial set up costs with challengers paying progressively more as the information landscape became more symmetrical.

Analysis Framework – RAG Rating

RAG Analysis	ElectraLink	RECCo	Smart DCC
Implementation and Governance	*Amber*	*Green*	*Green*
Independence	*Green*	*Green*	*Green*
Operational Capabilities	*Green*	*Green*	*Amber*
Engagement	*Green*	*Green*	*Amber*

4.15 Each of the three potential delivery bodies are analysed in detail below, and Ofgem's preferred option is listed in paragraphs 4.76-4.77.

Option 1: ElectraLink

Company Overview

4.16 ElectraLink is a company wholly owned by the Distributed Network Operators (DNOs). ElectraLink was originally set up to comply with the obligation set upon DNOs under the Electricity Distribution Licence to provide, or procure the provision of, Data Transfer Services (DTS).[51,52] The DTS allows participants in the energy sector to share data safely and efficiently.

[51] Electricity Distribution Consolidated Standard Licence Conditions SLC 37, p.224
[52] DTS - ElectraLink

4.17 One of ElectraLink's products is a technical API system for sharing smart meter data. GoSmart is an API solution that enables organisations to identify smart meters and obtain granular data with necessary verification steps built into the process.[53] This provides a secure mechanism for consumers to share data without the need for additional governance or system development for the business.

Analysis Criteria

4.18 We assessed ElectraLink against the four essential criteria and our analysis has awarded them a green RAG rating for independence, operational capabilities and engagement and an amber RAG rating for implementation and governance. The analysis is summarised below.

Implementation and Governance

4.19 ElectraLink is not a licensed entity and therefore has a different relationship with Ofgem as it is not regulated. Although it is not regulated, ElectraLink's permitted activities are outlined in, and derived from, the Electricity Distribution Licence held by the DNOs and the Distribution Connection and Use of System Agreement (DCUSA), which is maintained under this licence. This is due to its origin as a company created by the DNOs, in order to provide or procure the provision of the DTS as part of this licence, and its role as secretariat and administrator for the DCUSA.

4.20 Unlike Smart DCC, which is licensed to operate under the Smart Meter Communication Licence, and RECCo, which is a body established in accordance with the REC, ElectraLink is a Central Systems Delivery Body (CSDB). As aforementioned, ElectraLink occupies the secretariat role for the DCUSA, which includes the role of code administrator, however these roles are not regulated under licence.

4.21 As such, for ElectraLink to assume the Delivery Body role, we could seek to modify the Electricity Distribution Licence in order to extend ElectraLink's requirements, as DTS provider, to include the development of a consent solution before further design and development work is undertaken. However, as ElectraLink is not a codified entity, like RECCo (within the REC), and not a licensee like Smart DCC, were the DNOs to change their provider of the DTS, the requirements within the licence would no longer apply to ElectraLink and we

[53] GoSmart - ElectraLink

would need to find a different route to implementation. The same applies to the DCUSA, were ElectraLink to cease being the code's secretariat and administrator.

4.22 Therefore, a bespoke framework for governance of ElectraLink would need to be developed, were it chosen as the Delivery Body. The process for drafting this governance framework would be extensive and could impact the timely delivery of the consent solution.

4.23 We are mindful that the possible introduction of Code Manager licences may alter this dynamic. However, at present, due to the impact that drafting a bespoke governance arrangement could have on the timely delivery of a consent solution, **we gave ElectraLink an amber RAG rating for implementation and governance.**

Independence

4.24 ElectraLink is a company wholly owned by the fourteen DNOs. Although there could be potential or perceived bias due to ElectraLink's ownership model, we consider the company has demonstrated its independence from the DNOs.

4.25 ElectraLink's independence from the DNOs can be evidenced in its operation of the Data Transfer Services Agreement (DTSA). The DTSA is the agreement that governs the use of the DTS. It lays out the service levels and obligations of the DTS and is defined and governed by the users of the service, independent of ElectraLink's ownership structure. This has been evidenced by the user group directing ElectraLink to deliver Data Services to the Energy System Operator Ltd (ESO) which could be considered as non-beneficial to DNOs.

4.26 Despite being owned by the DNOs, ElectraLink is subject to the same competitive procurement processes as any other organisation when DNOs are looking to partner for services. This aims to ensure independence and fairness. Moreover, due to the consent solution's placement within the competitive retail sector of the energy system and its lack of relevance to the operational endeavours of the DNOs, we see few scenarios where ElectraLink's ownership by the DNOs would bear any relevance to its decision-making regarding the consent solution's development or maintenance. **Therefore, we gave ElectraLink a green RAG rating for independence.**

Operational Capabilities

4.27 As operators of the Data Transfer Service (DTS), ElectraLink understands the data sharing landscape in the energy sector and has demonstrable experience in developing and operating data sharing products and services, such as the DTS

and GoSmart. In 2013, Ofgem provided the approval requested by DNOs to allow ElectraLink to explore and perform data, market and infrastructure support services for businesses in the electricity industry. Since this approval was granted, ElectraLink has delivered a number of data products for the sector since this approval was granted, such as GoSmart, and EMPRIS – an analytics platform that allows users to examine the UK energy market and other data to generate new insights into the market.

4.28 Therefore, ElectraLink has the experience and the remit (within the terms of their mandate from DNOs) to explore and deliver this solution. Due to its expertise in data transfer technologies and agility in adopting secretariat duties for the DCUSA, in addition to its API solution development, **ElectraLink were given a green RAG rating for operational capabilities.**

Engagement

4.29 As code administrator for the DCUSA, ElectraLink has regular contact with industry. The DCUSA is currently administered by ElectraLink under a commercial contract with DCUSA Ltd, a special purposes company owned by all DCUSA parties (made up of DNOs and electricity suppliers).[54] In addition, ElectraLink work with meter readers, meter installers, meter operators, software providers, data collectors and aggregators across all types of premises.

4.30 ElectraLink's relationship with industry is strengthened as operators of the DTS which facilitates the movement of information between energy suppliers, DNOs, metering agents and other market participants. ElectraLink works collaboratively with Ofgem, government, National Grid Electricity System Operator Ltd (NGESO) and Elexon Ltd (Elexon) to provide data on a daily basis to support the efficient monitoring of the energy market. **Therefore, we gave Electralink a green RAG rating for engagement.**

Option 2: The Retail Energy Code Company Ltd

Company Overview

4.31 The Retail Energy Code Company Ltd (RECCo) is a not-for-profit organisation that owns and manages the Retail Energy Code (REC).[55] The REC was established under SLC 11B of the Electricity Supply Licence and SLC 11 of the Gas Supply

[54] DCUSA Parties - DCUSA
[55] REC Main Body v2.0 (PDF)

Licence, and RECCo established pursuant to the code. All licensed energy suppliers, gas transporters, electricity distribution network operators, metering operators and Smart DCC must comply with the REC. As part of managing the REC, RECCo are also responsible for procuring and supplying a number of sector-wide digital services, such as the Gas and Electricity Enquiry Services and the Energy Theft Tip Off Service (ETTOS) which is operated by Crimestoppers, under contract with RECCo.[56,57] Ofgem has recently consulted upon the separating the provision of the Centralised Registration Service (CRS) from the Smart Meter Communication Licence and transferring that responsibility to RECCo.[58,59]

Analysis Criteria

4.32 We assessed RECCo against the four essential criteria and our analysis has awarded them a green RAG rating for implementation and governance, independence, operational capabilities and engagement. The analysis is summarised below.

Implementation and Governance

4.33 RECCo is not currently a licensed entity and therefore has a different relationship with Ofgem as it is not regulated, though Ofgem and the government have issued proposals to licence Code Managers.[60]

4.34 The activities that RECCo is permitted to undertake are outlined in the REC. As such, for RECCo to take on the Delivery Body role then the REC would need to be modified, extending RECCo's remit to include the development of a consent solution before further design and development work is undertaken.

4.35 Were RECCo to be appointed Delivery Body, Ofgem would explore the different processes for REC changes and select the most appropriate option for implementation. This decision would be based upon the REC change processes available to us, feedback from this consultation and our requirements for delivery.

[56] The Energy Theft Tip Off Service (ETTOS) is a service operated to report suspected theft of gas and electricity.
[57] The Services We Manage - Retail Energy Code Company
[58] DCC Review Phase 2: Governance and Centralised Registration | Ofgem
[59] The CSS supports the faster and more reliable switching of energy suppliers, allowing consumers to transfer necessary data within 5 working days.
[60] Energy code reform: code manager licensing and secondary legislation - GOV.UK

4.36 Due to the significant stakeholder engagement involved in a code modification and the benefits that could bring to the eventual consent solution, **we have awarded RECCo a green RAG rating for implementation and governance.**

Independence

4.37 RECCo is a not-for-profit organisation and does not have any products or services on sale in the retail energy market. Additionally, RECCo is fully operationally independent from REC Parties and is run by an independent (non-industry related) board of directors,[61] therefore we consider that there is no risk of potential or perceived organisational bias. For these reasons, we are confident in RECCo's independence and that it could deliver the consent solution impartially if appointed. **For this reason, we gave RECCo a green RAG rating for independence.**

Operational Capabilities

4.38 Following the recommendations made to government and the regulator by the Energy Digitalisation Taskforce report regarding consumer consent,[62] RECCo has been proactively engaged in their own consumer consent project for over two years, and as such we consider RECCo demonstrates a strong grasp of the relevant use cases and role requirements. RECCo is a retail-oriented organisation that is responsible for procuring and supplying multiple retail-focused services, such as the CRS and the ETTOS.

4.39 As the code owner for the REC, RECCo is well positioned within the industry to be appointed as Delivery Body. Since its formation in 2019, RECCo has adopted and supported the development of multiple systems and services with the purpose of improving outcomes for consumers, such as the CRS and ETTOS. In 2023, RECCo was selected as the reconciliation operator for the delivery of the non-volumetric payment levelisation programme, and as such would develop the industry processes surrounding the programme.

4.40 The agility with which RECCo has developed these services and integrated them with their business-as-usual work, in addition to its retail-focused nature and long-term engagement with, and therefore expertise in, their own consumer consent project, **resulted in a green RAG score for its operational capabilities.**

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[61] Meet the Board - Retail Energy Code Company
[62] ESC Energy Digitalisation Taskforce Report 2021 (PDF)

Engagement

4.41 As code owner for the REC, RECCo regularly engages with parties that will be involved in the consent solution's use, parties that include electricity suppliers, gas suppliers and electricity DNOs.

4.42 RECCo take a purposeful approach to stakeholder engagement for each project such as evolving the code owner role,[63] Market-Wide Half Hourly Settlement (MHHS),[64] and the new Enquiry Service.[65] RECCo sets a baseline for what a project needs then seeks representation from suppliers, DNOs, metering equipment managers and third parties to set up a stakeholder advisory group. We view this tailored approach as standing RECCo in good stead to engage with third party innovators, and Other User groups who have the potential to interact with the solution. Third parties have previously included consumer bodies such as Citizens Advice and 'Which?'. Therefore, **we have given RECCo a green RAG rating for engagement.**

Option 3: Smart DCC

Company Overview

4.43 As a wholly owned subsidiary of Capita PLC,[66] Smart DCC is a company which holds or operates a monopoly under the Smart Meter Communications Licence,[67] which is regulated by Ofgem. It is responsible for linking smart meters in homes and small businesses with energy suppliers, network operators and a fast-growing category known as 'Other Users'.[68] Smart DCC ensures that the smart metering system as a whole works smoothly and it holds a crucial role in ensuring the successful rollout and ongoing operation of smart metering in the GB energy market. Regardless of which Delivery Body is selected, Smart DCC is likely to be involved in the consent solution's infrastructure due to its unique position in the industry as a processor of consumer energy data.

4.44 The Energy Digitalisation Taskforce report, which recommended the consumer consent project, stated: "This could be implemented centrally through an entity

[63] Join the Stakeholder Advisory Group as we evolve the Code Manager - Retail Energy Code Company
[64] Stakeholder Advisory Group - Retail Energy Code Company
[65] Join the new Stakeholder Advisory Group as we evolve the Enquiry Services - Retail Energy Code Company
[66] About Capita | Capita's purpose, approach and values
[67] Smart Meter Communication Licence | Ofgem
[68] Other User - Smart Energy Code

such as the Smart DCC or in a distributed way enabled by standards and common interfaces combined with a standalone portal".[69]

4.45 Smart DCC is connected to and, in many cases, directly integrated with critical segments of the energy sector (including DNOs and energy retailers of all sizes, known as 'Core Users', and Other Users). Currently, it supports secure messaging across 31 million meters and 78 million devices in over 18 million homes.[70]

Analysis Criteria

4.46 We assessed Smart DCC against four essential criteria and our analysis has awarded them a green RAG rating for implementation and governance and independence, and an amber RAG rating for operational capabilities and engagement. The analysis is summarised below.

Implementation and Governance

4.47 In practice, if chosen to be the Delivery Body, we would set out the roles and responsibilities in Smart DCC's licence (the Smart Meter Communications Licence) and in the relevant governance documents. This would define the Delivery Body's role in detail, including setting out our expectations alongside any specific reporting and governance requirements, which would be cross-referred to the Licence to ensure enforceability for the consent solution's development.

4.48 We are aware that the term of the current Smart Meter Communication Licence is due to expire in September 2025; however, we previously indicated that we considered it likely necessary to extend the Licence for an additional 12-36 months.[71] Additionally, following the expiry of the current Licence, a Successor Licence will be put in place, held by a Successor licensee. However, as ElectraLink and RECCo are unlicensed, we have not reduced Smart DCC's RAG rating based upon this factor.

4.49 Embedding the consent solution's development into the overarching Smart DCC regulatory framework would provide Ofgem with the tools to ensure there is a clear remit, governance, rules, and transparency, as called for in responses to our November CFI. **Therefore, we gave Smart DCC a green RAG rating for implementation and governance.**

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[69] ESC Energy Digitalisation Taskforce Report 2021 (PDF) (p.21)
[70] Smart meter statistics and network coverage | Smart DCC
[71] DCC Review Phase 2: Governance and Centralised Registration Service arrangements | Ofgem

Independence

4.50 As Smart DCC's activities are directly regulated by Ofgem and the principle of non-discrimination is already embedded in the Licence under LC 11 Part C,[72] in terms of provision of services to industry, there is little risk of potential or perceived bias. However, we are cognisant of the potential risk of vertical integration concentrating control in one company. As Smart DCC holds responsibility for the operation of the smart meter data transfer system, were they to be selected as the Delivery Body, this would risk entrenching and expanding a monopoly position. Ofgem would need to implement extensive governance arrangements, cross-referred to the Licence, in order to address this risk.

4.51 On balance of these points, although we are aware of the potential risk of creating vertical integration within Smart DCC were the company to be appointed Delivery Body, we are confident in Smart DCC's impartiality within the industry and would implement the necessary governance arrangements to address any problems that could arise from vertical integration. **Therefore, we gave the company a green RAG rating for independence.**

Operational Capabilities

4.52 Smart DCC is an integral part of Great Britain's smart metering system. As such, it has extensive experience and knowledge regarding smart meter data, the transfer of smart meter data and the governance and legality surrounding that data transfer – such as the UK GDPR rules surrounding consent.

4.53 Through the Operational Performance Regime (OPR), Smart DCC is set targets for several components of their operational performance, such as service availability, install and commission, and message response times – these referenced targets constitute 70% of the OPR and a maximum score against these metrics has consistently been achieved.

4.54 However, for the regulatory year 2022/23, Smart DCC's contract management performance was assessed by an independent auditor against a modified National Audit Office (NAO) framework. Smart DCC received a score of 1.71 out of a possible 3 from Ofgem, including a score of 1 out of 3 for the questions "Does [Smart] DCC have the necessary capability, skills and systems?" and "Is [Smart] DCC meeting its obligations?" in respect of contract management and service

[72] Smart Meter Communication Licence 22 01 2021 | Ofgem p.64

being managed well, with costs and benefits being realised as expected.[73,74] Ofgem acknowledge that the audit is annual and that DCC can improve on previously attained scores, noting an OPR score for 23/24 will be consulted on in October.

4.55 Additionally, responses have been submitted to an Ofgem publication identifying concerns that "the central platform service [Smart DCC] was too focused on supporting future services rather than ensuring its reliability". However, Smart DCC responded stating that it only looks at future services under limited circumstances.[75]

4.56 Smart DCC does have experience in developing and operationalising backend technologies; in 2020, the organisation developed and launched the Interoperability Checker in conjunction with Citizens Advice, the Department for Business, Energy and Industrial Strategy (BEIS) and industry.[76,77] Additionally, Smart DCC played a role in delivering the SMETS1 Enrolment and Adoption programme, to which the Interoperability Checker is associated, and in delivering the Faster Switching Programme.

4.57 Despite the success of the Interoperability Checker in particular, due to the amount of work and consistent attention Smart DCC's primary focus and licensed activity requires, and the amount of attention and focus this consent solution will require, we consider that Smart DCC risks a current lack of capacity and prioritisation for this consent solution's optimal delivery. **For these reasons, its RAG rating for operational capabilities in developing this consent solution is amber**.

Engagement

4.58 Smart DCC engages with all those that are parties to the Smart Energy Code (SEC),[78] such as gas networks, electricity networks and suppliers, through the SEC panel and sub-committees it attends.[79] Details of engagement events are

[73] DCC Price Control Consultation: Regulatory Year 2022/23 | Ofgem
[74] DCC Price Control: Regulatory Year 22/23 | Ofgem
[75] Update on the rollout of smart meters - NAO
[76] Check if your smart meter should work in smart mode - Citizens Advice
[77] BEIS is the former name for the Department for Energy Security and Net Zero (DESNZ).
[78] The Smart Energy Code (SEC)
[79] Current SEC Parties - Smart Energy Code

communicated to SEC Parties via the newsletter and published on the SEC and Smart DCC websites.

4.59 Smart DCC has been proactive in participating in innovation programmes to ensure the smart meter systems are of benefit to the sector and have direct consumer interactions. Initiatives have included several fuel poverty projects through the Modernising Energy Data Applications (MEDA),[80] and a viability trial with DESNZ for the Automatic Registration Programme (AAR).[81] Through Ofgem's Permitted Purpose consent,[82] this enabled access to anonymised smart meter system data to charities, local authorities and academia.

4.60 We have considered Smart DCC's attainment under the customer engagement element of OPR. However, there are documented concerns over Smart DCC's overall engagement in the review of Smart DCC's costs for the 2022/23 Regulatory Year (RY22/23)[83]

4.61 Smart DCC's customer engagement is financially incentivised under the revised OPR. Smart DCC's performance in this area is assessed based on qualitative submissions received from both Smart DCC and the SEC panel. The assessment covers three sections: timing and frequency of engagement; quality of information provided by Smart DCC; and accountability of customer views.

4.62 Since the OPR was implemented, Smart DCC has demonstrated year on year improvement. Moving from a score of 1.17 in regulatory year 20/21 to 2 in RY22/23. For the customer engagement incentive, Ofgem received submissions from both Smart DCC and the SEC Panel on their performance during RY22/23. After assessing both submissions Ofgem were minded to award a score of 2, corresponding to a reduction of Smart DCC's Baseline Margin (BM) by £0.381m.[84]

4.63 It was stated that Ofgem appreciates that Smart DCC provided some examples of facilitating customer views at appropriate times, however there are raised examples of Smart DCC not always following up on discussions, poor communication or inconsistent messaging across different forums, and Smart DCC presentations at meetings not being up to standard.

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[80] Using data for public benefit and to tackle fuel poverty | Smart DCC
[81] Government-funded innovation projects | Smart DCC
[82] Consent granted to DCC under Conditions 9 and 10 of the Smart Meter Communication Licence, and Section M4.3 of the Smart Energy Code - August 2023 | Ofgem
[83] DCC Price Control Consultation: Regulatory Year 2022/23 (ofgem.gov.uk)
[84] DCC Price Control Consultation: Regulatory Year 2022/23 (ofgem.gov.uk)

4.64 **For this reason, we have given the Smart DCC an amber RAG rating for engagement.**

Funding

ElectraLink

4.65 ElectraLink is a private commercial business that is unique in operating both a cost-recovery service through the DTS, paid for by market participants, alongside a commercial proposition with their data services for the wider energy sector.

4.66 ElectraLink operate three different types of funding mechanisms within their business:

4.67 Funding Mechanism 1: 'Standard DTS' cost recovery. ElectraLink charge organisations for usage of the DTS based on yearly calculation of service costs, which is then distributed to parties based on connection, data usage and scale. Charges are reviewed annually to ensure an appropriate level of recovery against the changing costs of the service. Cost recovery operates a five-year cycle which means ElectraLink can invest in change without significantly impacting parties in any given year.

4.68 Funding Mechanism 2: 'User Pays' cost recovery. The user pays model allows new services to be added to the cost recovery mechanism of the DTS but only charged to the actual users of the service, rather than spread across all users. In the event of the charges exceeding the costs of the service, the surplus is either returned to the DTS user community through the standard DTS charges or back to the users of the service via a reduction in pricing in later years.

4.69 Funding Mechanism 3: Fully commercial services. ElectraLink could invest in services upfront using reserves, then charges users that benefit from access to the service. The price is set to recover costs (and risk) over the asset's lifetime, with adjustments based on usage in subsequent years. This ensures that cost burden does not fall on energy bill payers through supplier charges, instead the service is recovered from organisations seeking to improve their own business models.

RECCo

4.70 RECCo publishes an annual strategy, forward work plan and associated budget that sets out expected costs to be incurred by RECCo over an annual period.[85] All budgeted costs are recovered from REC parties and other service users through a cost recovery mechanism.[86] RECCo publishes its charging statement on its portal with three-year financial projections to enable REC Parties to plan for the longer term and provide financial context to the strategic plan.[87] RECCo has a defined budgeting process, therefore it is not reliant on bespoke funding from the government or the regulator. REC Parties are given the opportunity to review the budget and, if necessary, have the right to appeal specific line items to Ofgem.[88]

4.71 RECCo's income matches its costs in each financial year and any underspend (including change allowance and contingency) against the overall budget is returned to funding parties as a rebate against the following year's charges. RECCo has had no occurrences of overspend since its creation. RECCo informed industry on its consumer consent work in its 2024/25 forward work plan and would expect to fund any work during the current financial year from its existing contingency and/or change allowances.[89] That will avoid any additional and unexpected costs for its funding Parties.

Smart DCC

4.72 Under the current Licence, Smart DCC's costs are subject to an annual price control review by Ofgem. Smart DCC is required to justify its incurred and forecast costs. Ofgem has the power to disallow any costs deemed not to be economic and efficient, that can be removed from Smart DCC's Allowed Revenue. Through the Price Control, Ofgem is seeking to ensure that Smart DCC can make required investments to deliver a good quality of service for all, whilst also assuring the organisation delivers an efficient operation. Costs of Smart DCC's mandatory business are recovered by charges on energy suppliers, network operators and other authorised users through the SEC – Other Users are not currently exposed to Smart DCC charges. However, there is currently a review of

[85] Introducing our 2024-25 Budget - Retail Energy Code Company
[86] Schedule 10 - Charging Methodology (PDF)
[87] REC Charging Statement - REC Documents - REC Portal
[88] In accordance with Clause 9.7 of the REC Main Body document.
[89] RECCO Forward Work Plan 2024-27 (PDF)

the SEC charging methodology, and the Smart DCC charges are subject to change.[90]

4.73 The charges are reviewed annually to ensure they are cost reflective and non-discriminatory and published in Smart DCC's charging methodology statement.[91] Smart DCC currently operates under a shareholder-controlled, for-profit model. The company is allowed to earn 15% baseline margin on its internal costs, put at risk against performance regimes. Additionally, the shareholder earns Shared Service Charge on a qualified portion of Smart DCC's Internal Costs. Ofgem could intervene and set new margin levels for a consent solution to be developed, as evidenced by the Smart DCC's Faster Switching programme.[92] As part of Ofgem's review paper in 2023, we consulted on reducing these levels for the remainder of the licence term; a decision is expected later this summer.[93]

4.74 The conditions of Smart DCC's baseline profit margin, as well as all risks against performance regimes have been set out as licence conditions on the basis of Smart DCC's current role as custodian of the smart meter data system. However, were Smart DCC to be selected as the Delivery Body, this would mean the company could directly profit from the delivery and governance of a consumer consent solution, unless Ofgem directed them otherwise.

4.75 As part of Ofgem's ongoing review of the regulatory arrangements for DCC, in 2023, we set out our intention to move to an *ex-ante* regime for Smart DCC's cost control under the Successor Licence. Ofgem also said that, where possible, we would consider implementing changes early to realise the benefits of the new regulatory framework. A consultation on the detailed design and implementation plan is expected by early autumn 2024.

Preferred option

4.76 Given the detail described in the analysis above, Ofgem's minded to position is that RECCo is best placed to take this work forward as the Delivery Body. RECCo has been developing work on consumer consent on its own initiative since the Energy Digitalisation Taskforce report and has planned for funding this workstream.

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[90] DP218 'Review of the SEC Charging Methodology' – Request for Information (RFI) | Smart DCC
[91] SEC Section K – Charging Methodology
[92] Centralised energy supplier switching service | Smart DCC
[93] DCC review: Phase 1 Decision | Ofgem

4.77 There are no concerns regarding vertical integration, funding, or engagement, nor are there operational concerns. **For these reasons, our preferred option is RECCo as Delivery Body.**

Q5. Do you agree with the options assessment conducted by Ofgem? If not, why?

Q6. Do you agree with Ofgem's minded-to position that RECCo should be selected as the Delivery body for the consent solution? If not, which of the three proposed organisations should be selected as the Delivery Body for the consent solution, and why?

Q7. Do you hold any views as to how the proposed solution should be funded? Please consider the points regarding fairness raised in paragraphs 4.12–4.14 and Ofgem's duty to consumers when providing your answer.

5. Landscape – Current and Future

Section summary

Consumer consent will not be an isolated programme, and the increasingly interconnected nature of the energy system requires an understanding of where and how any solution will interact with the other data flows, programmes, and initiatives; both as the landscape is now, and those in flight, planned, and existing in potential. This section aims to set out where Ofgem see the solution fitting into the data ecosystem of the energy sector, an aspect of horizon-scanning, and alignment with the current and planned regulatory frameworks.

Placement of the solution – licence condition

5.1 We consider it important to clarify whether the use of the consumer consent solution will be an obligation on organisations seeking to access consumers' energy data. Our proposed position is that it will be an obligation for supply licensees to report where consent has been obtained in the consumer solution, i.e. a consumer should be able to log into the consumer solution via a dashboard or application and see the data which a supply licensee is accessing and what this data is used for (under contractual conditions).

5.2 We are not proposing to require supply licensees to use the consumer consent solution to obtain consent from consumers, as individual licensees may already have effective processes in place for obtaining consent from their consumers that would be costly to change. We expect that some licensees will adopt the consent seeking side of the consumer consent solution despite it not being an obligation.

5.3 Our proposal is that the obligation on supply licensees to use the consumer consent solution would come from licence obligations under SLC 0,[94] particularly SLC 0.3 of both gas and electricity supply licences.[95,96] We have considered the inclusion of a new licence condition requiring holders of supply licences to use the consumer consent solution, however, we feel that the strict conditionality of a new licence condition is not the most effective method of achieving compliance at this time.

[94] Electricity Supply Standard Consolidated Licence Conditions - Current (PDF) | Ofgem
[95] Gas Supply Standard Licence Conditions | Ofgem
[96] Electricity Supply Standard Consolidated Licence Conditions - Current (PDF) | Ofgem

5.4 We expect third party consent seekers whose activities do not fall under Ofgem regulation, such as innovators and academic users, to have sufficient motivation to apply to become accredited users of the solution, as they will more easily garner informed consent to access heretofore inaccessible data, and develop new products, innovations, and beneficial research.

Questions

Q8. Do you agree with our position to make sharing consent data with consumers (via the consent solution) an obligation for licensees?

Q9. Do you consider SLC 0 an appropriate route for implementing these changes, or should Ofgem create a bespoke licence condition?

Marketing

5.5 A point from the CFI which was near universal was that any consumer consent solution will require a considerable effort in terms of marketing, education, and awareness raising among consumers to be effective. While we do not propose to develop a campaign in this consultation, as we deem that to be premature without further responses from industry, we have questions to pose on the placement of the solution. The details of a full marketing/information campaign are outside the current purview of this consultation, and we feel there is a mandate to require this of the Delivery Body, based upon the CFI.

5.6 We propose to detail the expectations of the Delivery Body in creating and managing the marketing campaign in the Decision document. Without a Delivery Body selected, it is too early to effectively design a marketing campaign.

Alignment with other initiatives

5.7 We are cognisant of other moving parts of the industry, and rapid digitalisation. There are cross-sectoral and cross-government initiatives which will touch on the consumer consent work, such as the proposed single, multi-sector Priority Services Register (PSR), as well as Digital Identity scheme which could potentially affect the consumer consent solution, as an enabler, but not a dependency. [97],[98]

5.8 Within Ofgem, the main workstreams we will seek to develop the MVP in lockstep with are the MHHS programme, Smart Secure Energy System (SSES), Flexibility

[97] Smarter Regulation: Strengthening the economic regulation of the energy, water and telecoms sectors - GOV.UK
[98] Enabling the use of digital identities in the UK - GOV.UK

Digital Infrastructure policy work, Data Sharing Infrastructure (DSI), and Energy Code Reform (ECR)[99,100,101,102].

5.9 The consumer consent solution – designed as it is to be data source-agnostic – can enable greater value from MHHS by opening up smart meter data from the Elexon Data Integration Platform (DIP). SSES, and Flexibility Digital Infrastructure (FDI), and Automatic Asset Registration and Common Asset Registration (AAR and CAR) will interoperate and be enabled by a smoother and more standardised method of recording consent.

5.10 The DSI is likely to share elements of design with the consent solution, such as a Trust Framework. There is potential for the DSI to transfer consumer data in future iteration, which could interact with the solution. With the potential placement of the solution in the REC, any future changes to that code through the ECR will need to be discussed in order to properly align the design of the solution governance framework and Delivery Body role with the intent of the review. Should another regulatory framework, such as another code, be selected through this consultation, alignment with the ECR will still be required to join up initiatives.

Timelines

5.11 The consultation opened in summer 2024 and will be closed for review in autumn 2024. The chosen delivery body will be announced in winter 2024/25 alongside the Decision Document. The solution will be developed throughout 2025 and the first half of 2026. This will include scoping and design for three months, MVP progress for six months, user testing for six months and refinement and security for six months. We expect the MVP to be launched in summer 2026.

5.12 We will ensure that the governance of the Delivery Body focuses on alignment and interoperability, to avoid siloed developments, or a lack of effective synergy with the parallel developments. However, we do not intend a much-required solution to be delayed in the hope of perfect interoperability. Design of this solution has been set up with an agile working approach in mind and we expect the Delivery Body to 'horizon scan' and interact with other workstreams to build interoperability and futureproofing into the solution from the outset.

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[99] Delivering a smart and secure electricity system: implementation - GOV.UK
[100] Flexibility Market Asset Registration | Ofgem
[101] Governance of the Data Sharing Infrastructure | Ofgem
[102] Energy code reform: implementation consultation | Ofgem

5.13 Once an MVP is in place and consumers can access the solution to grant and manage consent, we will drive the Delivery Body likely through code requirements to expand the remit of the consumer consent solution in scope of data accessible through consent:

- Time of Use Tariff (ToUT) data – *This will interact with Smart Secure Electricity Systems (SSES) workstreams by Ofgem and DESNZ and the design of the new aggregator/load controller licence regime.*[103]
- Energy Smart Appliance (ESA) Data – *This will interact with the Asset Registration workstream from DESNZ and the Flexibility market design by Ofgem.*[104]
- Consumer profiles – *This will interact with the Single PSR workstream, amongst others.*
- Credit data – *This will interact with the Single PSR workstream, amongst others.*
- Energy Theft data – *This will interact with ElectraLink and the REC's Theft Advisory Service, as well as other agencies.*

5.14 We would also seek to drive the Delivery Body to expand the scope of those who can access the solution, following the successful launch of an MVP, aiming to add non-domestic consumers on a staged basis. Discussions of the appropriate stages and groupings of non-domestic consumers will be held between the Delivery Body and Ofgem once suitable stage gates have been reached.

5.15 Some timelines are more developed than others across the parallel programmes, however we have added the publicly available timelines for comparison. We have prepared a high-level comparison of the MHHS Timelines and SSES Timelines.[105,106]

[103] Smart Secure Electricity Systems Programme consultation: summary document - GOV.UK
[104] Call for Input: The Future of Distributed Flexibility | Ofgem
[105] Delivering a smart and secure electricity system: implementation - GOV.UK
[106] Planning - MHHS Programme

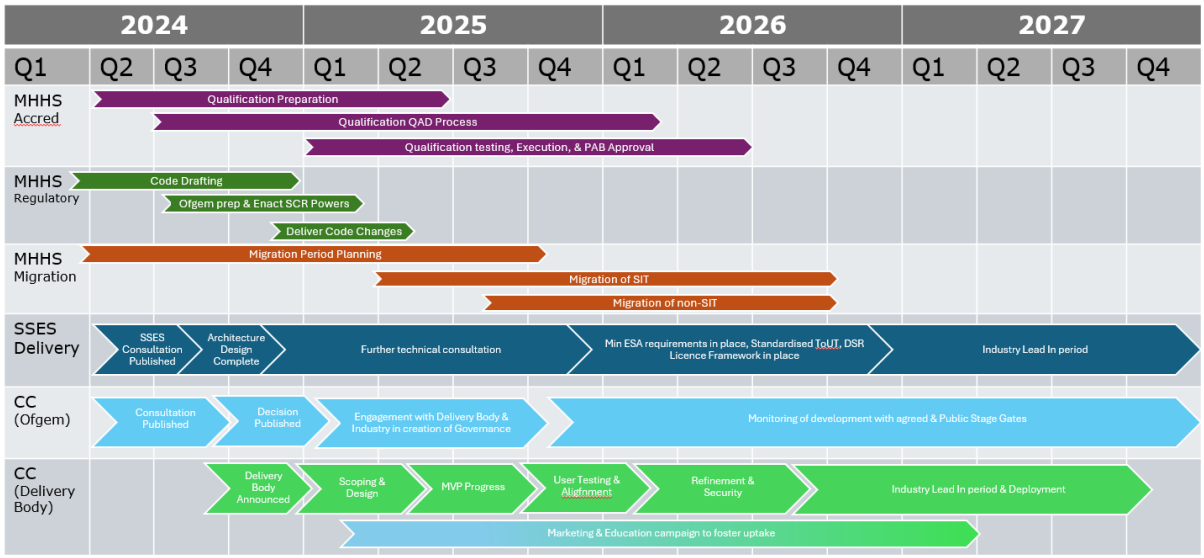

Figure 7*: High level timeline of associated workstreams*

Text version:

MHHS Accreditation stream: Qualification preparation 2024 Q2 – 2025 Q2; Qualification QAD Process 2024 Q3 – 2026 Q1; Qualification testing, Execution, & PAB Approval 2025 Q1 – 2026 Q2

MHHS Regulatory stream: Code Drafting 2023 Q4 – 2024 Q4; Ofgem prep & Enact SCR Powers 2024 Q3 – 2025 Q1; Deliver Code Changes 2024 Q4 – 2025 Q2

MHHS Migration Stream: Migration Period Planning 2023 Q4 – 2025 Q4; Migration of SIT 2025 Q1 – 2026 Q3; Migration of non-SIT 2025 Q3 – 2026 Q3;

SSES Delivery Stream: 2024 Q2-3 SSES Consultation Published; 2024 Q3-4 Architecture Design Complete; 2024 Q4-2025 Q4 Further technical consultation; 2025 Q4 – 2026 Q4 Min ESA requirements in place, Standardised ToUT, DSR Licence Framework in place; 2026 Q4-2027 Q4 Industry Lead

Consumer Consent (Ofgem) Stream: 2024 Q2-3 Consultation Published; 2024 Q4 - 2025 Q1 Decision Published; 2025 Q1 – 4 Engagement with Delivery Body & Industry in creation of Governance; 2025 Q4 – 2027 Q Monitoring of development with agreed & Public Stage Gates

Consumer Consent (Delivery Body) Stream: 2024 Q4-2025 Q1 Delivery Body Announced ; 2025 Q1 - 2 Scoping & Design; 2025 Q2 – 3 MVP Progress; 2025 Q4 – 2026 Q1 User Testing & Alignment; 2026 Q1 – 3 Refinement & Security; 2026 Q3 – 2027 Q4 Industry Lead In period & Deployment; 2025 Q1 – 2027 Q2 Marketing & Education campaign to foster uptake.

6. Conclusion

6.1 The unprecedented period of change the energy sector faces has created a generational opportunity and a consumer consent solution will provide an enabling environment for the multitude of initiatives needed to reach both a near-zero power system by 2030 and a net zero economy by 2050.

6.2 Our November CFI provided a clear justification for a solution, with 87% of respondents seeing the need for the creation of a solution for the issues around consumer consent. The subsequent engagement and workshops have only solidified the understanding of problem and narrowed down possible solutions. The majority view was that a technical solution, delivered by industry, was the most effective path to improvement.

6.3 In striking a balance between providing the specifics and technical detail requested during the CFI and workshops; and ensuring that the chosen Delivery Body had freedom to scope and design the solution, we have taken a principles-based approach to the requirements. We have only specified a minded-to position when necessary and have ensured that this consultation asks questions of industry and respondents, rather than presenting a formulated plan for approval or otherwise. We now welcome your views on the technical design of a consent solution.

6.4 Ofgem, however, has retained regulatory oversight of the design proposed by the Delivery Body, as is appropriate for a prudent regulator. We will also select placement of the solution to ensure clear and unambiguous regulation, ownership and governance.

6.5 We have proposed three candidates for a potential Delivery Body of the consent solution, and clearly laid out our analysis of the strengths and weaknesses of each. We have proposed the Retail Energy Code company as our preferred option to be this Delivery Body and welcome industry views on who should be selected as the Delivery Body.

6.6 We have proposed to require supply licensees to record, through the consent solution, the consent they have obtained from consumers to access their data. We propose this is required under the auspices of SLC0 of the electricity and gas supply licences.

6.7 We welcome the views of interested parties on our specific questions asked within this consultation, and general thoughts on our proposals. These views will inform and refine our final policy position and decision on the eventual solution.

Next steps

6.8 We have selected an eight-week period for responses to this consultation, due to the complexity and involved nature of what we are consulting on. While the consultation is open, we will engage with the three potential delivery bodies and other stakeholders to set expectations.

6.9 We aim to publish the consultation Decision Document, based upon analysis of the responses to this consultation, during Winter 2024/2025.

Appendices

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Appendix 1 – List of Questions

1. Do you agree with these Design Principles? Would you recommend any additional Design Principles?
2. Do you have a preference between the centralised, decentralised or hybrid models? Please elaborate.
3. Do you consider the security measures referenced in this section, including the access control measures, will meet the requirements of a consent solution holding consumer data? Which additional protections would you recommend?
4. Do you consider these standards are sufficient parameters to ensure inclusivity, accessibility and interoperability for the consent solution? Which standards would you recommend?
5. Do you agree with the options assessment conducted by Ofgem? If not, why?
6. Do you agree with Ofgem's minded-to position that RECCo should be selected as the Delivery Body for the consent solution? If not, which of the three proposed organisations should be selected as the Delivery Body for the consent solution, and why?
7. Do you hold any views as to how the proposed solution should be funded? Please consider the points regarding fairness raised in paragraphs 4.12–4.14 and Ofgem's duty to consumers when providing your answer.
8. Do you agree with our position to make sharing consent data with consumers (via the consent solution) an obligation for licensees?
9. Do you consider SLC 0 an appropriate route for implementing these changes, or should Ofgem create a bespoke licence condition?

Appendix 2 – Glossary

Term	Definition
Advanced Meters	An advanced meter is a meter available to non-domestic customers that has the capability to send half-hourly meter readings from the meter to the energy supplier, however it does not have the same degree of functionality as a smart meter. For example, an advanced meter only communicates from the customer to the energy supplier, whereas a smart meter has two-way communication between the energy supplier and the business customer. Smart meters can also send much more information than an advanced meter.
AES Encryption	Advanced Encryption Standard is a specification of encryption of data established by the US National Institute of Standards and Technology (NIST) in 2001. AES 256 bit is considered to be the 'gold standard' for encryption, and considered 'quantum resistant', if not 'quantum safe'. See Post-Quantum Cryptography (PQC).
Application Programming Interface (API)	A software intermediary that allows two applications to talk to each other. For example, to allow data to be extracted or shared within or between organisations.
AAR/CAR	The Automatic Asset Registration (AAR) Programme provided an opportunity to develop innovative solutions for asset registration that will facilitate digitalisation of the energy system. Phase 2 of the Automatic Asset Registration (AAR) programme, currently underway, will support a project to develop a solution for automatically registering small-scale energy assets and an accompanying Central Asset Register (CAR). The Phase 2 project was selected from the Phase 1 winning projects.
Central System Delivery Body (CSDB)	Bodies considered responsible for the IT systems underpinning the code arrangements and subsequently designated by the Secretary of State under s184 of the Energy Act 2023.
Central Switching Service (CSS)	A service provided by Smart DCC to transfer data, payment details, and account information on switching energy provider.
Centralised Data Repositories	A single owner's dataset that they are willing to share, via a single point of access (geographical or virtual) on a limited basis, with a set of rigid access frameworks around this data. See also the definition for 'decentralised data repositories'.
Certificate	A file or electronic password that proves the authenticity of a device, server, or user through the use of cryptography and the Public Key Infrastructure (PKI) Authentication of same helps ensure that only trusted devices and users can connect to their networks.
Conceptual Data Model	A visualisation, commonly indicative and created at the design stage, representing the data elements and the relationships between them.
Core Principles	The core principles are the foundational principles of the consumer consent project. They are the principles that have underpinned the project from the beginning, and in conjunction with feedback from our CFI, they helped form our Design Principles outlined in this document.
DAPF	The smart metering Data Access and Privacy Framework determines the levels of access to energy consumption data from smart meters for energy suppliers, network operators and third parties. It also establishes the purposes for which data can be collected and the choices available to consumers. Definition taken from the UK Government.

Data Asset	Any entity that is comprised of data. For example, a database is a data asset that is comprised of data records. A data asset may be a system or application output file, database, document, or web page. A data asset also includes a service that may be provided to access data from an application. For example, a service that returns individual records from a database would be a data asset. Similarly, a web site that returns data in response to specific queries (e.g. www.weather.com) would be a data asset. This definition is taken from National institute of Standards and Technology (NIST).
Data Architecture	A visualisation which defines how information flows in an organisation for data assets and governs how they are controls. The aim of an architecture is to translate system requirements into more human-readable formats.
Data Best Practice Guidance	Principles and expectations for licensees to follow when preparing Digitalisation Strategies and Action Plans. Part of Ofgem's standards for data and digitalisation.
Data Controller	The person (usually an organisation) who decides how and why to process data. Definition taken from ICO.
Data Integration Platform (DIP)	The DIP is a key component of the Market-wide Half Hourly Settlement programme facilitated by Elexon and provided by Avanade. Described by Elexon as "the new message orientated event-driven middleware component that will support the flow of events and messages between industry participants"; it is a data warehouse containing smart meter data flows to allow suppliers to settle energy used in markets on a half-hourly basis.
Data Lake	A centralised storage facility which contains untransformed or unstructured data in its raw format.
Dataset Agnostic	Any solution which processes permissions management to access multiple datasets without specification.
Data Warehouse	A centralised storage facility which is structured and contains filtered data which has been processed for a specific purpose.
Decentralised Data Repositories	Decentralised data sharing involves core participant data remaining within the participant's governance, and other known participants having access to a standardised version of the data in an agreed format. This allows for the sharing of data across multiple organisations and multiple geographical locations with all participants and locations known to all participants. See also the definition for 'centralised data repositories'.
DESNZ	The Department for Energy Security and Net Zero (DESNZ) is focused on the energy portfolio from the former Department for Business, Energy and Industrial Strategy (BEIS).
Design Principles	The Design Principles are parameters and metrics against which the Delivery Body's proposed solution will be measured. They were formed by a mix of feedback from our CFI, research and our core principles. We are seeking feedback on our proposed Design Principles.
DPIA - Data Protection Impact Assessment	A process to help one identify and minimise the data protection risks of a project. One must do a DPIA for processing that is likely to result in a high risk to individuals.
DSI - Data Sharing Infrastructure	The technologies, common data standards and legal framework that facilitate seamless and secure data sharing between multiple entities.

EDiT	A taskforce commissioned by 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.
ETL	"Extract, Transform, Load" - Describes a process or application wherein data is retrieved and combined from multiple sources (extracted), cleaned and formatted (transformed), and then packaged and moved into a designated warehouse (load).
Energy Theft Tip-Off Service (ETTOS)	The Energy Theft Tip-Off Service (ETTOS) is a service operated to report suspected theft of gas and electricity. It is run by RECCo.
ICO - Information Commissioner's Office	The Information Commissioner's Office (ICO) upholds information rights in the public interest, promoting openness by public bodies and data privacy for individuals. ICO is an executive non-departmental public body, sponsored by the Department for Science, Innovation, and Technology
ISO27001	An international standard for information security management which sets out a framework for all organisations to establish, implement, operate, monitor, review, maintain, and continually improve an information security management system.
Metadata	Data that provides information about a dataset that makes tracking and working with multiple datasets easier.
MPAN/MPRN/MPXN	Stands for Meter Point Administration/Reference/Both Number. This is a unique reference number which identifies a connection from a property to the network. For MPANs, this is the connection to the electricity network, for MPRNs, this is a connection to the gas networks. MPXN is commonly used to cover both connections.
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.
Other User	For a Smart Metering System or a Device and any period of or point in time, an Other User is a User that is not acting in the User Role of Import Supplier, Export Supplier, Gas Supplier, Electricity Distributor, Gas Transporter or Registered Supplier Agent (regardless of whether in fact that User is a Responsible Supplier or the Electricity Distributor or the Gas Transporter or the Registered Supplier Agent during that period of or at that point in time). This definition was sourced from the Smart Energy Code.
Protocol	A set of rules which govern how data is exchanged between devices. A well-known example is HTTPS - Hypertext Transfer Protocol Secure - which sends data securely between a web browser and a website.
Personal Data	Any information relating to an identified or identifiable natural person ('data subject'). Definition taken from ICO.
PII	Personally Identifiable Information - A commonly used term to encapsulate the categories of Identity/Location and other personal data which the ICO deems require special handling.

Post-Quantum Cryptography (PQC)	The development and growth of quantum computers has signposted the risk posed to current cryptographic 'gold standards', such as AES 256- bit encryption. Currently, quantum computers lack the processing power to break these, however this is expected to change. While there is not, as yet, an agreed 'quantum safe' standard for encryption - i.e. encryption which cannot be broken by quantum computers - US's NIST is releasing final standards this year. Quantum resistant refers to standards which have - through much larger key sizes - greater ability to withstand quantum enabled attacks.
POUR Principles	Four main guiding principles of accessibility upon which the Web Content Accessibility Guidelines (WCAG) standards. Stands for Perceivable, Operable, Understandable, and Robust. Compliance with these standards is measured in three levels; A-AAA; with A being the lowest level of accessibility, and easiest to fulfil, and AAA being advanced accessibility criteria, and the most effort and cost to meet.
Priority Services Register (PSR)	The Priority Services Register (PSR) is a free UK wide service which provides extra advice and support, including when there's an interruption to one's electricity, gas or water supply.
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, from 1 April 2023 – 31 March 2028. RIIO-3 price controls are currently under development, and will apply from 1 April 2028.
RESTful APIs	Representational State Transfer (REST) is an architectural style for designing networked applications since it provides a convenient and consistent approach to requesting and modifying data.
Standard Licence Condition (SLC)	Standard Licence Conditions are conditions that apply to all licensees of a particular licence type. These can be in and out of effect for licensees.
Smart Energy Code (SEC)	The Smart Energy Code (SEC) is a multi-Party agreement which defines the rights and obligations of energy suppliers, network operators and other relevant parties involved in the end-to-end management of smart metering in Great Britain.
Smart Meter Communication Licence	Smart DCC operates under the Smart Meter Communication Licence which was granted by Government and is regulated by Ofgem. The licence allows Smart DCC to establish and manage the smart metering data and communications infrastructure.
SMETS1/SMETS2	The acronym stands for Smart Meter Equipment Technical Specifications. Effectively two different generations of smart meters. SMETS1 uses a mobile network to send energy consumption data, whereas SMETS2 use a bespoke secure SM data network, meaning there is less reliance on mobile signal. This created the issue that SMETS1 meters ceased operating in smart mode when a consumer switched suppliers, whereas SMETS2 meters are compatible across energy suppliers.
Token/Tokenisation	Token-based authentication is a protocol that generates encrypted security tokens. It enables users to verify their identity to websites, which then generates a unique encrypted authentication token. That token provides users with access to protected pages and resources for a limited period of time without having to re-enter their username and password. It is a commonly used system for secure access to many sites and apps, including Open Banking

TLS 1.3	Stands for Transport Layer Security is an Internet Engineering Taskforce standard. TLS 1.3 is the latest version of the TLS protocol which is used by HyperText Transfer Protocol (Secure) HTTPS and other network protocols to secure the transfer of data.
Trust Framework	A pre-agreed framework which provides energy sector participants with accurate risk management profiles, common user attributes, identity management, and pre-negotiated agreements based on use cases. This is intended to establish the user's confidence, right, and legality to share data between parties.
UK GDPR	The UK version of the EU GDPR, as amended and incorporated into UK law from the end of the transition period by the European Union (Withdrawal) Act 2018 and associated Exit Regulations. The government has published a Keeling Schedule for the UK GDPR which shows the planned amendments.
UK Government's Digital Identity programme	A digital identity is a digital representation of your identity information, like your name and age. The UK Government is working to ensure people can securely prove who they are without requiring physical documents. This will not be made mandatory.
UPRN	The General Data Protection Regulation (EU) 2016/679 (EU GDPR). Since the UK left the EU, this has been incorporated into UK data protection law as the UK GDPR, which sits alongside the DPA 2018. Definition taken from ICO.
Usage Governance Mechanism	Any pre-agreed framework which details the rules of membership of the solution and governs approved usage of the solution. An example of this would be a Trust Framework, or the DCC's Other User membership. These can be applied to 'front load' the requirements for access, removing the need for rigid access and access controls.
WAI-ARIA	Web Accessibility Initiative (WAI) Accessible Rich Internet Applications is a technical specification allowing web pages (or portions of same) to declare themselves applications rather than static pages by adding role information to dynamic web applications. It is designed for developers of assistive technology and accessibility evaluation tools, as well as web applications and browsers.
WCAG (and WCAG 2.2)	Web Content Accessibility Guidelines are a set of technical standards on web accessibility from the Web Accessibility Initiative (WAI), aimed at making web content more accessible, primarily to those with disabilities, but also for all users across all devices, including limited devices, such as mobile phones. The key principles are POUR, as described above.

Appendix 3 - List of related publications

6.10 Data Sharing in a Digital Future | Ofgem

6.11 Governance of the Data Sharing Infrastructure | Ofgem

6.12 Flexibility Market Asset Registration | Ofgem

6.13 Multiyear Strategy sets out Ofgem's vision for delivering clean, affordable and secure energy system | Ofgem

6.14 Digitalising our energy system for net zero: strategy and action plan - GOV.UK (www.gov.uk)

6.15 Delivering a Digitalised Energy System - Energy Systems Catapult

6.16 Call for Input: The Future of Distributed Flexibility | Ofgem

6.17 Open letter on the Open Networks Project | Ofgem

6.18 Consultation: Market facilitator delivery body | Ofgem

6.19 Automatic Asset Registration (AAR) Programme (closed to applications) - GOV.UK (www.gov.uk)

6.20 Flex Markets Unlocked Innovation Programme (closed to applications) - GOV.UK (www.gov.uk)

6.21 Full chain flexibility | Ofgem

6.22 Delivering a smart and secure electricity system: implementation - GOV.UK (www.gov.uk)

Appendix 4 Privacy notice on consultations

Personal Data

The following explains your rights and gives you the information you are entitled to under the UK GDPR.

Note that this section only refers to your Personal Data (your name address and anything that could be used to identify you personally) not the content of your response to the consultation.

1. The identity of the controller and contact details of our Data Protection Officer

The Gas and Electricity Markets Authority is the controller, (for ease of reference, "Ofgem"). The Data Protection Officer can be contacted at dpo@ofgem.gov.uk

2. Why we are collecting your Personal Data

Your Personal Data is being collected as an essential part of the consultation process, so that we can contact you regarding your response and for statistical purposes. We may also use it to contact you about related matters.

3. Our legal basis for processing your Personal Data

As a public authority, the UK GDPR makes provision for Ofgem to process Personal Data as necessary for the effective performance of a task carried out in the public interest. i.e. a consultation.

4. With whom we will be sharing your Personal Data

Ofgem will retain your information on internal servers, with access controlled on the basis of internal staff necessity. As mentioned above, we will publish the responses alongside the decision document, unless respondents specify that the response in confidential. All responses will be ascribed to a business entity, rather than an individual. In the event of an individual responding in their private capacity, the response will be anonymised. ***(Include here all organisations outside Ofgem who will be given all or some of the data. There is no need to include organisations that will only receive anonymised data. If different organisations see different set of data then make this clear. Be a specific as possible.)***

5. For how long we will keep your Personal Data, or criteria used to determine the retention period.

Your Personal Data will be held for (be as clear as possible but allow room for changes to programmes or policy. It is acceptable to give a relative time e.g. 'six months after the project is closed')the duration of the project plus seven years to allow for any potential challenges to be raised, and the appropriate information retained to answer said challenges.

6. Your rights

The data we are collecting is your Personal Data, and you have considerable say over what happens to it. You have the right to:

- know how we use your Personal Data
- access your Personal Data
- have Personal Data corrected if it is inaccurate or incomplete
- ask us to delete Personal Data when we no longer need it
- ask us to restrict how we process your data
- get your data from us and re-use it across other services
- object to certain ways we use your data
- be safeguarded against risks where decisions based on your data are taken entirely automatically
- tell us if we can share your information with 3rd parties
- tell us your preferred frequency, content and format of our communications with you
- to lodge a complaint with the independent Information Commissioner (ICO) if you think we are not handling your data fairly or in accordance with the law. You can contact the ICO at https://ico.org.uk/, or telephone 0303 123 1113.

7. Your Personal Data will not be sent overseas (Note that this cannot be claimed if using Survey Monkey for the consultation as their servers are in the US. In that case use "the Data you provide directly will be stored by Survey Monkey on their servers in the United States. We have taken all necessary precautions to ensure that your rights in term of data protection will not be compromised by this".

8. Your Personal Data will not be used for any automated decision making.

9. Your Personal Data will be stored in a secure government IT system. (If using a third party system such as Survey Monkey to gather the data, you will need to state clearly at which point the data will be moved from there to our internal systems.)

10. More information For more information on how Ofgem processes your data, click on the link to our "ofgem privacy promise".