

Response to Ofgem's Flexibility Market Asset Registration (FMAR) consultation (September 2024)

About Energy UK

Energy UK is the trade association for the energy industry with over 100 members – from established FTSE 100 companies right through to new, growing suppliers, generators and service providers across energy, transport, heat and technology. Our members deliver nearly 80% of the UK's power generation and over 95% of the energy supply for 28 million UK homes as well as businesses. The sector invests £13bn annually and delivers nearly £30bn in gross value - on top of the nearly £100bn in economic activity through its supply chain and interaction with other sectors. The energy industry is key to delivering growth and plans to invest £100bn over the course of this decade in new energy sources. The energy sector supports 700,000 jobs in every corner of the country. Energy UK plays a key role in ensuring we attract and retain a diverse workforce. In addition to our Young Energy Professionals Forum, we are a founding member of TIDE, an industry-wide taskforce to tackle Inclusion and Diversity across energy

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Context and proposal summary

Flexibility Digital Infrastructure (FDI)

This consultation (link [here](#)¹) is part of Ofgem's Flexibility Digital Infrastructure (FDI) workstream and builds on the March 2023 [Call for Input into the Future of Distributed Flexibility](#)². Energy UK's response to this 2023 consultation can be found [here](#).

The FDI work posits that distributed flexibility (assets connected to the distribution network) and particularly, demand-side flexibility are essential for a cost-effective future system but will not emerge organically. The workstream identifies where common digital infrastructure could help to unlock it. It largely focusses on ways to reduce the transaction costs that Flexibility Service Providers (FSPs) face in the market on the rationale that reducing this barrier will support consumer access these markets.

The Flexibility Market Asset Registration (FMAR) proposal:

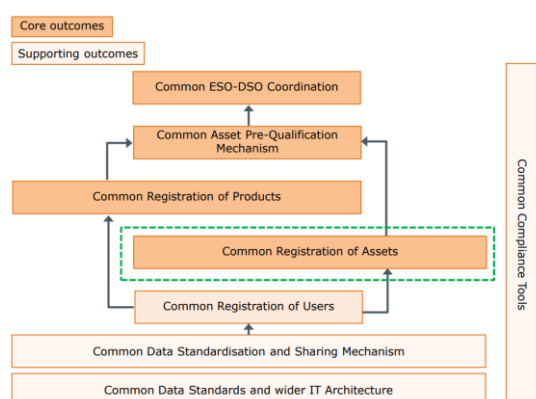
In the consultation, Ofgem single out Flexibility Market Asset Registration (FMAR) (along with the underpinning enablers) as a priority first step for policy intervention. Ofgem's current view is that other FDI outcomes (set out in the schematic below) may be delivered by the market (so it will continue monitor the market to determine whether further intervention is necessary).

The FMAR proposal is for a piece of digital infrastructure '*where data is collected once, stored as a single source of truth by a trusted entity, and can be accessed by multiple users who need it*'. The underpinning enabling work (to standardise inputs and align ESO-DSO markets) is currently being progressed via the ENA's Open Networks programme but will pass to Elexon in its new role as the Market Facilitator when this role is formally established in late 2025/6.

¹ <https://www.ofgem.gov.uk/consultation/flexibility-market-asset-registration>

² [Call for Input: The Future of Distributed Flexibility | Ofgem](#)

Ofgem schematic of the FDI outcomes



Summary of Energy UK response

We thank the Ofgem team for its work in this space and welcome the proposed intervention. We agree it has the potential to deliver FMAR within the timescales required by the market.

However, for the FMAR and wider FDI programme to deliver its aims of unlocking distributed flexibility (and in particular demand-side flexibility), it will need to be accompanied by a step-change in delivery for both the direct and indirect 'enablers' (referenced in the consultation). Energy UK would like to see a stronger focus here (particularly in the light of the Government's ambition to bring forward the target to decarbonise the grid by five years from 2035 to 2030).

The FDI work aims to unlock distributed flexibility by reducing the transaction costs of entering the market. We agree that this is important and welcome this work. However, we highlight that consumers will not be able to enter the markets and obtain the maximum value from their smart assets until FSPs are able to build attractive propositions. This will require faster progress on the market coordination work (stacking and primacy) as well as identifying and resolving areas where aggregated assets face barriers to market access. Currently, domestic DSR faces very limited access to the Balancing Mechanism (BM),³ is largely unable to access Capacity Market support⁴, and faces high barriers accessing some ancillary markets (such as the Reserve product STOR⁵).

There are other costs that FSPs face in bringing demand-side propositions to market such as engaging their customers in very different ways of using energy and regular testing the 'firmness' of response from different customer segments. There is often an assumption that FSPs can pick up the development cost of this new market but this is not always viable given the low returns for DSR acting in merit-order.⁶ The assumption also risks overlooking the unique characteristics of DSR (all technology classes have parameters) and, by doing so creating a further barrier to market access.

To support the proposed intervention to deliver on its potential, we have some recommendations:

- i) **Strategy:** Our main ask is a call for a strategic approach. Our members can deliver the change required if there is a concerted approach to make current (rather than future) markets work for all technologies. However, this will not result unless this change is clearly driven from above and designed in collaboration with industry.
- ii) **Speed:** That Ofgem consider an accelerated timescale, with initial outputs in 2025.
- iii) **Adaptable (MPV then iterate):** The energy digital ecosystem is evolving rapidly. To avoid the risk of a 'stranded asset', we support an agile approach (if new build) or one that builds on an existing initiative that will be required to stay relevant (for example SMP)

³ This is limited to 300MW and 50MW per FSP.

⁴ BM access requires either half-hourly settlement or bespoke/ balancing compliant meter. This excludes ~96 percent of households.

⁵ We note that STOR will be replaced by Slow Reserve. Whilst this is expected to be more accessible, it has faced delays coming to market.

⁶ An example of this is the proposed design for the Demand Side Flexibility service in which domestic FSPs would need to underwrite the cost of engaging and testing the manual DSR volumes.

- iv) Collaboration: The development and timescales should be highly visible to the market to avoid the risk of it stifling innovation in surrounding areas.
- v) Whole of the market: That the FMAR be designed to incorporate all assets and markets in time rather than limited to particular assets or markets

Response to Consultation Questions

Q1. Do you agree that policy intervention is needed to deliver common Flexibility Market Asset Registration?

We agree that the proposed intervention has the potential to deliver FMAR within the timescales required by the market. However, there was strong agreement from a diverse range of members that what is most needed in this space is a strategic approach. The current focus on data and digital infrastructure does not feel sufficient to unlock flex nor to provide FSPs with the confidence to invest.

- i) **Strategy/ indirect enablers**: It is increasing hard to keep up with the multiple initiatives in the digital and decentralised flexibility space.

On distributed flexibility, the consultation notes that *‘Flexibility has the potential to avoid billions of pounds of additional investment every yearIn recognition of this, Ofgem has made “enabling consumer-focused flexibility” one of the core objectives of our Multiyear Strategy’, however, it is not clear how this will be delivered* (reducing transaction costs is just one part of the equation).

Energy UK has been calling for a strategy in this area (or an update of the joint Ofgem and Government’s [Smart Systems and Flexibility Plan](#) [SSFP, 2021]) since 2022. The 2021’s SSFP target of 30GW for short duration flexibility by 2030 was based on an expectation of 40GW of offshore wind. However, shortly after publication, the ambition for variable renewables was ramped-up (to 50GW offshore wind by 2030 and 70GW of solar by 2035⁷) but without a correlative increase in the flexibility required to balance it.

Whilst batteries and smaller decentralised assets can come to market without subsidy, they face multiple and complex challenges to enter and compete (for example, the balancing mechanism struggles to dispatch both batteries and smaller aggregated assets; the capacity market is ‘functionally inaccessible’ to most domestic DSR). Whilst we support the proposed intervention, we urge Ofgem and Government to provide the market with a clear view of the optimum level of distributed flexibility and a high-level plan – business-as-usual will not deliver it.

The approach to change in this space is currently fragmented, often driven by bottom-up, disparate (and sometimes conflicting) code changes. This, combined with a lack of a clear signal to the market on the optimal outcome, makes this a difficult space to operate in and has resulted in innovators exiting to focus on overseas markets.

Whilst much of the benefit from a flexible demand-side is based on avoided future costs, there is currently no mechanism in the ESO markets to pull forward any of these avoided costs to incentivise customers to engage (as there is in the DSO markets).

Great Britain is fortunate to have some of the leading innovators in this space. Our members can deliver this change if there is a concerted approach to make current (rather than future) markets work for all technologies. However, this will not result unless this change is clearly driven from above and designed in collaboration with industry.

- ii) **Speed**: To ensure that the proposed intervention is best able to capitalise on this potential, we recommend Ofgem consider an accelerated timescale, with initial outputs in 2025. Whilst there will be a greater number of assets online in 2028, it is now that the

⁷ [British Energy Security Strategy](#) (2022)

market needs the support, particularly given Government's ambition to bring forward the target for grid decarbonisation (from 2035 to 2030).

In developing our response, we heard from DESNZ and [GreenSync](#) on the Net Zero Innovation Programme (NZIP)-funded Automatic Asset Register (AAR) and Central Asset Register (CAR), and from Arup on the Data Sharing Infrastructure (DSI⁸).

With the learnings gained from and investment in these programmes to date, along with those from related initiatives overseas⁹, we view an earlier implementation as both feasible and appropriate given the Government's ramp-up in ambition.

A key part of the potential value for our members is the role the intervention could have in accelerating the direct enabling work that the ENA's Open Network's Programme is progressing. This work (particularly on ESO-DNO coordination - stacking and primacy), is both challenging and vital for Flexibility Service Providers (FSPs). Ofgem has signalled that it would like more domestic propositions to be supplied by the market. However, this is unlikely to change unless either there is more revenue available, or providers can unlock more value for their customers by stacking across multiple products and services. Early delivery on the FMAR (2025 for a minimum viable product MVP) could help to accelerate this work. We note that our focus on early delivery has implications for delivery body since the Market Facilitator role does not start until end 2025.

- iii) **Adaptable (MPV then iterate):** Alongside early delivery, the approach should be adaptable. As the consultation highlights, the energy digital ecosystem is evolving rapidly – with both public-sector led initiatives (DSI, Consumer Consent Platform etc.) and market-led developments. We note that there could be a risk of 'stranded assets' in this space if digital infrastructure cannot evolve fast enough to stay relevant. Given this, we would support either an agile approach (if new build) or one that builds on an existing initiative that will be required to stay relevant. If new (rather than building on existing infrastructure), this should start with a MVP and iterate from there. A decentralised approach may best fit these criteria.
- iv) **Close collaboration with the market:** The development and timescales should be highly visible to the market to avoid the risk of it stifling innovation in surrounding areas. This will require close and ongoing collaboration with relevant stakeholders – the platform providers whose systems will need to seamlessly interact with it and the FSPs.

The consultation notes the rapid developments in this space since Ofgem's [Call for Input into the Future of Distributed Flexibility](#) (2023), including from platform providers and Energy UK members, Piclo and EPEX SPOT and notes that '*the Piclo Max platform appears to be offering a commercial solution to the common product registration FDI outcome.*' It is vital that the intervention is designed to bolster rather than dampen the innovation that these companies are driving in the market.
- v) **Whole of the market:** Our final key ask here is that the FMAR is designed so that in time, it can incorporate the whole of the market. We support 'flex market entry' as the appropriate focus but do not support the proposal to limit the FMAR to particular assets or markets (there was strong agreement across a wide range of members here). We appreciate that, initially, the FMAR may need to focus on small distributed assets and specific markets (balancing and ancillary, DSO flex), but recommend that the FMAR is designed to be rolled out to all assets and all markets.

We note that the proposed capacity threshold (>1MW) would exclude assets that could make a valuable contribution to the currently under-unsubscribed DSO flex markets (DSO tendered for 6.4GW in 2023/4 but were only able to contract 4GW – a shortfall that will

⁸ This digital infrastructure was previously referred to as 'the Digital Spine' The Arup feasibility study can be found [here](#).

⁹ These include the [EU-funded OneNet](#) programme, the [Australian Energy Market Operator's DER Register](#) and the [German Network Agency's Marktammdaten register](#)

feed through to higher network charges for bill payers). We also note the delays in registering a BEGA (Bilateral Connection Agreement) for larger assets. Flexibility will be needed from a wide range of assets as the system transitions. This may be hard to access in some locations, so we support a FMAR that works for all technologies and all markets (including the Capacity Market and wholesale markets).

Q2. Do you agree that for other FDI outcomes policy intervention is not needed at this stage? Are there any risks to consider with this approach to FDI delivery?

Yes.

Energy UK supports the shift in focus of the FDI work from that initially proposed in the 2023 [Call for Input into the Future of Distributed Flexibility](#) (2023).

Whilst we [supported](#) the need for intervention and welcomed the ambition, we were concerned that the previous approach was overly centralised and would take too long to deliver, risking the market moving forward without it. We were also concerned that it could pull resources and attention away from the direct enabling work (on market standardisation and ESO-DSO coordination) that FSPs need to build customer propositions.

As set out in our response to Q1, our view is that the market can deliver the remaining FDI outcomes if Government and Ofgem set out a clear strategy and work with the relevant actors (NESO, DSOs) to ensure that the current market is accessible and fair for all participants.

Our understanding of the FDI rationale is that reducing the transaction costs of entering/ operating will unlock flex. Whilst necessary, we do not agree that it will be sufficient. This is why we focussed on the direct enablers in our [previous response](#)¹⁰ in this area and why in this response we call for a stronger focus on the 'indirect enablers'.

Here we would support the following:

- i) A clearer vision or market signal on the level of distributed flexibility that will best enable the lower generation costs of the renewable fleet to feed through to bill payers.
- ii) A coordinated focus with NESO and Government on levelling the *current* playing field for market participants.
- iii) Consideration of how the future benefit (avoided costs) can be bought forward and used to incentive the market to compete, and bring down current bills for consumers.

Q3. Are there any other policy alignments or industry developments, in the UK or internationally, which should be considered as part of ongoing FDI policy development?

The European network code includes a common API for interaction with the flexibility market asset registers. This ensures that FSPs can interact with different markets via a common API gateway.

Our members operate internationally and highlight the need for the UK's digital infrastructure here to be aligned to ensure that markets are as accessible and liquid as possible.

Q4. Do you agree with the scope proposed for markets, assets, and data? Should anything else be considered?

Markets: Energy UK supports the proposal to include all ESO balancing and ancillary markets and the five core DSO products. However, we do not support the exclusion of the Capacity Market and

¹⁰ <https://www.energy-uk.org.uk/publications/energy-uk-response-to-ofgems-call-for-input-on-distributed-flexibility/>

wholesale markets. We recommend these markets (and any other DSO products) are included within the scope of the design (even if they are not prioritised for the early work) so it supports multi-market participation. Without this, the FMAR risks either creating a new barrier to these markets for distributed assets or being sidelined by an asset register that can provide this. We note that some FSPs are already offering their assets in the wholesale market.

Assets: As noted in our response to Q1, we would support a wider scope than proposed. In addition to the wider piece on asset visibility, the current proposal risks creating perverse boundaries (for example, larger I&C assets deliver turn up/ down, batteries just over the threshold capacity).

Data: We support the proposal to exclude dynamic data (such as battery state of charge, asset availability, pricing information and user settings including minimum home temperature). Dynamic data would increase the complexity of the FMAR and the costs and timescales to deploy it.

Furthermore, incorporating dynamic data risks replicating parameters from current market operation that may, in themselves, constitute new market barriers for aggregated assets (such as collecting data at the asset rather than aggregated unit level). A simpler MVP approach could help to avoid this.

On user data, this should draw on the expertise on stakeholders familiar with the user journey as a provider (for example, as BM participants) and focus on the best way of pre-populating data fields and digitalising the process.

During our work for this response, members heard from representatives of the DESNZ [NZIP](#) team as well as [GreenSync](#), the provider of the NZIP-funded innovation project, [Automatic Asset Register](#) (AAR) and [Central Asset Register](#) (CAR). We support this work's focus on minimising the data fields required for registration (MPAN and product model/serial number) and the ability of the register to use this to sync with the OEM's cloud platforms to autocomplete the remaining data fields. This is preferable to relying on manual administrative processes with the error and resource implications this entails.

We note the linkages with other proposed digital infrastructure:

- i) the [Data Sharing Infrastructure](#) (DSI) which will provide a medium to securely exchange standardised data between organisations
- ii) the [Customer Consent solution](#) which will provide a mechanism for consumers to grant and manage consent to access new energy data.

We highlight the importance of these working seamlessly together so that, for example, where an occupant moves house, this change triggers a process that withdraws customer consent and resets the new occupant back to default settings (and out of services that may not be suitable for them) until the new occupant is able to make a conscious choice.

Ofgem table setting out the proposed scope:

In initial scope	Out of scope*
Markets	
<ul style="list-style-type: none"> ESO: all ancillary and balancing services, including the BM DSO: all 5 products 	<ul style="list-style-type: none"> Wholesale markets Capacity Market
Assets	
<ul style="list-style-type: none"> Small-scale domestic and small business owned < 1 MW capacity e.g. electric vehicle chargers, heat pumps, battery energy storage systems 	<ul style="list-style-type: none"> Larger assets with commercial and industrial ownership > 1MW capacity e.g. Larger battery storage systems, I&C
Data	
<ul style="list-style-type: none"> Common across flex markets Static data required for registration and pre-qualification Flexibility service data, e.g. name of FSP, flex service, duration of contract Technical asset data, e.g. type, serial number, MPAN, flex capacity, ramp-up time 	<ul style="list-style-type: none"> Market-specific data fields Dynamic data required for operation and settlement E.g. battery state of charge, asset availability, pricing information, user settings
*solution may seek to include markets, assets, and data that are currently out of scope in future iterations	

Q5. Do you agree with the functional outcomes? Should anything else be considered?

At a high level, the functional outcomes seem sensible. However, we note that the 'devil will be in the detail'. As this detail will be determined by the Industry Working Groups, it will be important to ensure that stakeholders represent a range of relevant asset classes and end-users.

We agree the approach needs to be proportionate. Reducing costs where possible should always be the objective but how this is interpreted is key. Many of the issues that FSPs are currently facing in the market result from a focus on consumer costs that prioritises immediate costs over longer-term benefits.

A narrow focus on near-term costs risks the intervention being less effective or becoming a 'stranded asset' because the market has moved on and the output is unable to play the role ascribed to it. To reduce this risk, we would support simple, near-term delivery and close collaboration with the most relevant stakeholders (platform providers, networks, FSPs and end users) as it is developed.

Whilst the document highlights linkages to related digital interventions in this space (DSI, Customer Consent platform etc.) the lack of a clear overarching strategy here makes it difficult for stakeholders to identify potential gaps or overlaps, or whether the proposals deliver the best 'bang for the consumers' buck'. It will be essential for these to communicate effectively since no one participant will have access to the 'whole picture'. The customer's supplier, for example, is not party to whether the customer has a contract to provide flexibility to another FSP.

Q6. Do you agree with the design principles? Should anything else be considered? FMAR – Activities & Delivery

As above - these look sensible at a high-level.

It will also be important to consider how end-users are engaged. If there are multiple stakeholder groups, Citizen's Advice is unlikely to be able to resource them. We note that the Australian initiative [The CER Data Exchange](#) has struggled to involve end-users. It will be important to learn from this process and how they are working to engage demand side/ consumers as a result.

It will also be important to understand the contractual chain so that market participants can align contracts across industry (in the same way that embedded assets need to sign a BMU and a BEGA)

Q7. Do you agree with the enablers and design activities needed and for the Market Facilitator to coordinate Working Groups for them? If not, what other activities and governance arrangements should be considered?

The consultation notes that '*before developing common digital infrastructure, the ESO and DSOs first need to align their flexibility market processes to be common*'.

This process of alignment is critical – and the key impediment to lower transaction costs. We support the proposed FDI as a means to help deliver this. The requirement to align data sets / processes for the FMAR should be used to accelerate this work.

We assume that the proposed Working Groups will replace the current ENA Open Network industry groups focussing on primacy, stackability etc. If this is the case, we would welcome Elexon in its Market Facilitator overseeing this work well in advance of the formal handover.

It is not clear what the other Working Groups are for. If they are for the digital infrastructure then it will be important to ensure that the same groups are used across the different pieces of digital infrastructure to reduce resources, avoid fragmentation and build expertise.

Q8. What are the advantages and disadvantages of the proposed delivery body options for the FMAR digital infrastructure? Are there any additional options that should be considered? Do you agree with the justification for discounting approaches?

We note that the delivery body will be responsible for the deployment and ongoing maintenance of the FMAR including:

- i) how the data is collected,
- ii) where the data is stored, and
- iii) how that data is accessed.

Of the options, our priority of accelerating the MFAR (MVP then iteration) reduces the delivery body options, excluding the Market Facilitator since this body will not be formally constituted until late 2025/2026.

We note that the 'choice of delivery body may influence the architecture. Centralised architectures align more with options such as the ESO or the Market Facilitator providing a joint solution or a formal enduring entity. Decentralised architectures align more with options such as the DSOs providing solutions or the Market Facilitator overseeing integrated ESO and DSO solutions. The discounted Independent Market Platforms (IMPs) option aligns more with a decentralised architecture¹¹.

A decentralised approach could better deliver on our priority of adaptability to ensure that the architect can stay relevant in a rapidly changing space and support innovation by market platforms.

A centralised approach may, however, have better potential for rapid delivery and building on existing initiatives / investment (for example, Option 3 - the option of building out the ESO Single Market Platform (SMP) or Option 5 - building on the NZIP GreenSync work on the AAR/ CAR (Option 5). Either of these options seem sensible.

We note that the ESO is the delivery body for the DSI which the MFAR will need to interact with, and that the SMP hosts a number of key services for FSPs, including its Demand Flexibility Service (DFS) which last winter required the registration of 2.6 million MPANs mainly from households contributing <1kW of Turn down.

In the [Technical Annex](#) for the consultation, the System Use Case Exercise contributed by the ESO notes that the SMP 'is being developed in an agile way with a "progress over perfection" mindset that has resulted in multiple releases since its initial go live in February 2022 ... Onboarding includes the registration of users, companies, assets, and the creation of Units (made up of single or multiple assets) that can then seek pre-qualification for a number of products prior to acceding to generic and specific contract terms. ... SMP now also hosts the Demand Flexibility Service (DFS), Static Firm Frequency Response, the initial Regional Development Programmes (RDP) and the recently approved Balancing Reserve product. Work is under way to host the future Reserve products'.

This option (whilst centralised) may represent the best approach for fast delivery given the number of relevant services that it includes already.

We do not support a DSO-led approach given the fragmented approach that has resulted from the development of the DSO-led local flexibility markets

Q9. Do you agree with the timelines proposed? Should anything else be considered?

The consultation proposes that the FMAR should be deployed between 2025 and 2028. Our key ask however is that this timescale is truncated with a MVP delivered as early as possible.

¹¹ https://www.ofgem.gov.uk/sites/default/files/2024-07/Flexibility_Market_Asset_Registration_Consultation.pdf

It is in this early market where the FMAR could deliver the greatest value. Whilst there are fewer assets, there is more friction to deter FSPs from participating to grow both the markets and the offer for consumers.

A 2028 timescale risks either the market filling the gap and/ or the asset being stranded due to a rapidly changed ecosystem, with the customer-funded intervention being wasted.

Q10. What existing or new policy levers could be used to improve asset visibility?

The FMAR should be used to improve network visibility of assets on the system so it is important that network operators can access appropriate data.

We note the fragmentation of current approaches to register assets so would support an FMAR that either builds on existing digital infrastructure (such as the ESO's SMP) or is part of the Government's proposed solution to visibility (for example, GreenSync's emerging AAR/CAR).

Whilst making the process simple (for example GreenSync's AAR/CAR) will help improve registrations, an incentive will be needed for high coverage. We agree that flex market entry will be an important driver here since both the customer and FSP have an interest in ensuring the asset is properly registered. Flex market growth then can be an important driver to improve overall visibility.

Whilst flex market entry provides an incentive to register, some households/ assets will never participate. We support a stronger focus on improving network visibility and forecasting as CER/DER increases.

As noted previously, developments here will need to align with those overseas so that wider markets are aligned and to increase liquidity. These include the:

- i) [EU-funded OneNet](#) programme (includes a flexibility register for market operations)
- ii) [Australian Energy Market Operator's DER Register](#) (registers devices at installation to support grid management)
- iii) [German Network Agency's Markttammdaten register](#) registers generation and large consumption)

Q11. What use cases for asset visibility should be considered as priorities and why?

As noted above, forecasting should be considered as a priority use case for improving asset visibility.

The ESO role was designed as a residual system operator. Whilst the increasing variability on the system will undoubtedly make balancing supply and demand more challenging, the size of this challenge could be reduced if network operators have a clearer visibility of assets to support their forecasting.

The current limited visibility, particularly of distributed-connected assets, means there can be significant variance between forecasts at the day-ahead stage and at gate closure. Improving visibility would improve forecasting meaning that the network operators can work with the market to resolve more imbalances ahead of time, and at lower cost for the bill payer.

Q12. What costs, benefits or factors should be considered in a Cost-Benefit Analysis for asset registration solutions?

The wider benefit to the market from improved forecasting would be a relevant factor here.