



NETWORKS

Demand Flexibility Product Proposal

Recommendations on responses received
to consultation document

ESB Networks

DOC-050624-HYM

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1 Introduction

1.1 Background

In December 2023, ESB Networks issued a Consultation Document¹ outlining a proposal for a medium-term demand flexibility product ('Demand Flexibility Product') to be procured in locations where there is a defined system need, as part of an overall programme to meet the capacity requirements summarised in ESB Networks "Electricity Distribution Network Capacity Pathways" report. As set out in the Consultation, medium term demand flexibility was defined as the ability for flexible assets to deliver demand reduction, demand shifting or inject power at or near their full contracted capacity for a minimum of 4 hours each day over specified hours, on the majority of business days over a minimum of 3-6 months of the year. The product has been designed to meet the specific network need arising at this time and support the delivery of the 2025 and 2030 demand flexibility targets in the Climate Action Plan 2023 (CAP23).

The consultation was open over the period of 20 December 2023 to 14 February 2024. Over this period, CRU and ESB Networks held a joint online webinar on 8 February 2024 during which various details of the Demand Flexibility Product were discussed with stakeholders. At the time of the closing of the consultation on 14 February 2024, 30 responses had been received covering a broad range of stakeholders in the Irish electricity sector.² This recommendation paper summarises the results of the responses received and provides ESB Networks' recommendations for the procurement process of the Demand Flexibility Product.

1.2 Context

The National Network, Local Connections (NNLC) programme was established within ESB Networks to work with, and for, customers to enable every Irish home, farm, community, and business to play a part in the decarbonisation of Irish society. As part of this we are developing markets for flexibility, that encourage customer participation in climate action, and maximise the efficient use and value of the existing electricity infrastructure.

Since the establishment of the NNLC programme, the Climate Action Plan 2023 (CAP23) placed a more immediate spotlight on the role of a flexible system in supporting renewables integration and electricity demand management. It establishes an interim target of 15-20%

¹ Demand Flexibility Product Proposal Consultation Document, ESB Networks (DOC-191223-HVV)

² Of the 30 responses, 2 were marked confidential and have not been reviewed by ESB Networks. The remaining 28 have all been reviewed by ESB Networks and have informed the recommendations included in this paper.

demand flexibility by 2025, building on the existing target of 20-30% by 2030. This is in addition to the electricity sector carbon ceiling, outlined in the Climate Action Plan 2021, of 40 MtCO₂eq. for the first budgeting period (2021-2025), and 20 MtCO₂eq for the second budgeting period (2026-2030).

As outlined in the CRU's recently published National Energy Demand Strategy Call for Evidence (CRU/202356), the CRU is developing and implementing Ireland's National Energy Demand Strategy (NEDS) with the aim of:

- Co-ordinating measures aimed at ensuring overall electricity and gas demand is consistent with Ireland's carbon sectoral emissions ceilings;
- Delivering demand flexibility and demand response initiatives, as outlined in CAP23; and
- Supporting the delivery of Ireland's transition to reach net zero emissions by 2050.

In doing so, the CRU is working closely with ESB Networks' NNLC programme to enable and incentivise the demand flexibility and response needed to deliver Ireland's national targets and ensure ESB Networks can securely and efficiently manage the electricity distribution network through this period of rapid change. In emphasising the priority of this work, in Q4 2022, the CRU issued ESB Networks with a Direction to accelerate the National Networks Local Connections programme in terms of initial scale and speed of roll-out, and broaden the scope of demand flexibility products to include carbon abatement. The initial focus of this acceleration was to reduce the 2022/23 winter peak consumption by at least 5%, in line with EU targets set in the EU emergency regulation on high prices, with a further focus on the 2025 and 2030 targets.

1.3 Structure of this document

This document contains a summary of the consultation responses received, ESB Networks' response and recommendations to CRU. Specifically, it is structured as follows:

- Overview of the respondent organisations which have participated (Section 2).
- Overview of ESB Networks recommendations based on the consultation responses (Section 3).
- Detailed thematic breakdown of the key consultation questions, the responses received and ESB Networks' response and recommendation (Section 4).

2 Response to the consultation

The consultation on the Demand Flexibility Product closed on 14 February 2024. In total, 30 responses were received by the CRU including the following:

- ABO Wind Ireland Ltd
- Bord Gáis Energy
- Bord na Móna
- Cement Manufacturers Ireland
- Codema
- Demand Response Association of Ireland
- Digital Realty
- EDF Renewables
- eHeat
- EirGrid
- Electricity Association of Ireland
- Energia
- Energy Storage Ireland
- EP UK Investments
- Equinix
- ESB Generation and Trading
- Federation of Energy Response Aggregators
- Fingleton White
- Flex Power Solutions
- Form Energy
- iPower
- Irish District Energy Association
- Irish Energy Storage Association (IESA)
- Net Zero Energy
- RWE
- Statkraft
- Utility Innovation Group
- Wind Energy Ireland (WEI)

3 Overview of ESB Networks' Recommendations

While proceeding with any procurement in this space will be subject to further approval at later stages of the implementation, the following table provides an overview of the recommendations which are contained within this recommendation paper.

Table 1 ESB Networks' Recommendations

Section	Requirement	Recommendation
4.1	Guiding principles	<p>Flexibility procured by ESB Networks shall be for the objective of congestion management on the distribution network. A CO2 emissions limit per kWh of flexible demand shall be considered by the CRU and, subject to approval, be included in ESB Networks' tender eligibility criteria.</p> <p>The procurement model shall support multi-market participation of assets across flexibility, capacity, wholesale and ancillary services markets (so-called "revenue stacking").</p>
4.2	Defining use cases and service requirements	<p>This procurement will focus on a medium-term flexibility product. All technologies that are capable of delivering the technical and operational requirements of a specific locational network congestion need will be eligible to tender.</p> <p>The procurement of flexibility across identified locations will take place in consecutive batches</p>
4.3	Procurement locations	<p>An initial list of network locations potentially suitable for procurement of medium-term demand flexibility will be published in H1 2024. The specific locations to be tendered will be provided at RFT stage.</p>
4.4	Payment and scheduling approach	<p>Contracts for flexibility shall award availability payments structured according to a 'floor and share' approach, with negative incentives for deviations from agreed schedules. Payments shall be indexed for inflation. The appropriate level for the sharing factor should be consulted on separately.</p> <p>Negative incentives shall separately be applied to incentivise successful tenderers to deliver in line with agreed energisation dates, and (once energised) to incentivise the operational delivery of contracted flexibility in line with agreed schedules.</p> <p>ESB Networks shall provide indicative delivery schedules to providers up to a week in advance. Final schedules are provided at least 24 hours in advance of the required network need, and with sufficient time to enable positioning before day-ahead wholesale market gate closure. ESB Networks and EirGrid shall aim to share the findings from the TSO-DSO operating framework ahead of RFT.</p>

Section	Requirement	Recommendation
4.5	Contract duration	Contracts will be awarded up to a 15-year basis through a fixed energisation and termination date. The energisation date will be set 32 months after the award of contracts with a fixed termination date this date in line with the contract duration. Extensions to contract length will not be automatically granted due to delays in energisation dates.
4.6	Multi-criteria tender versus price-based auction	<p>A 'most economically advantageous' multi-criteria assessment process shall be applied in the award of flexibility contracts. A more detailed assessment methodology, including further details on potential evidential requirements for each criterion, shall be provided as part of RFT. The assessment criteria and evidential requirements will be confirmed as part of the RFT process.</p> <p>At this stage we do not consider there is sufficient evidence to support a move to price-based auctions in the near future, but shall remain open to revisiting this question at a later date with any decision consulted on separately.</p>
4.7	Assessment criteria	<p>This procurement shall award tenders based on an assessment of Value For Money, Operability and Deliverability as outlined in the consultation.</p> <p>As part of the RFT, ESB Networks' will provide detail on the scoring methodology as well as a set of hypothetical examples to demonstrate how this will be applied in practice.</p>
4.8	Locational batching	<p>This procurement will adopt locational batching of tenders to enable competition across locations based on value for money, deliverability, and operability.</p> <p>Procurement rounds will be staggered so that the procurement process can learn from past outcomes and iteratively improve. A location may be included in more than one procurement round if there is a continued need for flexibility that has not been fully addressed in a previous round.</p> <p>Applicants that are unsuccessful in a procurement round may submit tender again in future rounds, whether for the same or new locations. There is no limit placed on the number of tenders that a single developer may apply for, subject to being able to deliver on all locations for which they have bid</p>
4.9	Stages in the procurement process	The three stages of the procurement process outlined in the consultation shall be retained without further changes, in particular; Initial qualification (Stage 1) Site specific requests for tender (Stage 2) and Tender assessment and contracting (Stage 3).

This proposed procurement process will need to comply with State Aid law. This may impact on the details above and timeline for initiating the procurement process.

4 Detailed consultation responses and recommendations

4.1 Guiding principles

4.1.1 *ESB Networks' Proposal*

In our consultation paper, we proposed the following:

ESB Networks' Proposal

The primary purpose of flexibility procured by ESB Networks will be the active management of congestion and energy flows on the distribution network, with carbon abatement expected to be delivered as a result of this activity.

- Medium term flexibility should enable the DSO to reduce the dispatch down of renewables and provide location-specific volume of demand flexibility needed on a daily basis to make the most of existing capacity and ensure customer needs are met.
- The flexibility procurement model will adopt daily or near-daily demand shifting from high demand periods to periods of low demand and/or high renewable generation output.
- Further benefits to the electricity system are expected to include helping to balance supply and demand and increasing resilience.
- The model shall support multi-market participation of assets across flexibility, capacity, wholesale and ancillary services markets (so-called “revenue stacking”), with safeguards in place to mitigate potential negative consequences.

Contracts for demand flexibility must ensure an appropriate balance of risks between flexibility providers and the DUoS customers who will bear the cost of the flexibility procurement

4.1.2 *Summary of consultation responses*

The consultation asked respondents the following questions, with the responses received summarised below:

Question 1

What are stakeholder's views regarding allowing and incentivising the multi-market participation (or revenue stacking) of flexible assets?

- How would the allowance of multi-market participation impact the business case of flexible assets?

- What other barriers to multi-market participation/revenue stacking for flexible assets may still exist, even if allowed by ESB Networks' market arrangements?

Does the allowance of multi-market participation introduce delivery risks for distribution level markets for demand flexibility that should be considered?

Almost all respondents supported the principle of revenue stacking as a means to incentivise investment and maximise the contribution of assets to the power system whilst reducing cost to DUoS customers. In this context, respondents consider that flexibility service providers should be provided with the ability and incentive to access the wholesale energy market, the Capacity Renumeration Mechanism (CRM), TSO system services and demand flexibility services frameworks.

Respondents noted that barriers to market stacking may exist, resulting from potentially conflicting incentives in parallel markets / procurement frameworks and potential distortions to competition. Examples given included the threat of negative incentives in demand flexibility markets motivating an asset operator to trade at a loss in energy wholesale markets and that revenue stacking may favour certain asset characteristics over others, distorting competition in individual markets where stackable assets compete with non-stackable assets (e.g., CRM).

Several respondents have encouraged sector stakeholders (e.g., TSO, DSO and CRU) to work towards removing barriers to multi-market participation, providing investors necessary incentives, and to ensuring these incentives promote efficient outcomes. Some examples to enable this include development of TSO and DSO workstreams, scheduling and dispatch programmes and the Future Arrangement Services. One respondent suggested that interim measures could be put in place to enable participation ahead of final programmes' delivery, while another suggested that this procurement be delayed until greater certainty can be given regarding broader design of market arrangements for storage assets.

Four respondents also highlighted that coordination between different procurement frameworks was needed to maximise overall investment and participation. In particular,

- Four respondents queried the separate development of the Demand Flexibility Product and EirGrid's Long Duration Energy Storage (LDES) procurement framework and Future Arrangements for System Services (FASS). Respondents noted that whilst the frameworks may serve different system needs, they will be signalling investment in assets with similar characteristics and operating in the same market and system.
- One respondent noted that, if a participant holds a CRM contract, there are obligations and incentives to ensure they are available / discharging during periods of Reliability Option Events which could be counter to the ESN required schedule.

- One respondent went further to suggest that the set of tender prices a single developer submits across these different frameworks will be intrinsically linked and therefore contracts (e.g., demand flexibility and CRM) should also be linked.

Only one respondent considered that revenue stacking is undesirable, citing potential for distortions and conflicts with legal provisions of the CRM and Renewable Obligation Certificates.

Question 2

What are stakeholders' views regarding the focus on ensuring that procurement of demand flexibility does lead to reductions in system wide carbon emissions?

All respondents agreed that the procurement of demand flexibility should serve to promote system wide abatement of carbon emissions but with mixed views on the emphasis of, and mechanism for, this objective.

Three respondents felt it was not clear what weighting is placed on carbon abatement in this product versus other objectives, with some respondents citing a perceived retrospective decoupling of emissions mitigation targets from the demand flexibility target within the CAP24.

Six respondents suggested they would like to see carbon abatement become more of a focus of this tender process. Three respondents advocated for explicit emissions limits to be placed on flexibility tenders from combustion generators. Three other respondents instead suggested that the scope of carbon abatement should be considered beyond the dispatching activities in the flexibility market itself (e.g., the role that an electric heating or transport asset has in decarbonising the wider economy).

One respondent instead considered that impact on carbon emissions is secondary to ESB Networks' responsibility to manage the network needs and therefore the assessment should be limited to the technical capability of the asset. Similarly, two respondents suggested that the primary objective of congestion management should also be to reduce the dispatch-down of renewable generation which will promote greater penetration of low carbon energy in Ireland's energy mix.

Another respondent considered that the decision to decouple carbon abatement targets from flexibility targets within CAP24 has been taken in view of the high volumes of flexibility that would be required to meet ESBN's required technical characteristics and deliver on the CAP23 carbon abatement targets. The respondent considers that multi-day storage is better placed to deliver carbon abatement (as opposed to the multi-hour storage that may suit the technical needs required for congestion management).

Question 3

What are stakeholders' views on the suite of guiding principles outlined above?

- Are there additional guiding principles that should be considered?

Are there guiding principles that should be removed?

Most respondents supported the suite of guiding principles outlined in the consultation. However, specific concerns were raised with respect to the effective technology neutrality of the assessment process for awarding tenders and the objectives for this tender process.

Nine respondents agreed that a technology neutral approach will deliver the greatest benefits to the system, but several cited concerns that the specified operating requirements for the demand flexibility tender process will favour certain technologies (e.g., battery energy storage systems) in circumstances where alternative technologies could be more efficient. Four respondents considered that the current proposal does not provide sufficient assurances for investors in alternative technologies to participate.

One respondent considered that the objectives of the demand flexibility procurement need to be better defined relative to the roles and activities of the TSO, in particular with regards to balancing supply and demand at the system level and minimising curtailment of renewables. Moreover, this respondent considered that operational restrictions by the DSO should be minimised to ensure that resources which have sufficient capacity available to them on the distribution system can be used to meet wider power system needs to the greatest extent possible.

One respondent also considered that the wholesale energy market is the most appropriate mechanism for managing supply and demand.

Lastly, two respondents cited legal challenges to the GB Capacity Market in 2020 as precedent that may concern prospective investors in the Demand Flexibility Product proposal. One respondent suggested that additional information in relation to the compliance the EU Directive 2019/944 Article 32(1) should be included in the recommendation paper.

4.1.3 ESB Networks' Response

We note that most respondents support the underlying principles for the procurement of the Demand Flexibility Product and that further clarity on how these principles will be implemented will be helpful. Moreover, care is also needed to ensure that the product does not give rise to unintended consequences.

Below we provide further consideration on main three issues raised in the consultation:

- technology neutrality;
- carbon abatement; and
- revenue stacking.

Technology neutrality

With regards to technology neutrality, we note that the proposed product was developed based on an assessment of critical technical needs on our network. This assessment returned a number of locations where a local capacity shortfall is likely to arise in the coming years for a period of multiple hours on most days during the highest demand months (i.e., winter months), absent intervention.

After defining the operational and technical characteristics required to meet network needs in these locations, we identified that medium-duration storage may be well placed to meet these needs.³ However, the procurement process is open to any technology that can meet those technical requirements and ESB Networks shall ensure a non-discriminatory assessment process for tenders that is technology neutral and underpinned by the principles of value for money, deliverability and operability. This will ensure that the technology, or technologies, that is most efficiently able to meet the defined network needs is procured. To this end, we will provide further detail on the key assessment framework parameters and a set of hypothetical applications to demonstrate how this will work in practice at the RFT stage.

We reiterate that substantial additional volumes of demand flexibility originating from a range of different technical characteristics (in terms of e.g. locational, reliability, frequency and duration of delivery, months/years confidence of service delivery) will be required in the near future. While not every technology will be well placed to deliver the technical and operational needs sought for all flexibility needs, we consider that the approach remains technology neutral as flexibility providers will have an equal opportunity to show that they can meet the needs being sought.

Carbon emission reductions

It is our view, based on wholesale modelling work undertaken, that the procurement of flexibility is likely to lead to reductions in carbon emissions to further national climate policy objectives and emissions reductions targets. While carbon abatement may be maximised through the implementation of a CO₂ emissions limit per kWh of flexible demand procured, we note that ESBN's current licence conditions do not give us the vires to apply such a

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criterion without explicit instruction to do so from the CRU or as part of other legislation. In our recommendation, we therefore request the CRU consider this.

Revenue stacking

Assets contracted to deliver demand flexibility services to ESB Networks should be incentivised through market arrangements to participate in other energy, capacity or demand flexibility services markets, where feasible, to the benefit of the DUoS customer. The validity of this approach has been confirmed by respondents in terms of the potential to achieve value for money for DUoS customers.

At the same time, respondents have identified the potential for misalignment of incentives or distortions, if the product design is not cognisant of the potential impact of participation in multiple markets. In our view, supporting the participation of flexible assets in multiple markets, with sufficient safeguards in place to protect against negative consequences on the distribution network or wider system stability, can ensure that these assets operate as efficiently as possible. In addition, allowing the asset to “stack” revenues across multiple markets (capacity, wholesale and ancillary services markets), can help reduce the cost of procuring demand flexibility services for DUoS customers. Further, the total capacity required to deliver across all markets should be reduced, if the same capacity can meet multiple market needs. This should result in lower overall costs to the DUoS customer.

ESB Networks is engaging with EirGrid to agree the scheduling and operational approach for the flexibility product. In our view this process will provide assurance that the proposed flexibility product does not give rise to unanticipated consequences in related markets or to the system.

It is intended to publish further detail on the precise scheduling and operational approach at RFT stage.

4.1.4 ESB Networks’ Recommendation

ESB Networks Recommendation

The Guiding Principles outlined in the Consultation shall be retained with no further principles added.

The flexibility procurement model will adopt daily demand shifting from high demand periods to periods of low demand and/or high renewable generation output. The Demand Flexibility Product shall enable service providers to generate revenues in other markets (‘revenue stacking’) where this is feasible. Further detail of the scheduling and operational approach will be published at RFT stage.

We recommend that a CO2 emissions limit per kWh of flexible demand be considered by the CRU and, subject to approval, be included in ESB Networks' tender eligibility criteria.

4.2 Defining use cases and service requirements for demand flexibility

4.2.1 ESB Networks' Proposal

In our consultation paper, we proposed the following:

ESB Networks' Proposal

Locational analysis shows that a medium-term flexibility product will be needed for several consecutive hours per day for consecutive days, with high reliability, over periods of months throughout the year, with the ability to either increase demand close to renewable generation and/or increase injections in congested areas at peak times.

- A preliminary shortlist of locations considered for procurement of demand flexibility will be published in 2024 and refined prior to the procurement process. Because the Demand Flexibility Product is needed to manage varying needs of the local distribution network, the capacity and duration of demand flexibility required to meet these needs are location specific.
- The following characteristics will be specified in each request to tender: volume, duration and direction of adjustment; energisation date; and carbon emissions limit.
- The specific operational requirements may mean that storage technologies are best placed to meet the location needs. However, all technologies capable of delivering the technical and operational requirements of a specific locational network congestion need will be eligible to tender.
- Successful tenders shall meet a required energisation date of approximately 24 months (for 38kV projects) to 30 months (for 110kV projects) after concluding contracts.

Projects which are successful in this competition will receive a connection offer which meets the needs of their contract for demand flexibility with only shallow connection works and a non-firm Maximum Import Capacity (MIC) and Maximum Export Capacity (MEC).

4.2.2 Summary of consultation responses

The consultation asked respondents the following questions, with the responses received summarised below:

Question 4

What are stakeholders' views regarding how services for demand flexibility will be defined?

Three respondents suggested that the underlying problem and system need which this procurement is trying to deliver should be more clearly defined to (a) understand whether

the proposed product definition is fit-for-purpose, (b) give assurance to investors over what will be required of their assets, and (c) to understand how this procurement aligns with the roles and responsibilities of the TSO. Within this context, one respondent urged that more clarity around the basis and objective for the CAP23 target of 15% to 20% demand flexibility by 2025 be provided.

Two respondents requested that the operational parameters and scheduling approach be defined in greater detail so that developers can understand the operational requirements (e.g., volume, direction of change etc.).

Three respondents were concerned that a presumption of short-duration flexibility has been adopted for this procurement whilst longer-duration flexibility could still play a valuable role. These respondents cited evidence on intermittency profile of renewable energy generation and potential cost advantages to longer-term storage providers in filling these gaps.

Question 5

What do stakeholders consider is a feasible required energisation date?

On balance, respondents considered that the proposed energisation window was unlikely to be feasible for new developments and that this would favour incumbent flexibility service providers which are able to deploy an existing portfolio of assets. Respondents also highlighted that several aspects of the process can be delayed for reasons beyond a developers control.

Four respondents considered that an energisation window of 24 to 30 months was too ambitious. Two respondents suggested that a 30 month window could be achieved in a best case scenario on conditions of perfect tender information and expedited grid connection process. Another respondent noted that this window could vary substantially depending on planning decisions and connection offers, ranging from between 2 years and 8 months to 5 years and 9 months in a worst case scenario. Three respondents considered that developers with an existing portfolio of built assets in place could meet an 18 to 24 month window. One respondent suggested that demand-side response could meet a 6 month window.

One respondent suggested that an explicit energisation date should not be set administratively but that the procurement process should incentivise early delivery (e.g., through a fixed contract termination date). The respondent considered that this approach may mitigate risks observed in previous procurement processes (external to ESB Networks) from unrealistic energisation dates failing to contribute to delivery.

One respondent did not consider a reliable estimate could be given without further information on the locational requirements and the pre-qualification criteria for the specific tender.

Question 6

What are stakeholders' views on the carbon emissions limit the CRU should set to ensure that the procurement of demand flexibility results in a reduction in the carbon intensity of the system?

Of the five respondents that directly addressed this question, four supported placing an emission limit on the procurement of flexibility whilst one did not. Those supporting an emission limit offered different proposals:

- To not enable the installation of any incremental carbon emitting generation;
- To award contracts up to the point where their net cost is equal to the carbon price, provided that this price remains below the cost of network reinforcement; and
- To apply the same carbon limit as the Irish capacity market for combustion generation.

One respondent also suggested that any emissions cap be calculated across the broader volume of carbon abatement resulting from the flexibility. For example, if the flexibility service has led to an offsetting of emissions in the heat or transport sector then this negative balance (or carbon saving) should apply to the calculation of the flexibility asset's emissions.

Two respondents noted that the emissions of non-generating assets relies on the emissions-intensity of the power system at the time of charge or demand change, and that this time period may not be within their reasonable control. One respondent added that, in light of this, emissions limits should not be applied to energy storage assets.

Question 7

What is the minimum length of time before procurement that potential providers of demand flexibility need to receive a final list of network locations where ESB Networks' will seek to procure demand flexibility?

All respondents have placed emphasis on timely publication of procurement locations to provide sufficient lead time for work on tenders to commence. Of those which directly responded to this question, answers varied from 3 to 24 months in advance of procurement processes beginning to provide developers with sufficient time to prepare.

Two respondents suggested that locations should be released in batches so that developers which aren't ready to tender in early procurement rounds can focus on later procurement rounds.

4.2.3 ESB Networks' Response

We note that most responses provided broad support for the stated objectives of this product. In terms of core objective, the purpose of the product is to provide congestion management to the distribution network through medium term demand flexibility. For the purposes of this tender process, medium term demand flexibility is defined as the ability to deliver demand reduction, demand shifting or inject power at or near the asset(s)' full contracted capacity for a minimum of 4 hours each day over specified hours, on the majority of business days over a minimum of 3-6 months of the year. The product has been designed to meet the specific network need arising at this time and support the delivery of the 2025 and 2030 targets.

We acknowledge that the timelines targeted for this procurement will be stretching for new project developers. However, based on the feedback received, we think it is reasonable to set challenging energisation dates for this procurement. However, we note that in setting appropriate dates and negative incentives for late energisation (see below) it will be important to incentivise developers to manage risks that they are best placed to deal with, whilst not penalising potential providers for factors that lie outside their control. We also consider that releasing tenders in sequential batches will generate greater participation overall.

For the purposes of clarity, the following statement from the consultation does not preclude an asset with an existing connection from participating in this procurement: "Projects which are successful in this competition will receive a connection offer which meets the needs of their contract for demand flexibility with only shallow connection works and a non-firm Maximum Import Capacity (MIC) and Maximum Export Capacity (MEC)."

4.2.4 ESB Networks' Recommendation

ESB Networks Recommendation

All technologies capable of delivering the technical and operational requirements of a specific locational network congestion need will be eligible to tender.

In line with our proposal, these requirements will include the location; volume, duration and direction of adjustment; and energisation date. A carbon emissions limit may still be included as a technical requirement, though noting that this is subject ESB Networks receiving a specific direction from the CRU to this effect.

Contracts will be awarded with a specified energisation date. This energisation date will be set no later than 32 months after the signing of contracts, with potential negative incentives associated with late delivery. The details of potential negative incentives will be set out at the RFT stage. Although it is important to highlight that the incentive regime will not penalise late energisation where it sits outside of the control of the service provider.

The Procurement of Demand Flexibility Products across identified locations shall take place in batches, with the first batch of locations released as part of the Qualification Selection Questionnaire (QSQ) stage. We discuss this in more detail in Section 4.8.

4.3 Procurement locations: A preliminary view

4.3.1 ESB Networks' Proposal

In our consultation paper, we proposed the following:

ESB Networks' Proposal

Shortlisting network locations suitable for procurement of medium term demand flexibility has involved:

- developing forecast scenarios for demand and connections to 2035 to identify locations with a significant capacity shortfall in 2030 to 2035;
- removing locations where it is feasible to alleviate capacity constraints in the short- to medium-term via reinforcement
- ensuring flexibility assets can connect, and;
- ensure there is sufficient capacity for flexibility assets to operate to deliver the flexibility need.

Indicative estimates are that 100 MW would be sourced in the first procurement round, with cumulative volumes across the first and subsequent rounds potentially up to 500 MW.

4.3.2 Summary of consultation responses

The consultation did not ask respondents specific questions for this element of the proposal, however respondents provided relevant submissions on this topic under Question 7

Most respondents commented that the publication of locations, alongside indicative volumes of flexibility to be procured and the expected minimum duration requirements for these locations, is needed prior to any preparatory work by developers to support potential tenders. To this end, respondents have urged ESB Networks to publish this information at the earliest opportunity.

Several respondents expressed a preference that groups of procurement locations be published in batches so that developers not able to respond in time for earlier batches may do so for later batches.

One respondent noted that the analysis underpinning the selection of locations take into account potential impacts on the transmission system from a planning and operational perspective.

4.3.3 ESB Networks' Response

The public facing locations paper provides an initial list of locations where flexibility is likely to be required. We note that ongoing engagement between ESB Networks and EirGrid shall explore potential impacts to the transmission system.

4.3.4 ESB Networks' Recommendation

ESB Networks Recommendation

The indicative list of locations is published alongside this recommendation.

4.4 Payment and scheduling approach

4.4.1 ESB Networks' Proposal

In our consultation paper, we proposed the following:

ESB Networks' Proposal

A fixed availability payment will be paid upon service providers delivering as per a schedule provided by the DSO.

- A “floor and share” payment structure will guarantee contract holders a minimum level of revenues, or ‘floor price’, with a fixed proportion of net revenues earned above this floor being shared with consumers set via a ‘sharing factor’. Specifically:
 - Flexibility providers will submit floor prices as part of their bids subject to a maximum floor reserve price for each location set by ESB Networks; and
 - ESB Networks will determine an appropriate sharing factor based on technoeconomic modelling, regulatory precedent and other evidence (e.g., ability for assets to stack revenues from other market arrangements).
- The “floor and share” structure should incentivise flexibility providers to operate efficiently and generate revenues in other markets; a portion of these revenues can offset the cost paid by the DUoS customer under the contracts put in place by ESB Networks.

- Negative incentives will apply for a failure to provide availability or delivery as required by a flexibility providers' contract. Negative incentives will not apply where demand flexibility is not available as a result of deviations from the economic merit order for system reasons.
- ESB Networks are considering indexing payment to an appropriate market index to remove inflation risk from developers' bids.

ESB Networks will provide an indicative delivery schedule to providers up to a week in advance. A final schedule may be shared 24 hours in advance confirming whether they will be needed during the scheduling period.

4.4.2 *Summary of consultation responses*

The consultation asked respondents the following questions:

Question 8

What are stakeholders' views on the proposed floor and share revenue model?

- Does this model strike an appropriate balance between the needs of the DUoS customer and those of the provider of demand flexibility?

Does this approach create risks which the CRU and ESB Networks should consider?

Overall, the majority of respondents expressed support for a floor and share revenue model to balance risk and return across investors and DUoS customers. However, some respondents highlighted risks with both the principle and design of a revenue sharing mechanism.

Several respondents did not support a sharing factor. One respondent considered that the rationale for revenue sharing has not been fully set out in the proposal, and it is unclear that it would lead to better value for consumers compared to investors incorporating any views on future revenues into their tender prices. Further, three respondents noted that a positive sharing factor may result in higher tender prices or could reduce overall participation. Two respondents also considered that a sharing factor may discourage efficient operation of a flexibility asset once it has reached floor revenue. One respondent cited that additional complexities associated with a sharing mechanism may outweigh its potential benefits.

Several respondents highlighted concerns with linking the level of any sharing factor to market stacking opportunities. In particular, two respondents highlighted a risk that this approach may interact with, or distort, investment and operating incentives in parallel market mechanisms. Respondents also noted that it was unclear how the net revenues of parallel mechanisms (e.g., system services and CRM) would be assessed, how commercially sensitive information (e.g., commercial arrangements between aggregators

and asset owners) would be treated, and whether the administrative costs of this programme would be proportionate to its benefits. Another respondent suggested it would be difficult to assess the costs of other revenue streams such as capacity and system services. One respondent also noted that a common sharing factor across different technologies / service offerings, cost bases and risk levels will not create a level playing field for developers.

With regards to wholesale price risk for battery energy storage, one respondent noted that a flexibility market floor price for discharging should be paired with a wholesale price cap for charging to mitigate price risk associated with the timing of charging and discharging.

One respondent requested a methodology for the maximum tender price that developers may submit for their floor price.

Some respondents sought further clarity on the proposals. In particular, one respondent highlighted that the consultation does not specify whether losses will also be shared between developers and DUoS customers, whilst another requested further clarity on whether the sharing factor would be uniform across locations.

One respondent highlighted potential gaming concerns that are being explored as part of proposals for a floor and share mechanism in other procurement processes (i.e., DESNZ LDES).

Question 9

What are stakeholders' views on an appropriate level for the sharing factor?

Whilst most respondents agreed with the overall objectives of a revenue sharing factor, few commented specifically on what the appropriate level should be.

Two respondents recommended that 30% of the upside revenues from all markets should go back to end consumer with the remaining 70% kept by developers. Another respondent suggested a 50% of net revenues be shared with DUoS customers, after allowing investors to recover a notional charge on capital, energy and overhead costs, network charges and non-availability negative incentives.

One respondent noted that the optimal sharing factor should take into account revenue stacking opportunities in other markets to ensure overall that participants are rewarded appropriately for taking market risk whilst also sharing some of that benefit with the consumer. Another respondent suggested that ESB Networks undertake market studies to determine relevant benchmarks.

One respondent suggested that the sharing factor could be a competitive differentiator in the assessment of value for money, as opposed to an administratively determined parameter.

Question 10

What are stakeholders' views on the proposal for revenues to come in the form of availability payments, rather than utilisation payments?

- Is this approach also an appropriate enduring market solution or are there benefits in moving to an availability and utilisation payment approach in the future?

If the approach should be reconsidered in future, what market indicators should be used to determine when a review of payment structure is necessary?

The majority of respondents supported the proposal for availability payments without payment for utilisation. In particular, seven respondents noted that this payment structured offered investors greater revenue certainty and therefore confidence to invest.

Several respondents suggested that a two-part tariff which complements availability payments with utilisation payments for activated hours would better reflect the cost of compliance and incentivise flexibility service providers to more efficiently deploy resources. Another respondent also commented that availability payments alone may not be sufficient for technologies which have higher utilisation costs.

Several respondents requested more clarity over the scheduling structure of availability payments. One respondent asked whether periods of planned asset maintenance will be built into the schedules of availability payments, whilst another asked whether an availability payment in the demand flexibility market precludes recipients from participating during nominated periods in parallel markets.

One respondent requested that ESB Networks more specifically define what will be required by participants during availability periods and implications for revenue stacking. Another respondent noted that restrictive operating limits placed on assets during availability periods will act as a barrier to revenue stacking.

One respondent noted that availability payments may affect the relative competitiveness of prices tendered by higher operating cost technologies in flexibility tenders.

One respondent disagreed with the principle of availability payments for demand flexibility, citing that this risks distorting bids in parallel markets which assets could simultaneously access, undermining competition in those parallel markets

Question 11

What are stakeholders' views on the proposed approach to negative incentives for non-delivery?

Most respondents supported the role of negative incentives for non-delivery of contracted flexibility with sufficient protections in place for circumstances beyond the asset operator's reasonable control. For example, two respondents suggested that an asset operator should not face negative incentives if the TSO requires an asset during its scheduled flexibility availability.⁴ Another respondent noted that flexibility service providers should not be penalised for periods of scheduled maintenance.

One respondent requested further clarity over how negative incentives would be applied, for example whether this would be for failing to charge/discharge according an ESN schedule or a lack of availability (or both).

One respondent suggested that negative incentives should reflect the cost to the system caused by unavailability to provide efficient operating signals.

Two respondents requested further clarity over conditions under which a negative incentive would apply. Specifically:

- How will demand response be monitored for compliance with Demand Flexibility Product dispatch? For example, for a resource which regularly alters its offtake profile over time, it is unclear if a resource is responding to dispatch or has changed its intrinsic demand requirements and so will provide demand change even when not dispatched.
- What is meant by "*negative incentives will not apply where demand flexibility is not available to ESB Networks as a result of deviations from the economic merit order for system reasons*"? For example does this also covers circumstances associated with system needs reasons - including security of supply arising from a future capacity market obligation (or equivalent).

One respondent expressed a concern that negative incentives may have unintended knock-on impacts on an asset operator's incentive to provide services in other markets and system services frameworks.

One respondent suggested that negative incentives may act as a deterrent to participation for asset operators which are not traditional actors in flexibility or system services markets,

⁴ Specifically, if a participant fulfils the ESN schedule and charges at the specific period but then following that period the TSO/DSO prevents the unit from discharging. Subsequently in the next day the unit is unable to now charge and meet the ESN schedule through no fault of its own.

and that this concern may be allayed through clear communication and an open and inclusive dialogue.

Question 12

What are stakeholder's views on the indexation of payments for demand flexibility?

Of the nine respondents which directly address this question, eight supported indexation payments to remove inflation risk from tender prices and strengthen investment signals – whilst one respondent did not consider that flexibility providers with low incremental operating costs face inflation risk.

Of those that agreed with indexation, one respondent suggested an approach similar to the CRM in which indexation is applied to payments above 2% inflation with no indexation below this level.

Question 13

What are stakeholder's views on the proposed scheduling approach?

Five respondents requested that ESB Networks make a firm commitment to share final schedules no later than 24 hours in advance, and ideally 36 hours in advance to provide the asset operator with time to be included in the Day Ahead Market (DAM) scheduling as required.

One respondent requested that ESB Networks outline how often schedules will be received and what time period each schedule shall cover (e.g., a daily schedule for a 24-hour period, set 24-hours in advance of that schedule due to start).

Four respondents requested further clarity over how resource scheduling will interact with other scheduling processes (e.g. TSO system services).

4.4.3 ESB Networks' Response

We note that a majority of respondents support availability payments structured according to a 'floor and share' approach with negative incentives for non-delivery, on the condition that the floor price and sharing factor strike the right balance of risk and reward between developers and DUoS customers and is not unduly complex and burdensome to administer. We recognise that stakeholders have expressed a desire for additional detail on how the proposed floor and share mechanism would work.

To this end, we provide further detail on below on the:

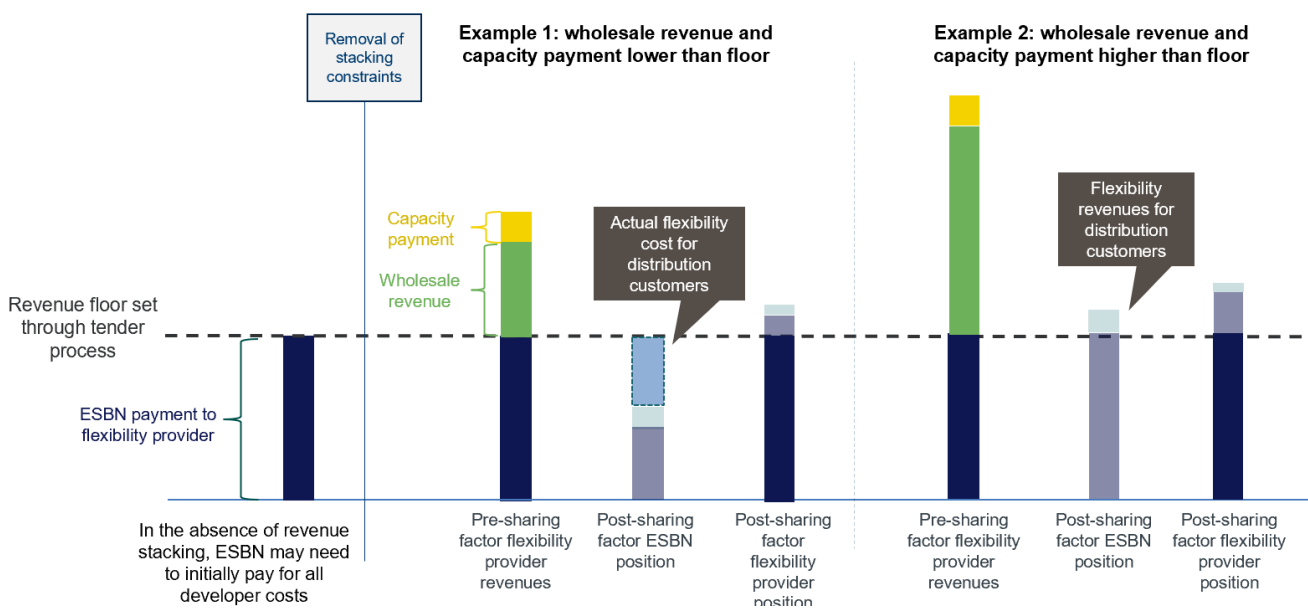
- floor and share mechanism;

- incentive regime; and
- scheduling approach.

Floor and share mechanism

In the absence of the ability to stack revenues in the current environment (left hand side of the illustration), it is likely that ESB Networks contracts (funded by the distribution network customer) may need to initially provide for the majority of costs for developing the flexible asset. The exact amount of this payment will be determined through a competitive tender process which will set a guaranteed floor price subject to performance (shown in navy blue).

Figure 1: Floor and share: high level illustration



It is expected that, at a point in the future, flexible demand providers with storage assets in Ireland will be able to earn revenue streams from other market arrangements, for example by participating in the wholesale and capacity markets. This is shown on the right-hand side of Figure 1 under two possible scenarios for additional revenue streams relative to the revenue floor. In this future state, during any given period, the flexible demand provider will earn positive net revenues from the wholesale (in green) and capacity (in yellow) markets in addition to the ESB Networks flexible demand payment (in navy blue).

At the end of each period, net revenues earned above the floor are deducted to take account of the sharing factor, with X% of net wholesale market and capacity market revenues returned to ESB Networks which would, in turn, pass these through to the DUoS customer. The remaining (1-X%) of these net revenues would be retained by the flexible demand provider, in addition to their full flexible demand payment. As illustrated in Figure 1, depending on the size of the additional wholesale and capacity revenue streams, such a

mechanism can help reduce the actual cost of flexible demand procurement to the DUoS customer (under Example 1) and may even more than compensate for the revenue floor provided to the flexible demand provider, thus generating net revenues for the DUoS customer (under Example 2).

It is our view that, in order to provide a credible signal to investors and to facilitate ESB Networks' assessment of tenders, an administratively determined sharing factor should be set. This shall be based on an in-depth technoeconomic modelling of operating the flexible assets in the I-SEM under varying levels and duration of constraints to revenue stacking. The results of this modelling, in conjunction with relevant regulatory precedent and other available evidence, will be used to determine the appropriate sharing factor.

We propose to separately consult on the level of sharing factor and the underlying design work to inform a more detailed recommendation ahead of publishing Requests for Tender. However, in principle, there are two high-level options with respect to the level of the sharing factor.

- A sharing factor more heavily weighted to the flexibility provider, paired with a lower floor payment; or
- A sharing factor more heavily weighted to the DUoS customer, paired with a higher floor payment.

While we intend to consult further on the level of the sharing factor, we are currently minded to adopt a higher sharing factor in order to achieve an appropriate balance of risks between DUoS customers and investors. We provide a summary of the relevant considerations to this assessment below.

A low sharing factor (i.e., weighted in favour of the flexibility provider) risks resulting in excess returns to flexibility providers if there is a lack of competition. A lower cap on the floor price may guard against this risk, though this may introduce other types of risk. For example, if the floor price cap is set too low it may result in limited participation, though if set too high then this becomes an ineffective guard against excess returns. Moreover, a combination of a low floor price and low sharing factor would likely expose providers to greater revenue volatility, and therefore uncertainty, which may increase the overall cost of procuring the service through the return which investors require.

On the other hand, a high sharing factor (i.e., weighted in favour of the DUoS customer) guards against excess returns even where competition is limited. Therefore, constraints on the floor price could be relaxed in this scenario which may increase the likelihood of successful tender processes. Moreover, this approach will provide greater revenue certainty for investors, while also providing them with the opportunity to earn additional revenues

through participation in other markets. On balance, we therefore note that this option is expected to best achieve the objectives of this procurement.

Incentive regime

In our view, negative incentives should be implemented to deliver two objectives; to provide incentives for developers to deliver capacity in line with agreed energisation dates (Objective 1), and; to incentivise the delivery of flexibility over the duration of the contract in line with agreed schedules (Objective 2).

With respect to both of these objectives, negative incentives should be set so as to balance providing strong incentives to fulfil contract obligations, without unduly disincentivising participation in flexibility services. We acknowledge that flexibility service providers should not incur negative incentives for reasons that were beyond their reasonable control or foresight and we will clarify the circumstances under which this would hold as part of the RFT.

With respect to Objective 1, we consider that failure to meet the required energisation date should result in a negative incentive. We also consider that it may be appropriate for parties to post a performance bond to cover the termination fee similar to the approach adopted in the I-SEM CRM.

With respect to Objective 2, we consider that negative incentives for flexibility service providers which deviate from agreed schedules should be guided by the cost this has on the system via an availability payment and performance scalar (for partial delivery), alongside appropriate controls that ensure that participation incentives in the CRM are not distorted. We shall set out the detailed approach to negative incentives at the RFT stage.

Regarding specific clarification questions raised on the monitoring and calculation of negative incentives:

- We will explore baseline methodologies that could reflect changes in demand profiles over time.⁵; further
- “negative incentives will not apply where demand flexibility is not available to ESB Networks as a result of deviations from the economic merit order for system reason” should be interpreted as saying that any adjustments made by wholesale market operator to the economic merit order due to technical limitations of the Transmission network shall not result in negative incentive for the flexibility provider.

⁵ Framework Guideline on Demand Response (ACER, 2022)

Scheduling approach

With regards to scheduling, we acknowledge that flexibility service providers will be better positioned to stack revenues alongside ESB Networks' contracts if final schedules are shared further in advance. We therefore recommend that final schedules are provided at least 24 hours in advance of the network need, of the contracted availability window and with sufficient time to enable positioning before day-ahead wholesale market gate closure. It is our view that flexible demand providers should be free to participate in other markets during all periods not covered in the ESB Networks schedule, subject to any operating restrictions applied by ESB Networks on a day to day basis, reflecting the capacity available to the participant subject to their flexible connection. However, any non-delivery that arises during a specified delivery window (e.g., as a result of participating in another market despite being included on the ESB Networks' schedule) will be subject to negative incentive, as outlined above.

Lastly, we note that the alignment and coordination between TSO and DSO scheduling processes is important for both flexibility service providers and wider system efficiency. EirGrid and ESB Networks are progressing a joint programme of work on the TSO-DSO operating framework. The findings and recommendations from this programme will inform the development of the incentive regime and will be shared at RFT stage as part of this procurement process.

4.4.4 ESB Networks' Recommendation

ESB Networks Recommendation

Contracts for flexibility will award availability payments structured according to a 'floor and share' approach with negative incentives for non-delivery.

The appropriate floor and share mechanism and level for the sharing factor will be consulted on.

ESB Networks' schedule will account for required asset maintenance, noting that engagement between ESB Networks and the flexibility provider will be required to ensure that asset maintenance is scheduled for an appropriate duration and sufficiently in advance during times of limited impact on network operations.

Negative incentives shall separately be applied to incentivise developers to deliver in line with agreed energisation dates and; to incentivise the delivery of flexibility in line with agreed schedules. Further detail on the circumstances under which negative incentives will apply and the calculation formula shall be published at the RFT stage.

Final schedules are provided at least 24 hours in advance of the contracted availability window and with sufficient time to enable positioning before day-ahead wholesale market gate closure

4.5 Contract duration

4.5.1 ESB Networks' Proposal

In our consultation paper, we proposed the following:

ESB Networks' Proposal

ESB Networks has identified a requirement for medium term flexibility services over a period up to 15 years and proposes to tender for long term contracts up to this period

4.5.2 Summary of consultation responses

The consultation asked respondents the following questions:

Question 14

What are stakeholders' views on the appropriate contract length?

All respondents supported the principle of long-term contracts to incentivise investment and lower the cost of capital. Three respondents suggested that a minimum contract term of 15 years should be provided to all participants irrespective of tender characteristics (e.g., location technology etc.). Three respondents suggested contracts of up to 10 years would strike a better balance between investor confidence and value for money.

One respondent suggested that a contract end date be specified rather than a duration, as per the approach taken in RESS and LCIS tender processes, to incentivise earliest possible commercial operation to extend the effective contract length.

One respondent suggested that delays to energisation which are beyond a developer's control should be added back to the contract length.

4.5.3 ESB Networks' Response

We note that respondents formed a consensus in favour of long-term contracts for flexibility. We note that there are several factors which influence the appropriate contract length; (a) the economic lifetime of flexible assets (b) fixed cost recovery for developers, (c) the network needs, and: (d) the allocation of risk and reward between developers and DUoS customers. Given these factors, and the characteristics of the proposed procurement, it is our view that a common contract length of up to 15 years should be set.

In particular, discussions with developers have revealed average economic lifetimes of 15 years, depending on technology. In addition, with respect to fixed cost recovery, we note shorter contracts increase the average annual revenues that developers will require from flexibility markets (and therefore DUoS customer) but that this decreases and contract durations extend and revenue stacking constraints are removed. We also anticipate that flexible demand solutions will have a long term network need given the rising proportion of demand that will be met by renewable sources and challenges associated with network reinforcement in a number of areas of the network. Lastly, with respect to the allocation of risk and reward between developers and DUoS customer, we note that the proposed floor and share mechanism will safeguard DUoS customers through sharing of net revenues over the duration of the contract.

In practice, we consider that a contract duration of up to 15 years is best achieved by setting an energisation date of 32 months after contracts are awarded (i.e., an extension of 8 months relative to the consultation proposal) with explicit firm expiry date after this point in line with the contract duration.

Whilst we accept that delays to energisation may be for reasons beyond a developers control, we consider that developers are best placed to manage this risk as part of their tender (i.e., through project design and site selection). We therefore do not consider it suitable to guarantee extensions to the contract expiry date as a consequence of delays caused by third parties other than ESB Networks.. Nonetheless, ESB Networks is committed to engaging with demand flexibility providers to understand the reason for delays to energisation and to work to a mutually agreeable solution to minimise further delays and ensure contract delivery.

4.5.4 ESB Networks' Recommendation

ESB Networks Recommendation

Contracts will be awarded up to a 15-year basis through a fixed termination date and a fixed energisation date.

The energisation date will be set 32 months after the award of contracts with a termination date after this date in line with the contract duration.

Extensions to effective contract length will not be automatically granted due to delays in energisation dates.

4.6 Multi-criteria tender versus price-based auction

4.6.1 ESB Networks' Proposal

In our consultation paper, we proposed the following:

ESB Networks' Proposal

A “most economically advantageous tender” approach will be adopted which scores and weights tenders across multiple criteria, rather than a price-based auction with pass/fail qualification criteria.

Once liquidity in the market has developed, price-based auctions with qualification criteria may be considered.

4.6.2 *Summary of consultation responses*

The consultation asked respondents the following questions:

Question 15

What are stakeholders' views on the relative merits of a most economically advantageous tender process versus an auction process?

Nine respondents directly expressed support for a ‘most economically advantageous’ tender process as a mitigation against potential speculative tenders expected under a price-based auction. However, respondents also highlighted that a lack of transparency ex ante over the assessment process could undermine investor confidence and lead to less competition for tenders.

One respondent disagreed that a new procurement process for congestion management would be efficient, and that procurement should instead be through the Capacity Renumeration Market (CRM).

Question 16

What do stakeholders consider are the metrics and levels of same that would indicate sufficient liquidity to enable a move to a price-based auction?

Of the three respondents that directly addressed this question, two reiterated that there is unlikely to be sufficient liquidity for price-based auctions to lead to good tender outcomes due to the locational requirements of this procurement process. One respondent provided a set of potential indicators which could inform a move to price-based auctions in the future. These indicators include:

- A minimum number of demonstrably competent and independent competitors into the procurement rounds,
- A minimum volume (and type) of capacity offered in versus the tendered volumes required,

- Ongoing and sustainable reductions in the modelled reserve prices and the resultant delta between reserve price and winning tender prices.

4.6.3 ESB Networks' Response

We acknowledge that a transparent assessment framework will provide the strongest investment signals. In our view, this can be achieved by specifying key parameters ex ante and demonstrating their application through the assessment of a set of hypothetical projects. We will provide this information as part of the RFT stage.

We note that there is little support for a move to price-based auctions, either now or in the future, due to the small number of participants expected to bid to meet a need at any one location. It is therefore our view that a most economically advantageous approach will be suitable throughout this procurement process, while noting that future procurement processes for flexibility will not necessarily follow this same approach. Rather, the most appropriate approach will be considered based on relevant market factors at the time when each procurement process is undertaken.

4.6.4 ESB Networks' Recommendation

ESB Networks Recommendation

A 'most economically advantageous' multi-criteria assessment process shall be applied in the award of flexibility contracts. A more detailed assessment methodology, including further details on potential evidential requirements for each criteria, shall be provided as part of this recommendations paper. The assessment criteria and evidential requirements will be confirmed as part of the RFT process.

At this stage we do not consider there is sufficient evidence to support a move to price based auctions in the near future, but shall remain open to revisiting this question at a later date with any decision consulted on separately.

4.7 Assessment criteria

4.7.1 ESB Networks' Proposal

In our consultation paper, we proposed the following:

ESB Networks' Proposal

The assessment aims to balance three objectives: value for money, operability and deliverability.

- Value for money will be assessed according to the cost per MW of demand flexibility such that ESB Networks procures sufficient flexibility at each location at least cost for the value it will bring to the network (subject to fulfilling operability and deliverability objectives). Tenderers shall be assessed against this objective through submission of price/quantity pairs, subject to the applied sharing factor, that they would be willing to accept.
- Operability will be assessed through scoring tenderers according to their technical capability to deliver the flexibility need at a particular location. Where applicable, this will be assessed across the relevant portfolio of aggregated assets submitted within a tender.

Deliverability will be assessed through evidence submitted by tenderers demonstrating the ability and timeliness for project completion and energisation. Tenders shall be assessed against pass/fail criteria for having acquired an appropriate site and being ready to lodge a planning permission application within several months. Tenderers shall be scored according to the ability to deliver the required flexibility with less network reinforcement, supply-chain robustness and readiness and likelihood of securing financing.

4.7.2 Summary of consultation responses

The consultation asked respondents the following questions:

Question 17

What are stakeholders' views on the proposed aims of the assessment criteria (value for money, deliverability and operability)?

- Are these aims sufficiently comprehensive?

Are there other high level aims that the CRU and ESB Networks should consider?

All respondents to this question broadly agreed with the three stated aims of Deliverability, Operability and Value for Money subject to greater transparency on how these aims will be assessed. In particular, three respondents emphasised Deliverability as one of the most important considerations to avoid speculative tenders.

Several respondents noted the omission of carbon abatement as an explicit aim in this procurement process but expressed some differences in views on its inclusion. Three respondents recommended setting an explicit carbon emissions limit for participating units. Other respondents considered that this aim should sit outside of the multi-criteria assessment but instead be an input into a broader system optimisation.

One respondent also suggested including the embodied carbon of the flexible asset, potential environmental impacts and risks (e.g., NOx, particulate matter emissions etc.) and degradation of the asset over time.

Question 18

What are stakeholders' views on the proposed assessment criteria outlined in the table above?

- Are there other criteria which should be considered when evaluating the three key aims?
- Are the assessment criteria sufficiently clear to stakeholders?

Do stakeholders consider that they will be in a position to provide evidence relating to the outlined criteria when responding to the procurement process?

Whilst almost all respondents supported the overarching aims (i.e. value for money, deliverability and operability), several found that some of the specific assessment criteria were either unclear, incomplete or inappropriate. Overall, most respondents requested further clarity on how criteria should be evidenced by tenderers and how they will be scored and weighted in the overall assessment.

The following specific feedback on assessment criteria was provided under each of the three aims:

Value for Money

Several respondents consider that this should be measured based on the spread between the reserve price and tender price, rather than the tender price alone since this approach provides a better comparison between locations with different reinforcement costs. One respondent suggested that tender prices be assessed on a € / MW basis for a target number of hours, with the understanding that ESB Networks can procure incremental hours at this effective price up to a predefined cap. One respondent also recommended a € / MWh measure as more suitable than € / MW.

One respondent considers € / MW may be a misleading indicator of Value for Money if the underlying tender is low quality (e.g., based on unrealistic assumptions). Another respondent considered that this concern could be mitigated through appropriate weighting of deliverability and operability in the overall assessment.

One respondent requested further clarity specifically over how network reinforcement requirements will be defined and measured whilst another sought clarity over association with revenues in other markets.

Deliverability

Several respondents requested more clarity over planning permission evidence requirements (e.g., proof of landowner agreements versus the ability to submit a planning application shortly after procurement tender). Several respondents were also unclear what evidence of supply chain readiness could be provided.

Two respondents consider that evidence of site acquisition and planning permission would be disproportionate and risks limiting liquidity and timeliness of the procurement process. On the other hand, another respondent agreed that evidence of planning permission is appropriate to mitigate delays to energisation observed in other mechanisms (e.g., CRM).

With regards to potential additional criteria, two respondents suggested that track-record and expertise relating to the provision of the proposed technology and evidence of existing supply chain relationships may be used. One respondent suggested that confirmation of financing, either from banks or from balance sheet, should be also evidenced.

However, several respondents highlighted that the evidence requirements for deliverability may be more burdensome for new project developers than incumbents and therefore sufficient time should be provided prior to closing the tender process. These respondents noted that consideration should be given to how the evidence requirements for deliverability may implicitly favour incumbents over new project developers.

Operability

One respondent requested clarity over how assets of different durations would be scored and compared to one another. Another respondent suggested that assets of shorter durations should not be prejudiced in any assessment due to the benefits of these technologies in addressing evening peak demand.

One respondent requested clarity over the treatment of aggregated assets as compared to single assets (all else equal) whilst another requested detail as to how assets of different durations will be scored (e.g., whether one asset of 4-hour duration would be preferred over two 2-hour duration assets) and whether longer durations would be incentivised by scalars.

Question 19

What evidence of a tenderer's ability to deliver to the required energisation date should be required, taking into account the need to balance avoiding speculative tenders that may not deliver while not ruling out early-stage projects that are capable of delivery but require more time?

Responses to Question 17 included several suggestions on the types of evidence of Deliverability. Respondents which explicitly addressed this question cited the following as potential sources of evidence:

- Planning Application/Preplanning assessment
- Project Implementation plan
- Track record in delivering projects, e.g., CRM
- Supply chain readiness
- Evidence of engagement with either a Bank or an Internal Investment Committee
- Performance securities
- Termination charges
- A high-level project plan

Question 20

What are stakeholders' views on how the aims and assessment criteria should be balanced against one another when ESB Networks are selecting the winning tenders?

Four respondents suggested that the procurement process place the greatest emphasis on deliverability to mitigate potential delays to energisation and non-delivery. No further direct responses were provided to this question.

One respondent noted that it is difficult to determine suitable weightings in the abstract. Instead, it may be valuable to apply prior weighting scheme to hypothetical projects with different characteristics to understand which projects are favoured in the assessment, and then iterating on the scheme until the assessment process delivers an outcome which best delivers the procurement objectives.

4.7.3 ESB Networks' Response

As noted in Section 4.6.3, we acknowledge that a transparent assessment framework will provide the strongest investment signals and that we will specify assessment frameworks' key parameters (i.e., scoring methodology and weighting factors) and evidence requirements ex ante and provide illustrative examples of their application at the RFT stage. It is our view that this will clarify the questions and concerns raised by respondents within this part of the consultation.

However, with respect to the specific questions raised here, we also provide our views below:

Value for Money

We note that we do not intend to publish maximum reserve prices for each location, as we expect that any such publication would unduly influence flexibility providers' tender prices.

Deliverability

It is our view that evidence supporting a timely site acquisition and ability to acquire planning permission is an essential component of the deliverability criterion, but acknowledge that this may cause delays to the tender submission for successful tenderers. However, on balance, we consider that this is a necessary trade-off to mitigate the more costly risk of non-delivery of awarded contracts. To this end, we consider that the evidential requirements set out in the consultation strike the right balance. With regards to types of evidence to be submitted, we agree that this may include evidence demonstrating (ex ante) the ability to purchase (or lease) a site and submit planning permission application shortly after contracts are awarded, or (ex-post) proof of site purchase and planning permission. We acknowledge that ex ante evidence may be a more proportionate burden of evidence and improve participation from new developers.

We acknowledge that more clarity should be provided as to acceptable evidence of supply chain readiness. In our view, evidence which demonstrates supply chain readiness includes the capability of the developer to deliver (e.g., based on a an established track record) and a reasonable level of certainty over access to, and the cost of, production inputs . We note that it may be beneficial to not over prescribe the evidential requirements at this stage given the expected range of technologies and development for which this tender is open to.

Operability

It is our view that, depending on the characteristics identified, there may be multiple technologies that are capable of delivering for a given locational need. Where this is the case, the operability criterion should allow different technologies to compete against each other in the same procurement process on a level playing field. To this end, it our view that technologies of different durations should be considered on their merits for a particular locational need.

Carbon abatement

It is our view that a carbon emissions limit, if one is to be applied, should be set as an eligibility criteria for participation ahead of a tender as opposed to an assessment criteria within it. As noted in Section 4.1.3, if a CO₂ emissions limit per kWh of flexible demand is to apply, it will need to be determined by the CRU with an instruction issued to ESB Networks' to include as a tender criteria.

4.7.4 ESB Networks' Recommendation

ESB Networks Recommendation

This procurement shall award tenders based on an assessment of Value For Money, Operability and Deliverability as outlined in the consultation.

ESB Networks will provide more detail on the scoring methodology and evidential requirements as well as a set of hypothetical examples to demonstrate how this will be applied in practice at the RFT stage.

4.8 Locational batching

4.8.1 ESB Networks' Proposal

In our consultation paper, we proposed the following:

ESB Networks' Proposal

ESB Networks are considering introducing competition across locations within procurement rounds (so-called "locational batching"). This may involve publishing a list of multiple locations where demand flexibility is required and inviting bids for these locations while noting that procurement will be limited to the subset of locations with the most economically advantageous bids.

Through repeated tendering, locations not selected in a given procurement round could be included in future batches as well as locations that were previously selected but which still have a flexibility need.

4.8.2 Summary of consultation responses

The consultation asked respondents the following questions:

Question 21

What are stakeholders' views on the proposed locational batching of flexibility procurement?

Most respondents supported the principle of locational batching as a mitigation against potential accumulation of market power in specific areas. However, several respondents requested that further clarification be provided such that the competition process is clear and transparent and that complexity be mitigated where possible to improve investor confidence. Moreover, almost all respondents urged for the publication of all procurement locations (and volumes) at the earliest opportunity in order to meet envisioned procurement timelines.

One respondent suggested that any unpredictable decisions by ESB Networks on where it decides, post-auction, to draw the cut-off line over which tenders it will accept and which to reject, is likely to damage future auction participation levels. This respondent suggest that ESB Networks commit to an explicit overall procurement target against which competition between locations will take place.

One respondent suggested that locations should be ranked according to expected value that could be delivered to the system.

Specific clarification questions raised included:

- Whether ESB Network would commit to an ex ante procurement target (e.g., MW) for each location
- Whether developers could submit multiple different applications for different locations and be successful in more than one (or whether participation would be limited)
- If a subset of locations do not attract economically advantageous tenders within a specific procurement round, whether these tenders will be retained for these locations in future procurement rounds.

One respondent did not support locational batching under an interpretation that this would require a single provider to provide services in 100% of locations before they can tender.

Question 22

Do stakeholders consider there are other approaches that can be used to promote competitive outcomes as the market is developing?

Two respondents suggested that procurement rounds should be staggered so that ESB Networks can learn from past outcomes and iteratively improve the procurement process.

One respondent suggested that detailed feedback following each procurement round will ultimately allow tenderers to improve future tenders, subsequently increasing competition and value for money.

One respondent suggested that community engagement with transparent and clear information prior to tendering process will help improve participation.

4.8.3 ESB Networks' Response

We note that respondents broadly support the principle of locational batch and acknowledge that investors require transparency over how this principle will be applied in practice. To this end, in our view, the below sets out how this process is expected to work:

- ESB Networks publishes a list of multiple locations where flexible demand is required – for example, 8 sites – inviting tenders to be submitted for these locations while noting that flexible demand would be procured only at a subset of sites with the most economically advantageous tenders – for example, the 5 most advantageous sites .
- Developers submit location-specific tenders to deliver flexible demand at one (or more) of the published locations
- ESB Networks reviews tenders and enters into contracts for flexible demand with the providers that submitted the 5 most economically advantageous tenders, on the condition that tender prices are below the pre-determined floor price caps for these locations.

With respect to specific clarification questions, it is our view that indicative procurement targets should be set ex ante at the location level and that there would be no limit on the number of locations which a developer may submit separate tenders for (subject to being able to deliver on all locations for which they have tendered).

We agree that a staggered procurement process (i.e., one which releases RFTs for locations in consecutive batches) may provide valuable opportunities to learn from the experiences of previous procurement rounds in order to improve the process for future rounds. However, this approach necessarily leads to delays in the release of RFTs and therefore has the potential to slow progress towards the procurement's objectives. It is our view that a small number of consecutive procurement rounds is likely strike the right balance in this trade-off.

Moreover, ESB Networks would still like to procure flexible demand services at the locations not contracted in a given batch (subject to their still being a flexibility need at that location). Therefore, these locations would be included in a future procurement batch, alongside additional locations not included in the first round (e.g., if six locations were not contracted for in batch one, these sites could be included in batch two alongside new sites). Where a developer would like to tender for a repeated location again, a new tender would need to be submitted. Through repeated tendering, these locations may become more competitive over time (e.g., if flexible demand providers have time to develop new projects in these areas) or it may become clear over time that they are not suitable candidates for flexible demand, if none of the tenders received are less than or equal to ESB Networks pre-determined willingness-to-pay for a given location.

4.8.4 ESB Networks' Recommendation

ESB Networks Recommendation

The procurement will adopt locational batching of tenders to enable competition across locations based on value for money, deliverability and operability.

Procurement rounds will be staggered in consecutive rounds so that the procurement process can learn from past outcomes and iteratively improve.

Applicants that are unsuccessful in a procurement round may resubmit their application in future rounds. There is no upper limit placed on the number of tenders that a single developer may apply for, nor any scoring advantage provided to developers submitting tenders for more than one location.

4.9 Stages in the procurement process

4.9.1 ESB Networks' Proposal

In our consultation paper, we proposed the following:

ESB Networks' Proposal

There will be three stages to the procurement process; initial qualification, site specific request for tender, and; tender assessment and contracting.

- Initial qualification (Stage 1): ESB Networks will operate a continuous qualification system covering minimum qualification criteria such as legal, health and safety compliance and track-record of delivery. This may also include providers' locational preferences to guide future tenders.
- Site specific requests for tender (Stage 2): ESB Networks will issue Requests for Tender (RFT) to qualified developers indicating available procurement volumes across a batch of locations. Tender assessment and contracting (Stage 3): ESB Networks will assess tenders via the multi-criteria assessment framework and will issue contracts to successful bidders.

Proceeding with any procurement in this space will be subject to further approval at later stages of the implementation of the plan

4.9.2 Summary of consultation responses

The consultation asked respondents the following questions:

Question 23

What are stakeholders' views on the proposed phases in the procurement process?

One respondent requested that ESB Networks publish the dates associated with each phase of the procurement process at the same time at the beginning of the process.

One respondent suggested that the time between initial qualification and publication of site-specific tenders will place too tight a timeframe on investors to be able to submit an RFT.

One respondent requested further detail and clarity on the proposed procurement process phases, in particular:

- In Stage 1, will prequalification apply to all subsequent procurement rounds for the developer in question and will this be a simple pass / fail test?
- In Stage 1, to what extent will the prequalification criteria differ or be the same as the Deliverability criteria?
- In Stage 2, a detailed and transparent assessment methodology is needed to ensure sufficient liquidity turns up to the procurement process.
- In Stage 3, unsuccessful tenders should receive specific feedback on the reasons for not being awarded

One respondent also suggested that indicative reserve prices be issued with Requests for Tender to give price signals.

One respondent requested that, prior to tender submission, ESB Networks provide an open dialogue with prospective developers to enable them to tailor tenders to the needs of ESNB.

Question 24

What are stakeholder's views on the appropriate timing for each stage?

- How long in advance of RFT issuance do stakeholders need to receive the final list of locations where demand flexibility will be procured?

How long is needed from the RFT issuing to RFT close?

Respondents that addressed this question agreed that a staged approach is the correct mechanism to roll out the tender process.

Two respondents noted that participants will need to have been given sufficient time between final list of locations and the submission of tenders. One respondent sought greater clarity over the timeline between RFT opening and closing.

One respondent noted that, contingent on the level of detail provided well ahead of RFT (including final locations), that a 6 week window may be sufficient between RFT issuing and close.

4.9.3 ESB Networks' Response

We note that respondents did not raise fundamental concerns with the proposed phased approach to the procurement process, but that further detail over certain elements is needed. To this end, we shall prepare a detailed process map from the perspective of prospective tenders as part of the Qualification Selection Questionnaire (QSQ) stage. This

process map will address the specific clarification points raised within part of this section of the consultation.

4.9.4 ESB Networks' Recommendation

ESB Networks Recommendation

The three stages of the procurement process outlined in the consultation shall be retained without further changes, in particular: Initial qualification (Stage 1), Site specific requests for tender (Stage 2), Tender assessment and contracting (Stage 3).

We shall provide a more detailed process map at the Qualification Selection Questionnaire (QSQ)
