

To whom it may concern,

Ohme welcome this opportunity to contribute to the Call for Input into the Future for Distributed Energy as we firmly believe that developing new propositions, business models and routes to market which recognise the emerging, differing consumer needs of EV drivers and domestic smart appliance users are key if we are to unlock the vast flexibility potential of this rapidly developing market. As the FES states domestic flexibility is not a nice to have but 20-30 GW (this might not all be domestic) will be essential to ensure that the system is resilient.

A prerequisite to unlocking this potential will be the ability of those that serve and are the customer touch points, to be trusted partners. It will also require the consumer facing businesses to be able to offer differentiated, varied and tailored propositions to a highly diverse set of customer needs, in order to build understanding and customer value in these markets. These new propositions are embryonic at the moment with the dominance of one set of providers – suppliers. This is not how we and others believe that customers will want to be served into the future particular as the system becomes more complex and interactive requiring much greater choice and segmentation.

While we very much welcome the proposals in this consultation, we strongly believe that these initiatives need to work in sequence and to complement other important customer facing reforms to include data-based metering, transparency of all supplier tariffs, consistent baselining across different flexibility services and review of the current supplier hub model. We do not believe that the level of flexibility required will be able to be delivered only by those dominant in the current market arrangements .

We are therefore shaping our response to this consultation with customer choice, diversity of customer needs and new varied business propositions at its heart.

Ohme believe that the adoption of the Light archetype is a helpful development and can over time and once the market has matured could move closer to the Medium archetype, which alongside involvement with other FSP's in the development of the future digital spine, would assist the development of a healthy, consumer focused, competitive market for domestic flexibility.

Q.1 What do you think distributed flexibility could contribute to the energy system?

Future Energy Scenarios recognise that the UK needs to increase its flexibility from the current 6GW to 100GW by 2050 if the UK is to achieve its net zero ambitions. A key element of this increased flexibility will be delivered from domestic EV charging with 'smart charging' having the potential to reduce peak demand by 10GW as earlier as 2030. This will be increased further with V2G charging increasing the peak demand reduction to some 30GW by 2040 under the Consumer Transformation scenario. It is clear therefore that flexibility provided from EV charging, Heat pumps, PV's and Domestic Storage will provide significant volumes for System Operators to utilise. However, to unlock and realise this potential, Flexibility Service Providers will need to develop engaging, trusted value propositions, appealing to a broad set of consumer needs and use cases with scalable, mass market appeal. The Leading the Way scenario assumes that smart charging increases to 92% by 2035. This step change in consumer understanding, engagement and action compared to today's behaviour will only be realised if consumer needs are put at the heart of developing the future energy system, rather than legacy, industry thinking driving this development.

Q.2 Will a focus on CER (Consumer Energy Resource) flexibility also help enable other forms of flexibility, especially distributed flexibility?

Households with an EV typically increase their consumption by 50% versus the average 3,300 kWh. As EV adoption increases, multi car households will become more prevalent with households doubling their consumption, but also providing significant potential for flexibility as much of this 'parasitic' demand can be shifted to align with grid requirements. In addition, given that EV's are unused for >80% of the time, they provide unique flexibility capability that must be utilised if the UK is to deliver its next zero ambitions.

Assuming operational challenges, i.e. enabling domestic asset meters to access these new markets alongside boundary metered assets, aligning consistent metering standards across services, and enabling System Operators to manage the statistical nature of CER flexibility rather than the deterministic characteristics of existing flexible assets, then the increased volumes being delivered will improve market liquidity, increase competition, encourage investment and innovation and therefore enable markets to develop for all Flexibility Service Providers, both commercial and domestic.

Q.3 Is there a 'case for change' and a need for a common vision for distributed flexibility?

With FES forecasting a 40% (42GW) reduction in peak demand by 2035, (of which 12GW is realised from smart EV charging), it is clear that CER's will play an increasingly important role in providing the additional flexibility required. The full potential for distributed flexibility will only be realised with an engaged end consumer, trusting the actions of the FSP, and allowing their smart devices to be controlled for the benefit of the overall energy system. With only 50% of UK households having an active smart meter and only 22% actively switching per annum, consumer engagement will need a step change from today's levels if we are to deliver the assumed 92% take up of smart EV tariffs. The market therefore needs to move away from the legacy supplier 'hub' and develop new consumer propositions and partnerships to gain the level of flexibility required.

In addition, significant investment and innovation will be required, creating new value propositions and business models to unlock this potential. Relying upon the current players who control the boundary meter will inhibit consumer choice, leading to poorer outcomes and increased costs. Current systems and processes are clearly sub-optimal, designed for the legacy system dominated by large, commercial assets, highlighting a clear need for change if the UK is to address the future challenges of decarbonising the energy system.

Q.4 What is your vision for how to accelerate the delivery of accessible, coordinated, and trusted markets for distributed flexibility?

To accelerate the delivery of effective distributed flexibility markets, all changes should be designed with the end domestic / small business consumer in mind, ensuring understanding, engagement, trust and participation, "there is no flexibility if the CER is not available". This consumer touchpoint provides a unique opportunity for millions of households to participate in these new markets. Innovative new approaches and competition should be encouraged, with minimal barriers to entry for small scale providers, as long as consumer protection is maintained, alongside simple, consistent, and aligned standards for market access. This means in the first instance allowing asset meters to provide the flexibility alongside boundary meters, enabling consistent and reasonable metering standards, (settlement and operational), which provide the necessary statistical accuracy for the System Operators, alongside a mindset change which adopts the probabilistic nature of aggregated domestic assets alongside the deterministic nature of existing commercial assets. This market must rapidly move from 'mainframe' to PC to 'cloud based' solutions, with a recognition that the current models, including the supplier 'hub', which dominate the current market, need to rapidly evolve.

Q.5 Will certainty of an end vision help accelerate enabling work and make it cohesive?

All FSP's need to be aligned against agreed measures of success, which need to include greater consumer understanding, trust, engagement, and participation in these emerging markets. Encouraging new markets entrants to compete alongside the legacy supplier model, will increase consumer choice, engagement, and participation in these markets, as well as reducing cost.

Q.6 When should a common digital energy infrastructure be in place? And therefore, when should development begin?

A digital spine, enabling all domestic assets to participate in these future markets needs to be developed for the medium term. However, alongside the future development of this digital infrastructure, short term measures ensuring the necessary 'enablers' are in place, e.g. live access to all supplier tariffs, consistent metering standards - both settlement and operational, agreement on role of OEM's, aggregators and FSP's, and the development of appropriate interoperability standards, need to be defined, agreed and operationalised to ensure the success of a future digital spine.

Q.7 What should a common digital energy infrastructure look like, and why? Please consider the archetypes or develop your own proposition.

Domestic flexibility is at the earliest stages of development both in terms of the services being offered, the consumer propositions being developed to support System requirements and the adoption of these propositions by the end consumer.

To encourage and stimulate innovation and market development, the lightest possible regulatory oversight is required, enabling market forces to determine future development, rather than being constrained by legacy / industry thinking and a risk averse rather than risk aware culture which has the potential to constrain the scale of opportunity presented by domestic flexibility.

Even before we begin to consider a common digital energy infrastructure, some key fundamentals need to be addressed to encourage investment, competition, and innovation in this market to develop scalable solutions offering real customer choice, namely:

- enabling all markets to utilise asset metering alongside boundary metering for CER's
- aligning consistent metering standards across both settlement and operational metering that can be applied across different flex services
- ensuring CER's can access all supplier tariffs, in real time, enabling appropriate optimisation and control of domestic devices and ensuring end consumers are not adversely impacted
- enabling consistent baseline standards across Grid Operators, ensuring flexibility is measured and rewarded consistently across services and simply understood by the end consumer.

Q.8 What is your view on the desirability and feasibility of the archetypes or your own alternative proposition?

1. Status Quo - Is sub-optimal

2. Light - Improved Transparency, common standards - This archetype is Ohme's supported option and is the logical next step in developing these nascent domestic flexibility markets. The creation of a level playing field with increased transparency of market opportunities will encourage greater investment and competition in these developing markets, ultimately resulting in better customer outcomes through increased choice and improved pricing.

3. Medium - Exchange. Adds additional costs with no certainty of return. Transparency of prices and historical returns for FSP's presents will inhibit market participation and innovative developments. This will also favour incumbents, with the capability to bundle domestic flexibility with energy procurement undercutting innovative new entrants and stifling competition. However, should the costs of developing an Exchange be managed within sensible limits, this does have the potential for

increasing transparency and market liquidity and could be a medium-term development assuming the Light archetype is successfully implemented.

4. Thick - Central Platform. Significant additional costs for all FSP's, with prescriptive processes stifling innovation. Will significantly favour incumbents and given the experience of the DCC, will be a lengthy and costly approach.

Q.9 Should a common digital energy infrastructure be new-build, or should it build-out from existing infrastructure?

The existing TSO / DSO infrastructure needs reform, as it has been built for large scale commercial flexibility assets, rather than mass market, domestic devices providing probabilistic rather than deterministic outcomes. We therefore need a new approach, a new 'directory' providing common standards and a framework within which to compete, which can deliver the agreed measures of success, building customer trust, engagement and participation within a healthy market of many CER providers offering tailored consumer propositions for differing market segments.

Q.10 What are the important areas for consideration when designing institutional delivery models for a common digital energy infrastructure?

Agreed standards and processes, i.e. metering standards - accuracy and frequency, real time access to consumer tariffs, transparency of all market opportunities within which to compete and fair consumer outcomes, which build trust, further participation and greater levels of domestic flexibility, are all pre-requisites to developing the future distributed flexibility markets.

Q.11 What are the important areas for consideration when designing financial delivery models for a common digital energy infrastructure?

1. The scale of change required to deliver the required flexibility is significant, requiring new entrants, new business models, and mass market consumer participation. EV smart charging will play a major role in delivering the expected 40GW of flexibility, so reducing market barriers to entry for smart charging providers is key, with delivery of the Light archetype 'enabler's ' providing the foundation for a future digital energy infrastructure,
2. Enabling the end consumer to recognise and understand the 'value' of the flexibility they are providing through transparent pricing and competition is critical, therefore building trust and encouraging greater participation and the scale required to fulfil the task in hand.
3. Buyers, (TSO / DNO's) and Sellers will need to better manage the risks associated with probabilistic outcomes and ensure that end consumers aren't directly impacted by penalties for non-delivery. Whilst commercial flex providers can manage and accept these risks, consumers will need to be presented with a simple value proposition that deliver agreed outcomes and rewards for fulfilled behaviours and actions.
4. Effective competition between legacy providers and new entrants also needs to be encouraged, with customers trust and agency at the heart of this new market. Competition needs to encourage numerous new entrants, with new propositions that can deliver the step change in consumer engagement required, and not rely on the legacy supplier routes to market.



Internal Only

companies are collectively referred to as "Ohme"). The content of this email and any attachments is confidential, may be privileged, is subject to copyright and should only be read, copied, and used by the intended recipients. If you are not the intended recipient, please notify us by replying to this email or telephoning, immediately erase all copies and do not disclose, print, copy, the email, or any part of it to any person or third party. Although this communication and any attachments are believed to be free of any virus, or other defect which might affect any computer or system into which they are received and opened, it is the responsibility of the recipient to ensure that they are virus free and no responsibility is accepted by the sender for any loss or damage from receipt or use thereof. For details on how we collect data and use personal data please see our Privacy Policy <https://www.ohme-ev.com/privacy-policy>

Internal Only

OFFICIAL-SENSITIVE-InternalOnly