

NIE Networks' Response to SEM Committee's Future Arrangements High Level Design Consultation (SEM-21-069)

October 2021

Introduction

NIE Networks welcomes this consultation by the Single Electricity Market (SEM) Committee on the High-Level Design (HLD) of the Future Arrangements (SEM-21-069), enabling System Operators and industry views to shape design, as well as the opportunity to present its views to industry at the consultation workshop. NIE Networks welcomes further with the SEM Committee in relation to this response as the detailed design of the Future Arrangements progress.

As a backdrop for its response to the consultation questions, NIE Networks would highlight the role the role networks and the emerging DSO role will play in decarbonisation. It is anticipated that significant volumes of low carbon technologies (LCTs) will connect to the Northern Ireland distribution network over the coming decades driven by government policy objectives including the ban on the sale of new petrol and diesel cars by 2030. Projections suggest there could be up to 1.3 million electric vehicles by 2050, complimented by other LCTs and further renewable generation. Customers, empowered with information and technologies, will become increasingly active and it is anticipated that a substantive volume will have the capability to provide System Services as well as other emerging markets such as local Flexibility markets, which NIE Networks is currently piloting.

With the expectation that customers behaviour and distribution system conditions will become more dynamic, NIE Networks would reaffirm its licence obligations as well as obligations and rights under applicable legislation to operate a safe, secure, efficient and economic distribution system.

Note, NIE Networks has not included responses to all questions in the SEM Committee's consultation.

Q1: Do stakeholders consider that the commitment to putting these arrangements in place on an enduring basis, at least to 2030, represent sufficient certainty of process.

NIE Networks welcomes the commitment from the SEM Committee to putting these arrangements in place on an enduring basis until at least 2030 but would note that this may represent a period which may be as short as 6 years in duration from the current end date for the extended period of the Regulated Arrangements.

It is critical that the Future Arrangements are sufficiently flexible to adapt to new needs, technologies and markets as they emerge and scale over the next decade e.g. the participation of tens of thousands of electric vehicles or domestic PV and battery storage combinations in multiple markets. NIE Networks welcomes engagement on the development of scenarios to test and validate Future Arrangements proposals.

If sufficiently flexible arrangements can be developed which ensures they remain fit for purpose then any extension of commitments e.g. to 2035 or beyond would be welcome, noting that NIE Networks is investing in systems, processes and resources to support the Future Arrangements.

However, NIE Networks recognises that jurisdictional policy objectives and legislation influences the SEM Committee's ability to make longer term commitments.

Q2: What are stakeholders views on the options and recommendations presented for qualification/registration? Are there further options that may be considered?

NIE Networks recognises the benefits that could be derived by increasing the flexibility around the qualification/registration process e.g. greater volumes being registered in a timelier manner, and promoting competition. NIE Networks would highlight the role played by the DSO at present in qualification/registration and assessing network impacts; currently NIE Networks absorbs these additional activities within its RP6 indirect allowances, but would note that this position is not sustainable into the future and cost recovery provision will be necessary. NIE Networks welcomes engagement on this. The SEM Committee should recognise that, irrespective of the arrangement in place now or in future, the burden on the DSO is set to grow as the volumes of assets connected to and volumes of System Services coming from the distribution network grow substantially.

Recognising that volumes registering is a primary driver in the DSO's burden, whichever approach to qualification/registration is implemented in the Future Arrangements will also have an impact on the DSO, as well as the TSO. While increasing their frequency, a gate-based approach offers greater predictability in administrative and network assessment burden for the DSO, whereas a rolling approach presents a greater challenge in terms of planning and allocating resources efficiently.

The SEM Committee should be cognisant of the burden placed on the System Operators and their challenge in allocating of organisational resources efficiently. This is not limited to qualification/registration but extends to dynamic assessment of network capacity and facilitating distribution connected Providers' participation on an ongoing operational basis.

NIE Networks welcomes engagement from the SEM Committee and industry on measures that could be implemented to promote efficient registration and operational behaviours from Providers and supports efficient DSO resource allocation.

NIE Networks would note that, at present, registration date is the determining factor in the allocation of distribution network capacity (see NIE Networks' response to Question 8 on the development of this processes). Should processes evolve to where all assets are initially registering with the DSO through defined gates, the ability to use date as the determining factor to allocate network capacity may be diminished e.g. all registering assets may have the gate closure date as their nominal registration date and cannot be prioritised on this basis.

Q3: What are stakeholders views on the proposed formalisation of the QTP?

NIE Networks welcomes the formalisation of the QTP process and a formal opportunity for the DSO's views on trial design to be considered. NIE Networks would invite the SEM Committee, and the TSO, to consider how the DSO's input could be formally considered during trial design and, recognising increasing distribution participation, if the DSO's participation in the selection process has value.

Considering that multiple submissions may be received from industry in a given call for evidence, NIE Networks would request clarification on any selection criteria that will be used by the TSO and that

the TSO's consultation on trial design and subsequent recommendations to the SEM Committee should include rationale regarding successful or unsuccessful submissions from industry.

NIE Networks would highlight that the DSO may have unique insights and in future may propose trials such as novel service provision techniques or communications approaches and the formal QTP should enable the DSO to do so.

Q4: What are stakeholders views in terms of the introduction of a single System Services Code?

In principle, NIE Networks supports simplifying arrangements and agrees on the development of a single System Services Code to replace the current multiple System Service documents. NIE Networks requests that the SEM Committee confirm how this single System Services Code would fit within the existing structures of codes and to confirm that should a conflict arise which code (or document) would take precedence. It is NIE Networks' view that existing codes requirements cannot be undermined by any potentially less onerous requirements in a new System Services Code.

Q5: What are stakeholders views on the options in terms of governance of rule changes?

It is NIE Networks' view that with respect to governance and rule changes, where the distribution network, or distribution connected assets are concerned the DSO must be a central party.

Parallel to the TSO, the DSO holds licence and legislative obligations in relation to the distribution network that cannot be undermined by another party or panel. Firstly, the DSO must be the party which assesses the impact of proposed rule changes on the distribution network. Where the impact of rules changes on the distribution network is at the interpretation of another party there is risk of negative and/or unintended consequences for the DSO and the distribution network. Secondly, rule changes which inhibit the DSO's ability to fulfil its licence and legislative obligations cannot be permitted to progress.

Practically, NIE Networks proposes that it should be party to a new System Services Code panel, and a mechanism should also be established which allows the DSO to directly escalate issues to the SEM Committee for arbitration where necessary. The mechanism must prevent rule changes which undermines the DSO's ability to fulfil its licence or legislative obligations from being progressed.

Q6: Do stakeholders have views on the potential to amalgamate different Panel meetings?

It is NIE Networks' view that the various panels exist to service specific codes/purposes and accordingly panels cannot and should not be combined. NIE Networks would also highlight the differences in panel compositions in Northern Ireland noting the minimal overlap in Grid Code and Distribution Code Review Panel memberships. Even within organisations, the expertise requirements for existing panels would differ to that a System Services Code panel. System Services cuts across Trading and Settlement arrangements, transmission and distribution and there is a risk of fragmenting System Services by combining panels, which should be avoided. NIE Networks would finally note the general capacity of existing panels to absorb System Services which, along with the general customer base, would be best served by establishing a new dedicated panel for System Services.

Q8: What level of involvement should the DSO/DNO have in the governance process?

NIE Networks welcomes the recognition of the important role of the DSO and need for adequate consideration of distribution connected Providers participating in the Future Arrangements. Furthermore, NIE Networks would highlight its licence obligations with respect to operating a safe, secure, efficient and economic distribution network and would reference its response to Question 5 as well as the responses to the July 2020 Scoping Paper (SEM-20-044) on the DSO's role in the governance process.

Through their inherent design, distribution network conditions are extremely localised and dynamic, extending down to the low voltage network where this is particularly acute and individual customer behaviour impacts on one and other. The TSO does account for distribution network conditions or its constraints when operating system level markets and auctions, which led to the introduction of Instruction Sets when a DSU market was established in Northern Ireland in order to continue to maintain a safe and secure distribution network.

As a more dynamic approach to allocating distribution network capacity is developed by the DSO, the DSO must participate in the Future Arrangements both at the qualification/registration stage and going forward at the auction stage and on a real time basis as local conditions can change rapidly. Accordingly, it will be necessary to exchange information between all parties (including direct DSO TSO and DSO Provider exchanges) at both qualification/registration and on an operational basis including forecasting and scheduling. With projections for increased volumes of services coming from the distribution network, the Future Arrangements should be kept under review to ensure they remain fit for purpose.

Based on stakeholder support during its Greater Access consultation programme, NIE Networks is progressing the development of a platform that will dynamically allocate capacity to Providers closer to real time. This approach enables the use of available network capacity to be optimised, minimising conservative assumptions that may unduly limit available capacity. This platform will be initially implemented on a trial basis, with a view that it will be operational when the Future Arrangements commence. NIE Networks acknowledges some challenges with progressing to dynamic allocation of network capacity and welcomes engagement from industry and RAs on this but would highlight the benefits this can offer to the system as a whole.

Currently, NIE Networks allocates distribution network capacity on a last in-first out (LIFO) basis, with registration date the determining factor. In the long run, this may present barriers to new distribution connected assets and technologies obtaining network capacity, stifling innovation and competition. In addition to support for more dynamic capacity allocation, through the Greater Access programme, stakeholders supported an option that, where markets were reflective, a cost-based approach to allocating capacity should be adopted. NIE Networks would note that other options e.g. LIFO, round-robin and pro-rata approaches, also had varying degrees of support.

At a high-level cost is an appropriate principle to allocate network capacity on, reflecting markets and enabling incumbent and new assets to compete on a level playing field to the benefit of the general customer base. However, as there are multiple markets, products and price signals, no single unified price is readily available to form the basis on which to allocate capacity fairly thereby

presenting a barrier to implementing this approach. NIE Networks welcomes further, in-depth engagement on the principles of access for distribution network Providers and assets.

Q9: How should interactions with distribution connected parties be governed?

NIE Networks recognises that, in the context of the Future Arrangements, the DSO is not the contracting party yet has a central role in allocating capacity to and enabling service provision from distribution connected parties based on an exchange of information across different timeframes including forecasting and scheduling interactions. On this basis, a Provider-led approach represents the most similar to the existing approach and the logical, least-regrets starting position for the high-level design of the Future Arrangements but that the DSO-led approach has advantages.

NIE Networks would note that the optimal governance of interactions may not be one of the discrete options put forward by the SEM Committee but rather a hybrid option that adopts characteristics of many depending on the nature of the relationship between parties. While additional information on all options is required, NIE Networks would highlight features of the DSO-led approach that should be considered and potentially combined with the Provider-led approach to secure that distribution network while optimising the System Services available from it.

As noted by the SEM Committee, NIE Networks has concerns that a TSO-led approach could limit the DSO's ability to operate its network securely and lead to sub-optimal outcomes for distribution connected Providers and assets.

NIE Networks would note that should the approach to allocating capacity evolve e.g. to an ex-post, cost-based allocation, the approach to governing how distribution connected Providers interact will need to be reviewed and if required transition to a different governance option.

Q11: What are stakeholder views on the Auction Design options and SEMC Recommendations?

NIE Networks understands and agrees with the SEM Committee's rationale for recommending Option 1, Post DAM-Day Ahead System Service auctions as it offers increased accuracy of volume requirements following DAM outcomes as well visibility of post-DAM positions of prospective Providers, informing auction submissions. NIE Networks would note the challenging timelines associated with running System Service auctions in this time window, and allowing for any necessary network analysis including that of the DSO to secure the distribution network.

NIE Networks' best view of its dynamic network capacity allocation (NCA) process is that results will be published prior to DAM auction closure based on its response to Question 8 (current LIFO approach). This means that capacity allocated to Providers can be utilised in any auction or market provided that double counting is strictly avoided. At a high level, network capacity is finite but in some aspects agnostic to how it is used e.g. in the provision of System Services, participation in energy market or Balancing Mechanism, so an ex-ante allocation of capacity to be used how Providers see fit is a functional approach. The SEM Committee should consider NIE Networks' response to Question 8 regarding the potential long-term negative consequences of allocating capacity on a basis of registration date, and not cost in respect of new assets and Providers entering the market.

Should arrangements evolve to a position where the outcomes of any auctions are necessary for allocation of capacity i.e. product-volume distribution or utilising a cost-based principle of access to allocate available capacity, the allocation process may need to move to a post auction timeframe. Location and merit order are key determining factors in available network capacity and the SEM Committee should consider its preference for whether System Service auction bids should be constrained ex-ante i.e. based on date as the current approach, or constrained ex-post i.e. based on auction outcomes reflecting cost.

Q13: What information is required to get a full view of the volumes required for System Services?

NIE Networks recognises the benefit offered by network capacity information being available prior to auction submissions to maximise the 'usability' of System Service volumes awarded during the auction process. However, it should be noted that as available network capacity is a function of the location of the Provider (asset), it is not possible to provide accurate estimates of network capacity without the DSO having a view of the location of assets, specific volumes requested and a merit order in which to assess impacts.

Where the merit order is pre-determined e.g. based on registration date, information can be provided ahead of auctions as proposed in NIE Networks' response to Questions 8 and 11, however if capacity was to be allocated on a cost basis, it is challenging to provide capacity estimates ahead of auction outcomes as available capacity is a function of the locations and volumes of the in-merit assets providing System Services.

Q14: What are stakeholders views on the development of Secondary Trading of System Services?

NIE Networks welcomes discussion regarding the development of secondary trading arrangements for System Services as a mechanism for Providers to react to changing system or market conditions and manage risk however would note the complexity of facilitating this, within constrained timeframes. Framed by its response to previous questions, the challenge with facilitating Secondary Trading arrangements in a distribution context is that in the first instance, capacity allocated to Providers on an asset by asset basis reflecting network conditions local to the assets.

Obligations or distribution network capacity cannot be directly transferred to other Providers or assets as they may be in different locations with different network conditions and constraints. Facilitating secondary trading would necessitate analysing the impact of each trade on the distribution network taking into consideration that obligations which wish to be traded.

Q15: What are stakeholders views on the proposals regarding Commitment Obligations and Scalars?

NIE Networks would note that where capacity is allocated to Providers, this must be respected to safeguard the distribution network and public safety. Should a situation arise in which a Provider breaches allocated capacity for in any dimension, some form of penalty should be incurred that reflects the seriousness of the potential network risk incurred by the DSO and that minimises the likelihood of reoccurrence.

Compliance with capacity allocations could be addressed in a similar manner to how Commitment Obligations may be enforced and NIE Networks welcomes further discussion with the SEM Committee, TSOs and industry on this.

Separately, NIE Networks would note that while the introduction of Scalars can promote more efficient outcomes they can have unintended consequences as has been observed previously during the Regulated Arrangements. As an example, early indications from the TSOs suggest locational scalars will be pursued to a greater degree in the Future Arrangements. While this is expected to be beneficial to the TSO, the inherent nature of a locational scalar will incentivise System Services to be delivered from a given network location thereby further concentrating the co-ordinated action of Providers and undermining design assumptions, exacerbating network congestion. Accordingly, NIE Networks requests that development of scalars is done in conjunction with the DSO so that appropriate risk mitigations can be put in place.

Furthermore, NIE Networks would request additional information on how Scalars would be applied in the auction and therefore if and how the DSO should take them into consideration during allocation of network capacity. Existing scalars have promoted enhanced technical capabilities and clarification is sought on how this can be fairly reflected in auction and capacity allocation design.

Q16: Do stakeholders have views on the introduction of the concept of Firm Access to the System Services market?

NIE Networks has concerns relating to introducing the concept of Firm Access for System Services and would note that no Provider or asset connected the distribution network would have what could be considered as 'Firm Access'. Firm or Non-Firm Access are transmission system and SEM (energy) concepts which do not translate to the distribution network, or directly to System Services.

NIE Networks would highlight to the SEM Committee that should a distribution connected Provider with hypothetical 'Firm Access' be constrained due to a distribution network issue, they would not be compensated. The SEM Committee should consider limiting this concept to transmission connected assets where, in this context, Access has meaning and might be aligned with other markets with existing arrangements in place for assessment. In addition, the SEM Committee would need to consider how 'Firm Access' would be evaluated and/or applied in the context of the various System Service products and their respective timeframes.

NIE Networks welcomes further, in-depth engagement with the SEM Committee on this topic with respect to distribution connected Providers and Access concepts.

Q17: Do stakeholders have views on layered procurement of System Services? What approach could be taken to support this?

NIE Networks would note that development of dynamic network capacity allocation, referenced in its response to Question 8, is expected to offer greater network access than the existing instruction set process, but that this closer to real time analysis will offer less longer-term predictability of access. This should be taken into account when considering the approach to layered procurement of system services, depending on the type of services that may be subject to longer term procurement, and will likely require further engagement during the detailed design process.