

REA high-level response to ENA Flexibility consultation

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Background for members

- The Energy Networks Association has launched a major new consultation stemming from their Open Networks Project. It is proposing a number of new products and standardising flexibility services between network providers.
- This is a crucial consultation as it is laying the foundations of what the market will look like in the 2020's.
- In particular, the products include:
 - a model to compare the value of network reinforcement vs going to market,
 - plans around interactions between active management and flexibility services including for greater coordination between ESO and DSOs, and
 - a proposal to release tenders in tranches twice a year.

The REA hosted a workshop with the ENA on this topic on the 22nd September 2020.

The REA will not be formally replying to the consultation but is submitting high-level comments on key questions that the ENA would value input on. .

Members have been asked to think about the following questions. Our response to the consultation (draft below) includes responses to many of these questions.

- What are barriers I am experiencing to participation in local flexibility markets?
- How could processes be more standardised between DNOs and National Grid?
- What data is not being provided that would otherwise be helpful in encouraging me to participate in flexibility markets?
- How might the ENA more explicitly signpost where networks requirements might be?
- What do I think about ENA's [draft methodology](#) for procuring flexibility vs traditional reinforcement?
- How many flexibility procurement cycles would I want per year?

- Do I think Active Network Management (flexible connections) might be harming the market for flexibility procurement? How should this be balanced?

REA consultation response

Are there barriers preventing customers with assets with Flexible Connections (ANM) providing flexibility services to the ESO or DSO today?

The REA welcomes the ENA's leadership in developing these products and launching this consultation. Overall, we see it as a positive step towards our ambition of a smart, flexible, and affordable power system with high degrees of renewable power integration.

There is a very serious risk however that the 'wait and see' approach that DNO's appear to be taking in respect of Ofgem's RIIO-ED2 and Access SCR results in sub-optimal approach to progress on the ENA's work towards unlocking the value of flexibility as a key enabler for accelerating decarbonisation on the grid at least cost. The REA considers that the ENA's work here is vitally important to delivering on Net-Zero and it is imperative that these work packages are taken forward in an integrated fashion.

Storage developers of all scales require the stacking of different revenue sources (service contracts) to make a project viable. There is not yet enough coherence and consistency between value inputs – this is a significant barrier reported by members. The speed of delivery for many sources of flexibility is a fundamental value to the system and the more consistent and integrated the revenue streams are the better able grid operators will be able to procure alternatives to direct reinforcement.

The current flexibility markets and system design are helpful for unlocking flexibility technologies that can deploy in shorter timeframes, but make it difficult for technologies with longer deployment timeframes that can also offer cost effective flexibility services. There is a lack of monetisation of the value storage creates by avoiding renewables curtailment. There is also a need to integrate an understanding of the different technology characteristics (e.g. behind the meter battery storage, grid-scale storage, or longer duration storage) into modelling to properly assess what procurement parameters are needed for the viability of delivery.

In relation to timeframes for procurement - if DNOs are only bidding one year ahead then they are only allowing projects that can get planning permission and build in a year.

To enable wider range of flexibility technologies (including those with longer lead times) to participate, the ENA could consider standard flexibility tenders on a range of different timescales:

- Shorter-term tenders particularly targeting behind the meter flexibility (e.g. from domestic batteries and smart EV charging). This could be as short as day-ahead flexibility procurement.
- Medium-term tenders (possibly between 6 months and 8 years) for technologies such as grid-connected battery storage.
- Longer-term tenders for longer-duration storage, which take more time to be deployed and are capital intensive, for example compressed air energy storage.

Organising contracts in such a manner would assist with managing the balance between tenders being used to provide revenue streams for existing and faster deployment assets that can provide additional option value given the nature of the flexibility that they provide vs supporting the construction of new assets that may have longer build times and that require more certain revenues.

How could processes be more standardised between DNOs and National Grid?

The REA notes that the barrier to entry in these markets is still high in that only individuals with direct experience of bidding for flexibility markets previously are able to engage with many of the products. Standardisation can reduce this barrier, particularly as there are individual processes in place for different flexibility tenders. We would also welcome training for professionals in this space and a greater focus on proactive notification for the wider industry of reform workstreams and proposals to maximise dialogue between different parts of the market. For relatively new technologies such as storage, there is a need for storage representation in relevant committees e.g. CUSC, STC.

What data is not being provided that would otherwise be helpful in encouraging organisations to participate in flexibility markets?

REA members would like to see greater use of guide prices, which can inform their decisions around whether their projects or assets would qualify.

For instance, Energy Storage projects can solve multiple issues, for example:

1. Provide peak capacity and defer reinforcement
2. Accommodate more renewables by avoiding curtailment
3. Reduce overall CO2 emissions by serving peak demand using low carbon energy
4. Avoid constraint payments by avoiding renewable curtailment
5. Solve voltage issues
6. Provide security of supply
7. Network charges of systems providing flexibility services
8. Business rates for systems providing flexibility services to level the playing field with DNOs
9. Rates at which curtailed energy will be charged (if applicable) to a storage provider.

Currently there is a lack of information related to all points except for that related to point 1, hindering the business case of storage.

For a storage project to be attractive and having to rely on short term contracts there is a need to monetise all value created and to have a clear view of costs to be faced.

How might the ENA more explicitly signpost where networks requirements might be?

There is a desire and need for an NOA approach looking at the system as a whole and integrating transmission and distribution networks. Like pathfinder projects, there is a need for a map at substation level identifying places where capacity, curtailment, voltage issues will emerge. It is also important to accelerate the Distributed ReStart programme and integrate this into a holistic needs map.

What does the market think about the ENA's draft methodology for procuring flexibility vs traditional reinforcement?

The REA notes that the draft methodology does not properly consider the option value of procuring flexibility. Networks who opt for flexibility to start with can still pursue traditional reinforcement at a later stage. This is a direct value to the networks not presently being fully reflected.

The methodology integrates all aspects related to conventional network reinforcement, however it does not fully recognise the value that storage can generate as a network infrastructure asset.

- There is need for further clarity around modelling granularity (hourly resolution).
- Optional aspects such as reduction in curtailment need to be carefully considered, especially in light of the implementation of article 13 of EU 2019/943. Redispatch cost should be assessed and communicated.
- The value of ancillary services related to active power, voltage control, inertia should be included and quantified.
- An adequate methodology to assess the contribution to security of supply by alternatives to conventional network reinforcement such as the one developed by Imperial College should be adopted.

It would be beneficial to reference the CBA methodology developed by ENTSO-E to assess projects of common interest.

How many procurement cycles for flexibility should be conducted per year?

As outlined above, the REA would prefer multiple procurement cycles per year at different tranches to reflect the value of different types of flexibility at difference scales / durations. A one-size-fits-all approach is likely not the best way forward. The ENA should consider a range of systems, one suggestion from a member includes cycles to deal with bulk need, occurring once every few years, however additional cycles would also be beneficial twice per year.

Do I think Active Network Management (flexible connections) might be harming the market for flexibility procurement? How should this be balanced?

The REA is concerned that the increasing use of ANM will hinder the development of flexibility markets. The REA would like to see the development of deep integrated flexibility markets that ensure both demand and generation turn up and turn down are fully utilised as flexibility services to prevent the need to curtail renewable generation and to avoid or defer expensive grid build out.

As we seek to transition to a net-zero carbon world with NGESO seeking to be able to operate the system carbon free by 2025 when the circumstances permit, it is untenable that RES generation on the distribution network can be curtailed for free and without any penalty on the DNOs. Continuing to rely on ANM should not be regarded as a sign of progress but as an admission of failure in revealing the full value of flexibility.

Curtailed energy through ANM schemes should be accounted for as network losses and energy not served. This demonstrates the value that participants in Flexibility markets could provide in the market. Failure to do so can hide the value that participants in flexibility markets could capture. In line with the CBA used by the NY Public Service commission energy not delivered should be attributed to a value in line with the cost to economic opportunity.

If ANM schemes are over procured the prices in Flexibility markets can become volatile reducing project bankability.

To ensure efficient, deep markets for flexibility, generation-side and demand-side flexibility should not be artificially separated between ANM and Flexibility Services due to legacy reasons. The REA would like to see procurement and activation of flexibility for both purposes managed through an integrated flexibility market. This should mean that the use of ANM is reduced or retired in favour of fully market-based procurement of flexibility.

The use of ANM towards a fully developed market for Flexibility Services is closely integrated with the wider review of access reforms from Ofgem. It is critical therefore that these are progressed together as a holistic package of reforms to prevent developments in one area, jeopardise the ultimate aim of unlocking flexibility to enable a rapid least-cost pathway to decarbonisation.

REA members have raised concerns around whether assets connected to the grid with a flexible connection will be able to bid for flexibility services as freely in the future as those with firm connections.

This issue also relates to the wider question about strategic investment in the electricity networks. The REA would like to see more clear, public tests for strategic investment be published so that DNOs are able to fully and fairly assess how using

flexibility and alternative options to network investment in their planning decisions might satisfy a DNO's medium to long term outcomes.

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