

FLEX WEBINAR Q&A SUMMARY

Monday 15 February 2021



Q: Could we please have an indication of the total market value of the flexible market ending 2020?

A: The estimate total market value for Flexibility services is approximately £500,000 in 2021/22.

Q: Randolph referred to 'Innovation Trials' and a series of associated events taking place within GB. Is same planned for NI?

A: FLEX is one of six innovation projects currently being progressed by NIE Networks during this regulatory period. More information on all of our projects can be found on our website www.nienetworks.co.uk/future-networks.

For more information on all the innovation projects in GB visit www.smarternetworks.org run by the Energy Networks Association.

Q: Would introducing a set of low-cost tariff periods at night incentivise individual EV, Heat Pump, and immersion heater owners to shift demand away from the peak evening period and enable more of the available wind energy to be dispatched?

A: In Northern Ireland, electricity supply companies set tariffs of which Distribution Use of System (DUoS) charges are only a relatively small proportion. Tariff reform part of our DSO programme and may include more time-of-use options to manage network constraints. The dispatch/curtailment of wind energy generation is generally outside of NIE Networks' remit.

Q: What is the time scale for DSR to be available to domestic users in NI?

A: Flexibility services (including Demand Side Response) are open to domestic users in Northern Ireland provided that they can meet NIE Networks' minimum technical requirements for the services. Individual domestic customers (users) who find it challenging to meet NIE Networks' requirements on their own should explore participation through a 3rd party.

Q: What is the approximate time for the reduction of peak load of the three services procured: Sustain, Secure and Dynamic?

A: Sustain: Flexibility service delivery for the duration of Services Windows e.g. 4 hours.

Secure and Dynamic: Flexibility service delivery for a minimum 30 minutes, and can be up to the duration of the corresponding Service Window. NIE Networks has provided estimates for the number of Utilisation Events and average Utilisation Event durations in FTZ information published on Piclo and at www.nienetworks.co.uk/flexibility.

Q: Can you explain how this flex project differs to the current DSU/DS3 capacity market schemes?

A: A Demand Side Unit (DSU) is an energy market concept/construct and is a single market entity that is comprised of a portfolio of smaller assets. This is comparable to a Flexible Unit with respect to NIE Networks' Flexibility Services.

There are a series of differences between NIE Networks' Flexibility Services and the DS3 or capacity market related to their use case and funding mechanism/source.

While it is anticipated that Flexibility Services will evolve over time as trial outcomes and learning become available, their primary use case is the management of network peaks in order to defer network reinforcement. The primary focus of the FLEX project is the technical demonstration of Flexibility Services but it is envisaged they will be funded on a business as usual basis from the value associated with deferring network investment, and any savings shared back with the customer through an agreed mechanism.

The capacity market is a national mechanism to ensure supply adequacy, in which generators and other eligible units are awarded contracts that are designed to ensure the availability of sufficient generation capacity (or otherwise) to meet total system demand for the relevant period. At a high level, capacity market payments are linked to energy prices and are funded by suppliers.

DS3 system services are services procured by the TSO to ensure the secure operation of the electricity system and focused on system stability through response, reserves, inertia and other services. They are funded out of a dedicated DS3 system services pot.

In summary Flexibility Services are network facing, DS3 system services are system stability facing and the capacity market is supply adequacy/energy market facing.

Q: What communication method/technology will be used? Is it planned to have visibility of available reduction and achieved reduction? Will these services be accounted for in the energy market systems?

A: As part of its FLEX trial, NIE Networks is open to different approaches to communications to facilitate and maximise participation. Automated email, phone call and text message, and subject to successful development, API based communication methods are available.

Actual Flexibility Services delivered will be measured utilising the Flexible Unit's metered data. Interaction with any other markets or mechanisms is at the discretion of the Flexibility Provider to manage.

Q: It seems that the only connection offers we can get from NIE are zero export G99 offers. Surely this stops the ability for NIE Networks to control these large systems. Also, why is NIE Networks still taking 90 days to respond and charge large amounts to apply when rest of UK answer in days with no charge.

A: NIE Networks connections applications process is approved by Utility Regulator. In addition, there are network limitations in places due to volumes of renewables now connected to electricity network.

Is there an idea of how many of the 3 event types per year to expect?

A: Yes, NIE Networks has provided estimates of the number of Utilisation Events per year and the average duration of each Utilisation Event for FTZs where it is procuring Secure and Dynamic as their Utilisation is driven by network conditions. This is not applicable to Sustain, as it is expected to be delivered for the full duration of every Service Window in the Service Period.

Q: "30-minute minimum service delivery (minimum run time)*" For battery storage, does this mean 30 minutes on full rated power, or energy delivered during the 30 minutes not necessarily on full power?

A: Provided that NIE Networks' minimum criteria are met, this is at the discretion of Flexibility Providers, the nominated Flexible Capacity, minimum and maximum Utilisation Durations should reflect the technical capability of Flexible Asset (BESS).

Q: Just to clarify, sites can apply directly to participate in FLEX, without having to operate via existing aggregators?

A: Yes, provided that the site can meet NIE Networks' minimum criteria. NIE Networks would note that if a site was in contract with an aggregator, then it should check with their aggregator or the terms of their agreement with their aggregator prior to making any submission.

Q: Will the slides be made available to participants?

A: Webinar slides are available to download now from NIE Networks' website at www.nienetworks.co.uk/flexibility.

Q: Do we have any understanding of what data will be required from the sites i.e. real time SCADA signals, 1 second data etc. Or is it assumed that NIE meter data will be used to prove response has been achieved

A: Individual sites should have metering of at least 30 minutes resolution and up to a resolution of 1 minute. This data should be aggregated for all sites within a Flexible Unit and submitted to NIE Networks by the Flexibility Provider. NIE Networks reserves the right to request individual Flexible Asset (site) meter data. NIE Networks will access customer billing meter data from time to time to audit submissions but normal operation is Flexibility Providers submitting their own meter data.

Q: Will this project happen without smart meters?

A: Yes, but participants are responsible for providing meter data at the required resolution to verify performance.

Q: Who pays for any specialist equipment which might be needed on customer sites to participate in any of the flex products.

A: Flexibility Providers/participants are responsible for the installation of any equipment and any ongoing operational costs necessary to deliver Flexibility Services.

Q: Could you explain further the stackability capability of these services with DS3, capacity market and wholesale market

A: NIE Networks does not specify if or how Flexibility Providers should stack revenue streams rather has avoided any exclusivity with regards to Flexibility Services so a Flexibility Provider is able to pursue it.

However, as an example, when receiving advanced notice of instruction from NIE Networks to provide Flexibility, a Flexibility Provider who participates in the wholesale energy might choose to amend their energy market position to reflect NIE Networks' requirements while continuing to earn revenue from energy.

Q: Can we put a portfolio of assets at a single indicative postcode to choose a zone, before confirming exact locations? We have done this with other DNOs previously

A: Technically yes, but exact locations are verified at during tender pre-qualification stage which immediately follows Asset Registration on Piclo (www.picloflex.com/dashboard).

Q: Will this project include domestic customers using solar PV and battery storage?

A: If domestic customers, using solar PV and battery storage or otherwise, can fulfil NIE Networks' requirements then they are eligible to participate in the FLEX project trial.

Q: How will sector coupling be considered in the future years of the FLEX project? e.g. heating sector (heat pumps, electrical district heating) or transport (electric vehicles)

A: NIE Networks does not discriminate against technology types or customer groups and accordingly participation is open to all sectors as described in the question and any other that can fulfil NIE Networks' requirements.

Q: You mentioned multiple communications options were available - does this include API integration?

A: As part of its FLEX trial, NIE Networks is open to different approaches to communications to facilitate and maximise participation as well as develop a diverse/robust trial dataset. Automated email, phone call and text message, and subject to successful development, API based communication methods are available.

Q: Open to all? When is a smart Metering Program going to be rolled out in NI to enable domestic customers to participate like GB/ROI markets?

A: The decision to roll-out smart or intelligent metering in Northern Ireland is at the discretion of the Northern Ireland Executive. As yet the Department for Economy has not approved the roll-out of smart or intelligent metering in Northern Ireland. However, smart metering is not a requirement for participating in the FLEX project trial.

Q: Thank you for this webinar. I have a question related to the expected payments. What are the expected utilization/availability payments, is there any rough estimates?

A: NIE Networks is not providing information relating to available payment rates in order to avoid unduly influencing price discovery.

Q: Would you consider aggregate portfolios smaller than 50 kW?

A: No, NIE Networks has minimum requirements like to this to delivery efficient outcomes for the network and as a company, but will review this threshold at the end of the trial period.

Q: What is the typical price range per MWh of flexibility provided you expect? Can you explain more about penalty for non-complying? For battery storage, when are they permitted to charge to ensure a new congestion does not occur at a different time?

A:

- a) NIE Networks is not publishing price signals during the FLEX trial in order to avoid unduly influencing price discovery.
 - b) The full payment mechanics are detailed in NIE Networks' Flexibility Product Specification document (NIEN-FPS-01) found on NIE Networks' website at www.nienetworks.co.uk/flexibility. Payments are reduced in line with the payment mechanics for Utilisation and Availability (if applicable) where there is under-delivery of Flexibility Services to promote conformance to instructions and consistent performance.
 - c) NIE Networks does not explicitly define periods when batteries are permitted to charge but has set a limit of import/export following Utilisation Events which Flexibility Providers must adhere to for the remaining duration of a Service Window to avoid exacerbating congestion issues. Flexibility Providers are limited to 115% of their Baseline Position value for the remainder of the Service Window in which a Utilisation event occurred.
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Q: How will NIE Networks make sure that new players and consumers are the leaders in this market, and not getting monopolised by incumbents

A: NIE Networks has implemented measures to remove barriers to entry to promote participation which also enable customers and 'new players' to compete with 'market incumbents'. These measures include low minimum Flexible Capacity requirements and Utilisation Duration and accessible and low-cost communications and testing arrangements. Furthermore, NIE Networks

does not require Flexibility Providers to be market registered entities and organisational checks/requirements are scaled according to the size of the submission being made.

Q: Can you please provide worked examples to demonstrate how participation in FLEX would operate and provide reward for our 11 Local Councils who currently own and operate existing generation assets (Natural Gas CHP's) and storage devices e.g. exporting electricity to the grid?

A: Depending on the FTZ product, and assuming the Flexibility Provider (Council) has a Flexible Asset in an FTZ:

A baseline electricity consumption or generation value for Flexible Assets is calculated and the delivery of Flexibility Services is measured with respect to this value. This approach has the effect of creating an 'inferred set-point'.

Where Sustain is procured, the Flexibility Provider would be required to run its Flexible Asset(s) (CHP, storage or otherwise) for the duration of the Service Window effecting a desirable change in their electricity consumption or generation position to the benefit of the network. NIE Networks would compensate the Flexibility Provider for every MWh of Flexibility Services delivered, measured as the deviation from the Unit/Assets' Baseline value.

Where Secure is procured, NIE Networks would instruct a Flexibility Provider to deliver a specified Flexible Capacity for a specified duration within Service Window effecting a desirable change in their electricity consumption or generation position to the benefit of the network. The instruction from NIE Networks would be issued at least 24 hours in advance of the commencement of delivery. NIE Networks would compensate the Provider for every MWh of Flexibility Services delivered, measured as the deviation from the Unit/Assets' Baseline value, and for the Flexible Capacity made available during the Service Window.

Where Dynamic is procured the process is effectively the same as with the Secure product expect the notice period for Utilisation instructions from NIE Networks is 3 minutes.

Q: Do the maps indicate zones where eligible sites should be located, or do the highlighted zones cover the constrained substation locations.

A: This is one and the same thing.

Q: Will this project include V2G?

A: NIE Networks is technology neutral, provided that its minimum requirements are met, V2G is eligible.

Q: Are there penalty fees for non-performance when called on?

A: There are performance scalars that penalise Flexibility Providers resulting in reduced payments for non-conformance/under-delivery. The full payment mechanics are detailed in NIE Networks'

Flexibility Product Specification document (NIEN-FPS-01) found on NIE Networks' website at www.nienetworks.co.uk/flexibility.

Q: Can you detail your definition of an asset?

Any customer site, installation, facility or Distributed Energy Resource that can be flexible with its electricity consumption or generation in response to an instruction from NIE Networks.

Q: At LV it would be difficult to justify the economic value for the flexibility but if the aggregator aggregates 50 kW would it be something the regulator would try to make more attractive from the supplier or the aggregator?

A: The economic case for utilising Flexibility at LV can be challenging as the revenues available are directly related to the value of the network reinforcement being delivered/deferred.

Ultimately, NIE Networks is seeking to use Flexibility Services to benefit the general customer base and further deployment of Flexibility Services for LV and other network issues will be considered with learning from the FLEX trial period, in conjunction with the Utility Regulator and other stakeholders.

Q: Can you confirm that FLEX participants need not be current market participants? Does this mean that Energy Services Companies, including those not based in NI, can participate?

A: Yes.

What is the methodology to calculate the utilisation kWh/MWh values from load shedding?

A: NIE Networks initial position is to consider the time value of money when deferring capital network investment. The saving to the Northern Ireland customer by deferring investment for 1 year create an annual pot for Flexibility Services. If the MW/MWh Flexibility requirement can be met within this 'pot', then it is economic to utilise Flexibility Services. Each network congestion issue has a unique congestion profile (MW/MWh requirement) and corresponding network investment value creating a unique MW/MWh price ceiling in each zone.

Q: We don't have smart metering for residential customers so does that rule out homes for participating (I think it was said that there is a minimum of 30min data)? Thanks

A: As part of its FLEX project, NIE Networks is willing to accept meter data from sources other than NIE Networks' customer billing meters which operators may need to install themselves. NIE Networks requires meter data to verify the delivery of Flexibility Services and make payments.

Is NIE Networks considering mandating 2-way communication potential for all new EV chargers installed in future in NI, in order to ensure potential for aggregating EV flex

A: Innovative connection arrangements are outside of the scope of the FLEX project but we welcome views on the approach to the efficient connection and operation of EV charging infrastructure.

Q: Is there a MW size limit to participate in the scheme? Can Transmission connected sites participate?

A: There is no specific upper unit Flexible Asset MW size limit however the volume of Flexibility Services required creates an implicit MW ceiling. In order to support network congestion, Flexible Assets providing Flexibility Services must be connected downstream from specific points of network congestion. Accordingly, NIE Networks nominates a maximum connection voltage within each FTZ. The highest nominated voltage across all 17 FTZs in this procurement round is 33 kV meaning that transmission connected assets (110 or 275 kV) will be technically unable to delivery Flexibility Services to support the specific point on the network.

Q: Will the Flex Trial consider the carbon impact of participants e.g. firing up a diesel gen set just to earn from Flex

A: While the carbon impacts will be noted, under current legislation NIE Networks is not permitted to discriminate on grounds of carbon impact.

Q: Is NIAUR considering mandating that suppliers provide efficient and effective access by aggregators to customer usage data (where the customer agrees with the aggregator) to enable competitive aggregation in NI

A: We have passed this question on the Northern Ireland Utility Regulator for comment.

Q: Is there a programme to invest in the network as well and in addition to FLEX.

A: Yes, it is anticipated that there will continue to be substantial network investment in Northern Ireland electricity network with Flexibility Services complimenting or augmenting this investment where possible.

Q: How does participation in the Flex trial interact with OFGEM approved generators?

A: There is no direct link between the FLEX trial and the OFGEM generator accreditation scheme.

Please email any queries in relation of NIE Networks' Flexibility Services to flexibility@nienetworks.co.uk.