

Demand Flexibility

Call for input summary

Version 0.1

1.0 Executive summary

Following the Demand Flexibility Service (DFS) call for input in March 2023, this document summarises the comments and feedback from industry.

The call for input was set up to help understand the industry views on the next steps for demand flexibility following the closure of the initial ESO Demand Flexibility Service Winter 22/23.

The insights gained from this call for input have been used to develop the demand flexibility deep dive workshops planned for April 2023. For further details please visit Demand Flexibility Service (DFS) | ESO (nationalgrideso.com).

If you have any comments regarding this document or would like to provide additional feedback, please get in touch with us directly by emailing demandflexibility@nationalgrideso.com

2.0 About the respondents of the call for input

A total of 48 responses were collated, mainly via an online form, as well as several offline submissions sent directly. The main categories of respondents were suppliers, technology companies and aggregators. Responses were also received from wider market influencers such as the regulator, government bodies, trade and consumer bodies, academia, network operators and generators.

- 68% of respondents were interested in participating as a provider in a potential future demand flexibility service
- 28% of respondents currently undertake their own flexibility services outside of the ESO DFS
- 37% of respondents answered positively to intending to progress a flexibility offering in the future with half hourly settlement and the smart meter roll out
- 35% of respondents currently participate in other ancillary service markets including the balancing mechanism (BM).
- 34% were supportive of more time upfront to engage on the development of the service and 21% had no opinion

'Strong support for prioritizing design..however key design features needed to be set at least 6 weeks beforehand the start to allow sufficient time for software changes'

2.1 Priorities

Respondents were asked to state their top five priority areas (plus a freetype field for other comments). The ranking was scored, and the top ranked categories are listed below. These priorities will form the focus for taking the service forward.

Rank	Topic	Rank	Topic	Rank	Topic
1	Baseline methodology	4	Guaranteed Acceptance Price (GAP) & price discovery	=6	Closer to real-time procurement/dispatch
2	Driving consumer participation and exploring consumer incentives	5	Event opt-in	8	MPAN process/duplication resolution
3	Alignment with Balancing Mechanism & Ancillary Services	=6	Bidding process & mechanism	9	Process improvements & automation

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3.0 Commercials

53% of respondents favoured continuing as an enhanced action for this winter, potentially as a transition period, with 39% in favour of an in-merit service.

3.1 Role of tests and Guaranteed Acceptance Price (GAP)

There was a whole spectrum of replies, ranging from the abolishment of tests and GAP to maintaining or expanding the current levels. Several respondents highlighted the value of the certainty tests provided in ensuring continued consumer engagement, and for making the business case to participate.

Availability payments were also raised as an alternative or an additional mechanism for providing certainty. There is broad appetite for price discovery, and a recognition that a GAP cannot and should not remain forever as the service becomes more established, but many think it is still too soon to move away from that.

One respondent asserted that their studies showed that the level of financial reward was immaterial to the outcome. Some respondents also mentioned the likelihood that in-merit dispatch would lead to user fatigue due to the number of uses, and disengagement due to low prices and hence low rewards. Two respondents raise the idea of having a GAP and tests for domestic consumers in the less mature market, but not for Industrial & Commercial (I&C) as more established flexibility providers. One respondent stated there should only be onboarding tests, and no more regular tests.

3.2 Price discovery

There is general support for more price discovery, with some respondents wishing for more “live events” to drive competition coupled with extra transparency on the order of actions taken. One respondent suggested that DFS is still too immature for price discovery. Some believe Pay-As-Bid (PAB) is suitable given the immaturity and concentration of the market, others prefer the simplicity and equal reward of Pay-As-Clear (PAC). Availability payments were raised several times, although some raised that availability payments would necessitate a penalty regime. One respondent suggested running auctions with artificial scarcity to ensure competition (e.g., buy 50% of the available volume). Another suggested that prices should be set at the single imbalance price, to ensure DFS is more profitable than the BM. Some respondents referred to work on DSO services, such as INTRAFLEX with NGED (WPD) and NODES.

3.3 Penalties

Respondents were almost universally against the idea of penalties where this was interpreted as a potential net negative cashflow for the provider or end consumer. Some raised that incentivising accuracy through reduced payments could be a good idea, although many think DFS is still too immature and there is too much uncertainty in end consumer behaviour for this to be implemented at this stage. Others argue delivery has been accurate enough that there is no driver to implement penalties / incentives for accuracy.

One idea would be to pay a premium if delivery is within x% of forecasted. This will incentivise participants to be more accurate in their forecasts (some of them admitted sending the original bid info as forecast). Still, it would probably need more frequent audits as what is stopping a participant from “miscalculating” their way to the premium.

Also, strictly speaking, we are not paying for delivery but are paying for negative delivery. We could simply pay for delivery, in which case, we might end up paying zero if 50% of the MPANs in the unit turn up and 50% turn down in the same amount.

Looking at the data, there is a clear separation in the size of the bids: less than 40 MW and more than 40 MW. We could implement a penalty structure that increases as the size of the bid increases. Could this cause large participants to split up into more, smaller units?

3.4 Categorization/grouping of flexibility

46% thought there would be commercial benefit in grouping delivery portfolios. 10% were opposed with a view of this being an arbitrary categorisation which could be difficult to define given the different characteristics and portfolios of assets.

3.5 Impact on wholesale

There was a mix of views on the impact on wholesale markets, with some indicating little impact or no observable impact, while others asserted it is distortive and disruptive. Respondents raised the prospect of closer-to-real-

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time procurement as a way of providing certainty and avoiding price pollution, while others extolled the value of the scarcity signal.

4.0 Delivery

4.1 Closer to real-time

Of those who provided a view, the majority found or believe that closer to real-time (e.g. within-day) activation would not have a significant impact on volumes. A couple of respondents said day ahead notice was preferable, or necessary due to their consumer base.

Many respondents seem to interpret the question as “real-time” rather than “closer to real-time” or “within-day” which has coloured the responses. Most said this would require automation and is likely to limit volumes. Of those who interpreted the question as within-day, time horizons of 4 to 8 hours were suggested as minimum viable times, or day-ahead for the following morning or within-day for the evening.

Respondent’s general view is that shorter lead-times will lead to less certainty of the delivery, although some pointed out that they will continue to learn and refine their forecasts. 4/6/8hrs was raised several times as a minimum viable lead time, although the difference between provider notice for procurement and end consumer notice for activation was raised as a key point in that context.

A flexible approach to combine both Day Ahead and Intraday auctions would be generally welcomed.

4.2 Procurement

Respondents were generally supportive of a more flexible approach to procurement lead times and process.

5.0 Process

There were a range of different areas flagged for review. Notably the key areas which had the largest agreement were around MPAN duplication, automation, baseline, communication and event opt in.

The SharePoint was seen as a basic method for delivery. The current process would benefit from automation and API. There was recognition that it could be used for next winter if the service was similar but there were benefits for some additional developments. It may be more difficult to continue with SharePoint if the service becomes more complex. A more enduring solution should be progressed in parallel for a product/service beyond next winter.

For those with a potential to participate in DFS, a further detailed level of reporting could be provided. Those with automated solutions had access to this data more freely however those accessing domestic meters could be subject to a 24 delay.

It was noted minor adjustments by the ESO could equate to much larger impacts and changes for participants. The ESO should be cognisant of the development and implementation time needed ahead of launching a service (c.6 weeks).

6.0 Rulebook

6.1 Baseline methodology review

There is a general consensus supporting removal of the within day adjustment for consumers to avoid gaming, customer confusion and onerous data provision. Another consideration is to change the adjustment period to before consumers are notified of an event or use a longer baseline assessment period. There was a suggestion that these could be predetermined and stored to reduce time.

Further consideration could be to review existing baseline assessment methodologies or modelling tools. Some respondents commented that profiling or categorisation with standardised baselines could also be beneficial. Principles for the intention could also be shared with industry.

Moving to a more real time service would alleviate some of the concerns around gaming and potentially allow access to greater volume.

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6.2 MPAN duplication enhancements

There were a range of suggestions for this process. However, the key to this would be to introduce some form of database or platform for providers and consumers. It could hold information such as the registered ownership of MPANs. This would allow providers to verify or identify duplicated MPANs easily. A minimum ask was for all participants to provide a point of contact to support resolution.

Enhancements to the existing process would require a clear set of rules to guide providers on the outcomes of ownership be it recency, supplier default, minimum sign-up periods, timestamps, exclusion of automatic opt in etc. Realtime MPAN checks would support consumer switching and building a platform to compare all DFS providers would provide clarity to consumers.

The clear communication for consumers to help understanding of only allowing a single MPAN to participate at sign up stage was also noted. This could also be supported by an umbrella campaign for the service which could be facilitated by ESO or an independent party to manage customer communication.

6.3 Metering

Asset metering is less associated with Domestic properties and therefore a number of parties remained neutral on this.

For I&C and aggregators, it was felt that asset metering could provide an additional amount of flexibility access via this route. Allowing asset metering would support alignment to ESO's other balancing services more closely and could provide data accuracy benefits. Respondents also noted asset metering could unlock further flexibility outside of smart meters with more homes with access to connected devices and smart assets. Between October 2022 and the end of March 2023,

A number commented on a potential risk of double counting if both boundary and asset metering were accepted. A solution would need to be put in place to mitigate if this option was taken forward for future iterations of the DFS.

Measuring Instrument Regulations (MIR) was seen as a negative factor for the DFS and wider industry. This regulation applies to asset metering and the industry felt it could impair access to future flexibility (and one of the larger domestic loads - EVs). Full guidance on MIR is still to be confirmed.

Half Hourly Settlement (HHS) was seen to offer more opportunities in the market. However, due to the high operational cost, volume may be slow to materialise. HHS would be beneficial from a data perspective and would support consumer choice opening up more tailored propositions/incentives in the future.

Consideration and protections were flagged for vulnerable customers as well as those with greater usage and/or less flexibility.

7.0 Participation and protection

7.1 Volume and participation

Many areas were touched on by respondents including widening the scope of DFS. Considerations include removing barriers to the Capacity Market (CM), metering, allowing stacking of the DFS with the CM and reducing the minimum requirement threshold.

The largest consensus was around consumer information. Be it at provider side, in terms of clarity of service or general information for the public on the relevancy of the DFS and bringing more providers in to join the service. Responses with reference to smart metering were also prevalent and spanned easier data access for providers, better consumer knowledge of smart meter requirements and opting into half hourly data collection.

Other responses included using DFS as a national service, rewarding longer term energy efficiency, increasing the number of live events, a more clear and efficient process via API and moving to Pay-as-Clear.

Providing more longer-term certainty and market stability for industry would be welcomed to balance investment in to setting up the DFS by providers. This could come in the form of longer DFS service/programmes, policy and governance to ensure the flexibility market is stable and adequate protections are in place. It was noted that the HOMEflex voluntary consumer code is likely to be in place by next winter and should be encouraged.

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7.2 Enabling wider access while still maintaining visibility of reduction delivered

There was an acknowledgement that only smart meters could support access to half hourly data. Not having HH data in place would compromise the baseline and delivery calculations, and therefore many respondents agreed with the current process. A number of respondents suggested asset meters could also support this function and should be considered. It was suggested that DCC or Elexon could be a useful governance support to the service.

“Whilst lack of a half-hourly smart meter access is a barrier to DFS participation, it is unclear how turn down volume could be verified without this.”

Recommendations to engage with innovators and tech providers for a longer-term solution may be possible for future iterations of the DFS.

An opportunity has been created for smart meters and recognising that this is a key enabler for flexibility, there was strong support for the smart meter roll out. One respondent highlighted that if events were not classed as marketing, it would remove the need for explicit marketing consent and therefore unlock a significant volume and enable wider consumer participation.

7.3 Incentives

DFS participants offered different incentives for consumers from prize draws to financial/points. Many providers showed positive responses from consumers with messages of system resilience. Others noted financial reward, choice and carbon reduction as positive messages to drive behaviour change.

More learning, insight and research for consumer archetypes was called for in this area to understand behaviour drivers. Particularly in relation to reaching those disengaged in the energy market.

7.4 Switching

In terms of making switching easier for consumers, the focus was around MPANs; rules, API and/or a centralised database to provide additional support and visibility around the process.

Respondents were also keen that consumers had choice and it should be supported by knowledge and information. Other factors of note included an independent party to support the process, additional consumer knowledge on the routes to market and clarity of service rules.

7.5 Learnings

The two main themes centred on incentives and communications. There was a call for better education for the public including additional social media support to dispel myths around the DFS. Many providers were still in the process of collecting their own DFS information as well as supporting the ESO DFS Consumer evaluation. Further details will be released in due course.

8.0 Wider market initiatives

Over half of the respondents said that migrating their volume to a new market for next winter was not applicable to them. Some (15%) answered positively to moving the volume to new markets and a third (28%) thought it may be a potential and were considering their options.

23% had considered offering flexibility in the BM and 21% had not. Barriers stated included high risk vs reward, API integration, suitability of services and operations (including costs).

Over half of respondents (53%) were aware of the various ESO trials and innovation projects currently underway to unlock flexibility. Some stated they were developing their own trials to support the industry and some showed interest in developing partnerships relating to ESO current and future projects. An overarching view of the energy landscape including a roadmap of current and future demand response was welcomed.

To further drive support for wider development of flexibility services, suggestions included a single source of information and data, innovation and access to wholesale markets. Further support could be in the form of increasing competition, stackability, regional pricing, support with DCC registration and consistent rules around metering requirements.