



Open Networks Project
Electricity Networks Association
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25th September 2020

Dear Sir or Madam

Thank you for the opportunity to respond to the Open Networks Flexibility consultation. Please find below E.ON and npower's response.

Executive Summary:

We are very supportive of the ENA's underlying objectives of making flexibility procurement as transparent and technologically neutral as possible. We agree that a fair, consistent and transparent evaluation of flexibility (compared to traditional reinforcement and network solutions such as ANM) is necessary and we welcome this opportunity to raise our concerns over the current version of the Common Evaluation Methodology (CEM) model. As well as some technical issues around inclusion of optionality and whole system benefits, we have some concerns around the governance of the design of such an important tool. It is our understanding that no flexibility providers were included in the working group looking at the CEM. This would have been an ideal opportunity for the networks to demonstrate that they are taking an open and transparent approach to flexibility.

We believe that the standardisation of products, contracts and terms and conditions for existing flexibility markets should help facilitate fuller participation by all sizes of providers. By extending standardisation to include consolidation of data collection, bringing together basic data from across all local and national balancing and flexibility providers into a central depository, this should improve the efficiency of tenders. However, new DSO services should be allowed some time to trial different methodologies/processes to ensure that the right solution for all participants/operators can be found.

We believe that in all aspects of flexibility services, system operators should be steered by consumer demand and look to make services as simple and open as possible. There can often be a compromise between simplicity and fairness which will depend on the maturity of the service i.e. nascent services should concentrate on simplicity to encourage participation whilst existing services should look to tackle areas of unfairness that may be holding back some participants. Tackling fairness in market areas such as baselining and ANM inclusion are good examples

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and need addressing and E.ON is pleased to see ENA taking these issues forward in this consultation.

Comments on the Common Evaluation Methodology:

One of the key benefits that flexibility brings is to allow system operators to defer investment in networks due to demand growth. The decarbonisation of heat and transport brings with it huge uncertainty in the timing and the speed of customer uptake. Even with the Government’s ban on new sales of internal combustion vehicles in 2035, it is not clear when and how fast electric vehicles will become mass market. It is quite likely that rates of uptake will also vary in different places across the country or even within individual towns and cities themselves. Basing multimillion-pound reinforcement schemes on forecasts and with limited monitoring of the LV network risks installing new network in places where it is not needed immediately and missing areas where it is needed more urgently. However, using 1-year flexibility contracts, DNOs ought to be able to ‘wait and see’ if the demand really does materialise when expected. If it does, then the flexibility assets contracted can cover the exceedance for a year whilst plans are made to reinforce and if it doesn’t then the only cost incurred is the fee for the flexibility whilst a large saving in capital expenditure has been made. This optionality that flexibility offers is key and must be incorporated into all processes and analysis used to investigate flexibility.

We believe that the first version of the Common Evaluation Methodology (CEM) tool that has been released does not make clear how this optionality value will be assessed. Whilst it does allow the user to test the costs and benefits across several forecasts/scenarios, it does not consider how these forecasts might (and will) change and how this could impact decisions that need to be made today. For example, if the ‘best view’ forecast suggests traditional reinforcement is the best option whilst one of the other scenarios suggests that a one-year deferral through contracting flexibility is the best option, how should the network operator choose. Ideally, the network operator would like to ‘wait and see’ which forecast looks to be the closest to reality. See Figure 1 for an example to illustrate this issue.

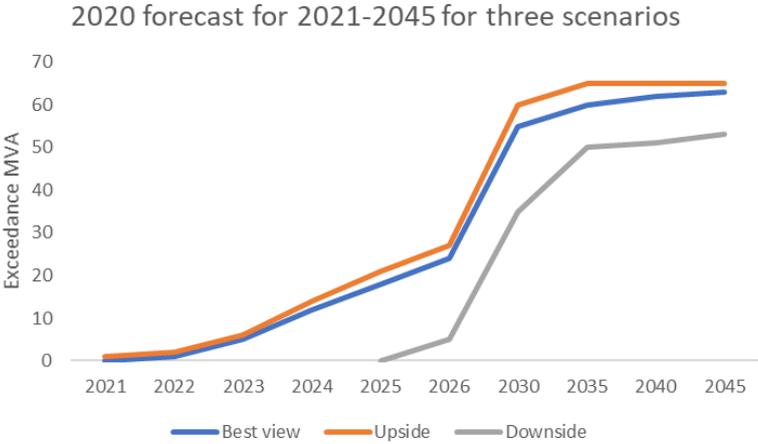


Figure 1- Three forecasts for exceedance on a network

Let us assume that the CEM outputs for traditional reinforcement are an NPV of £100m for the best view scenario, an NPV of £105m for the upside scenario and an NPV of £50m for the downside scenario. In comparison, a one-year deferral through flexibility option suggests an NPV of £95m for the best view scenario, an NPV of £98m for the upside scenario and an NPV of £60m for the downside scenario (See Table 1).

2020 NPV £m	Best view	Upside	Downside	Average
Traditional reinforcement	100	105	50	85
One-year deferral via flexibility	95	98	60	84.3

Table 1- Result from CEM for two options across three scenarios

It is clear that the traditional reinforcement option is the better option for two scenarios whilst the one-year deferral via flexibility is the better option for the remaining option. Averaging across all three scenarios equally gives £85m NPV for traditional reinforcement and £84.3m for one-year deferral and therefore you might suggest that the traditional reinforcement option is the best one and proceed with that.

However, if the cost of contracting flexibility to cover the upside exceedance for one year is £1m, this might be worth paying in order to get a better view of costs and benefits next year. **This is the important difference in option value that we believe the CEM is currently missing.** For example, if the expected future demand (based on a 2020 forecast) stalls you might find that the CBA in 2021 has changed (due to different forecasts for each scenario).

2021 NPV £m	Best view	Upside	Downside	Average
Traditional reinforcement	98	103	50	83.6
One-year deferral via flexibility	97	101	65	87.6

Now, even with the £1m cost for contracting flexibility for 2021, the 2021 NPV for a further one-year deferral looks better. Therefore, we believe that the CEM needs to take this ability of flexibility (to delay decisions until more data is available) into account rather than basing a decision on a 'single point in time' CBA.

A further point not covered by the CEM is the value that flexibility offers the whole system. Based on the current version of the model, the NPV is calculated solely from a DNO perspective. However, if contracting with flexibility means that the ESO can get access to cheaper peak power for a year or can prevent a little more

curtailment of wind, this additional value needs to be taken into consideration. If it further means that new peak generation assets can also be deferred for a year or transmission network assets can defer reinforcement, this also needs including (possibly in the societal impacts as any financial benefit cannot be assigned to the DNO). We believe that the 'whole system consideration' aspect of the DNO license condition (Standard License Condition D17~7A – 'efficient decision-making on energy network planning and operation') makes the inclusion of wider system benefits in the CEM essential to be compliant with the license.

We also believe that it is important to include as wide a group of stakeholders as possible in the User Group being proposed. The User Group will look to develop the CEM tool and as suggested above, this needs to include benefits for the whole system. Therefore, the User Group cannot just include representation from the DNOs.

Comments on Q2-Q5:

In general, we applaud the ENA's attempts to make flexibility procurement as simple, standardised and consistent across all the DNOs. Having different procurement processes, terms and conditions and contracts adds resource cost and risk to participants wanting to utilise a portfolio of flexibility assets across the country. We were disappointed that version 1 of the standardised contract was released before discussion with the industry and this has led to an overly long contract document (at 39 pages before scheduled services are included). We also believe that many of the terms are unpalatable to our larger I&C customers (such as unfettered access to sites, PR activity without consent and liability clauses). We expect the ENA to consult more closely with industry before the release of version 2 to tackle these issues.

We would like to see DNO standardisation expanded across other areas of DNO interaction with the industry. Network planning and connections are areas where we have experience of otherwise plausible flexibility projects being derailed by excessively high priced G99 consents which are not consistent across the sector. This is serving to undermine customer confidence in flexibility as a whole.

In terms of weights applied to different aspects of a procurement tender, we would prefer to see less emphasis placed on any technical parameter as this suggests that procurement is not technology neutral and that the DNO has a solution in mind. The technical parameters suggested e.g. ramp rate, energised status, type of metering, type of connection would appear to suggest that even assets that meet the minimum requirement will be penalised over 'better' options. The DNO should ensure that any risk that they are trying to mitigate against through having a weighting on technical parameters are covered in the minimum specification. This is the methodology that ESO has used very successfully over many years for national balancing services. It also demonstrates transparency and technology neutrality.

As a potential flexibility provider, an 'early as possible' timeline for procurement (that informs us which assets could and could not be considered) would be preferred. This would then allow us to focus on tenders that we can participate in and not needlessly use resource preparing tenders that we cannot win. Therefore, of the two options highlighted, we prefer ACA with the separate Stage 2 process.

Having two procurement rounds each year per DNO seems a sensible balance between knowing what flexibility is required and not flooding the industry with numerous tenders. Also, aligning these rounds across all the DNOs for the same time in the year means that flexibility providers can focus on preparing submissions (for those assets that they know meet the technical requirements) and so not have to continually prepare submissions right across the year. These procurement rounds should also consider when other tenders for flexibility services e.g. capacity market are happening and try to avoid overlap.

Standardisation of the active power services parameters (such as minimum capacity, maximum ramping rates and minimum utilisation times) will, as stated above, enable flexibility providers to easily consider their assets for tenders and allow aggregators to more easily discuss with potential clients what requirements are needed to participate in local flexibility markets. Standardisation at the lower levels should help smaller participants and new entrants to enter the market quickly and help those parties considering constructing new flexibility assets to easily adapt design in order to reach these minimum specifications. We are disappointed to not see further standardisation for some of the flexibility provider defined parameters such as recovery time and maximum daily/weekly utilisation. Early clarity of any needs concerning these parameters would further help flexibility providers and aggregators only put forward tenders that both parties can be sure of delivering the necessary energy for the necessary period. However, we are pleased to see that implementation of these standard parameters is expected to be a quick process with all DNOs adhering to the levels set by Oct 2020. We are also keen to see standardisation with ESO service parameters as quickly as possible such that revenue stacking across all balancing services can be made as seamless as possible.

Whilst all the above changes will help to encourage more participants into the market, this must be seen in context, alongside the removal of major revenue sources for flexibility providers. Whilst the removal of market distortion through the TCR is a sensible thing to do, we believe that Ofgem did not consider the impact that this would have on a nascent flexibility market, especially as any benefit from network reform through the Access and Forward-Looking Charge SCR is still two to three years away. This, alongside the capacity market suspension and the painfully slow reform of the ESO ancillary markets, makes the need to get DNOs and the ESO thinking in a whole system manner especially important.

Comments on Q6-Q7:

It is difficult to give comment on the standardisation of new DSO services without the review of these services. In principle, it would seem unnecessary to start standardising services until it is clear that they are becoming widespread and used by large numbers of participants. It is only when markets and services have a high degree of participation that standardisation offers any benefit, ensuring that participants can move their assets from service to service, market to market without needing to requalify or test. It is also only when similar markets are common across the country that standardisation also removes accusations of cross-subsidy or postcode lotteries. As suggested in Q6, standardisation too early in the process risks stifling innovation and best practise. It is only when markets and services have had sufficient time to trial and test that the best outcomes for all can be found.

Other than the services already going through standardisation (Secure, Sustain, Dynamic, Restore), we are unaware of any other DSO services that could benefit from standardisation today, although as stated at the beginning of this question, this is difficult to comment on without the review.

One area of 'standardisation' that we feel would benefit all industry participants would be a central depository of technical information on assets which can be used by market operators to make early filtering decisions. Currently, each market requires potential participants to share technical information on their assets e.g. metering equipment, ramp rates etc. Much of the information needed by each market is duplicated across other markets, but in general we cannot just submit data we have previously submitted e.g. data needed for the capacity mechanism cannot be resubmitted for balancing services. Whilst we appreciate that markets do need different data for some detailed parts of their assessment, we believe that a large proportion of the data needed by each market is currently held by another market operator (or even another part of the same market operator). By having a central depository of basic data, market operators could quickly filter potential participants without having to wait for data to be collated from each of the sites.

We would also like to see standardisation of the process for bringing successful trials of innovative services into business as usual as quickly as possible. The quicker that trialled services are brought to the full market mitigates the risk of DNOs setting up a suite of bilaterals.

Comments on Q8:

In order to prioritise non-DSO service development, network operators must be guided by what consumers want i.e. to be led by customers rather than what the industry believes is the right development. In the absence of a clear steer from customers, we believe that focus should be on making existing markets (and the stacking of revenue across them) as simple as possible. A single platform across all the flexibility markets run by the ESO and the DNOs would make participation easy

and the storage and transmission of data needed for industry systems as simple as possible. A single platform across all markets should also aid system resilience as all the data is in the same place, giving the DNOs and the ESO as much transparency across the entire network as possible i.e. DNOs will be able to see which national balancing services participants are already part of and the ESO will be able to rule out participants who are already contracted for DNOs. A single platform also makes for a highly liquid market and ensures that there are no interoperability issues between parties. System operators will then not have to be involved in creating scalable platforms of their own. Any platform or database should also be open in both directions such that flexibility providers are able to see the network condition in order to help inform their business case. Data such as expected date of reinforcement, condition and age of key equipment such as transformers and length of any connection queue in the area will help flexibility providers estimate how long their assets may be used.

Comments on Q9-Q11:

Baselining has been an issue for demand side flexibility provision for a long time. There are pros and cons for all baselining methodology currently used by the ESO and DNOs, but overall it is generally about balancing fairness with simplicity. Without the provision of a physical notification (as in the BM), baselining is incredibly hard, both for remuneration of the service provided and also the settlement of the underlying supplier of the asset. We believe that there are three options for baselining:

- Generic technology derating such that the capacity of every asset of that type is derated by a set percentage.
- Baselining based on metered historical actuals (week before, day before etc) such that the starting position of the asset can be estimated.
- Redeclaration of the asset availability (sculpting availability across the day a week beforehand).

It is our belief that the ability to redeclare asset availability is the best route for all parties, provided that the cost of redeclaration is not too high. To ensure that participants are redeclaring honestly, ESO and DNOs can conduct routine spot checks on metered volumes just before activation. This would allow all technologies to be treated in the same manner (unlike the derating method) whilst baselining according to historical actuals does not allow for changes in the market (such as an asset being 'in the money' one week and 'out of the money' in the following week). Keeping the redeclaration process as simple and cheap as possible is also important to ensure even small participants can take part.

Comments on Q12-Q15:

Whilst we agree in general that capacity from ANM and capacity from flexibility services currently look to solve different problems (ANM helps with excessive generation, flexibility services helps with excessive demand), this overlooks the services that standalone storage can offer. Standalone storage can absorb

excessive generation as well as discharge energy to meet excessive demand (as suggested in 7.2.1). Standalone storage can compete on a level playing field with other flexibility services, however services to tackle excessive generation are currently monopolised by ANM schemes. Given that most flexible connections are evergreen, this means that one potential revenue stream is completely closed to standalone storage. We believe that DNOs should open these “high generation, low demand” situations to as full a market as possible to ensure prices are kept as low as possible for consumers. DNO control of assets through ANM also needs to have an operational cost associated with it that other technologies (such as storage) can look to compete against them fairly. Currently ANM is seen as zero cost, even though the generator has actually ‘sold’ the flexibility they are providing through ANM in order to get an early and cheap connection. This ‘one off’ cost needs to be better incorporated into the common evaluation methodology in order to compare ANM against storage. By shutting some players out of a service, DNOs are breaking their own ‘flexibility first’ principle.

E.ON is fully supportive of helping assets currently on ANM areas of the network to participate in flexibility and balancing services. Blanket bans are too heavy handed and do not consider what is happening on the network at that time. As networks become more and more dynamic, data and forecasts ought to help system operators select the right assets to deliver the services needed. Therefore, we would be highly supportive of prioritising projects that give system operators (and the industry as a whole) more information across all areas of the network. The fact that this will require accurate forecasting and the correlation of several data sources is not an issue as the Energy Data Taskforce report suggests that this ‘bringing together’ of data is the source of new system value and should be opened up to everyone to maximise that value.

We are also supportive of the economic modelling that is currently being performed by the Open Networks Project through the CEM. We believe it can better compare the whole system benefit of ANM vs traditional reinforcement vs flexibility service than the current iteration, but this should be the focus for all system operators. As stated in our general comments on the CEM, we have some concerns, but in principle, we believe this is the correct course of action to deliver a least cost Net Zero. We are also supportive of the cost of reinforcement/flexibility being fully socialised through a shallow boundary (although we believe increasing the fixed component of DUoS is the right charge to use rather than a local BSUoS). This has the additional benefit of encouraging low carbon technologies right down to LV level i.e. stopping the case where the first EV to be installed after reinforcement is needed must pay for a benefit that all the other EVs previously installed will benefit from and which would stop LCT uptake dead.

Regarding regulatory changes, we are fully supportive of the arguments in 7.2.3, looking to use a shallow connection boundary to shift more flexibility into flexibility services and less into ANM and curtailment as we believe a market will deliver the necessary flexibility more efficiently than forcing customers onto ANM schemes.

Therefore, we believe that this regulatory change and its inclusion within the CEM that should be the priority for any future Open Network projects.

Comments on Q17:

The adoption of residential flexibility will be a key part of the overall system flexibility answer for Net Zero. For example, the ESO in their future energy scenarios estimate that by 2050 up to 80% of all household vehicles will be smart charged by 2050 and up to 45% will be able to provide vehicle to grid services. Therefore, it is key to remove all the barriers that might prevent this significant source of flexibility from being delivered. Some of the barriers today are regulatory in nature, with the removal of Triad avoidance payments and embedded benefits before the introduction of potential benefits from the Access and Forward-Looking Charges SCR being the most impactful. Other barriers include code modifications that are looking to give DNOs the capability to disconnect low carbon technologies in periods of network stress with no recompense (DCP371 and SECMP0046), thereby giving DNOs 'free flexibility'. Finally, meter splitting suggestions (through DCP379) also add confusion and complexity for a customer who just wants a single party to reduce their energy bills as much as possible (whilst keeping the lights on and their EV sufficiently charged when it is needed). The customer journey and experience must come first and foremost in attracting residential flexibility and that means making the process simple and transparent.