Recommendation on DS3 System Services Volume Capped Fixed Contracts

DS3 System Services Implementation Project

February 4th 2019

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1 Executive Summary

On October 25th 2018 EirGrid and SONI published a consultation[1] on the proposed Volume Capped Fixed Contracts contractual arrangements. The Volume Capped Fixed Contracts will provide long-term contracts for high availability service provision, with a total volume of between 91 MW and 140 MW to be awarded. This consultation contained a draft contract template to be used for these arrangements, as well as covering a range of design details for the Volume Capped competition process, including (and not limited to):

- Requirements relating to connection to the grid
- Calculation of the Temporary Scarcity Scalar
- TOR1 & TOR2 dispatch for non-frequency events.
- Tie-break requirements

In this document, we consider the responses received to this consultation, provide clarifications where necessary, and make our recommendations. The contracts will now be finalised (including a full legal review) and published ahead of the tender process.

The main recommendations and clarifications can be summarised as follows:

- The service provider must be a party to the associated Connection Offer and/or Connection Agreement with the relevant System Operator (or party to the GASOA/DSUSOIA in the case of AGUs/DSUs).
- No more than 50 MW of contracted service provision shall be connected to the Transmission or Distribution Systems in such a manner that they would be deemed Electrically Contiguous.
- Only units contracted under these arrangements will be considered when assessing whether units are Electrically Contiguous.
- For non-firm connections, units will only receive payment for the availability of services that can be accommodated by the network. However the calculation of the Availability Performance Scalar will assume that all available services can be accommodated by the network.
- The value of the Temporal Scarcity Scalar will be fixed for the duration of these arrangements, and will be determined using a 2025 Plexos study.
- Technical characteristics will not be considered in the event of a tie break.

[1] 'Consultation on DS3 System Services Volume Capped Fixed Contracts' http://www.eirgridgroup.com/site-files/library/EirGrid/DS3-System-Services-Fixed-Contracts-consultation.pdf

- Specific details regarding interactions with I-SEM arrangements are being developed and will be made clear to participants in advance of bid submission.
- A separate protocol document will be created for the purposes of these arrangements.
- We will not apply the Availability Discount Factor to units under these arrangements

With regards to the body of the contract and associated schedules, several alterations have been made in response to stakeholder feedback. Many of these are housekeeping in nature, however the more significant ones are summarised below:

- We have added a clause limiting the number of non-frequency event TOR1 & TOR2 dispatches to 10 per year.
- We have clarified that the five days per year of Scheduled Outages allowed for need not be taken consecutively, and unused days can be carried to the next year.
- We have included a 'Target Go-Live Date' which is applicable to the planning and construction period for new builds and may be different to the actual 'Go-Live Date'.
- We are open to additional forms of collateral for use as bonding and will outline viable options in the final contract.
- We have included more specific detail on how units can meet the Performance Milestones.
- We have removed the Schedule relating to Data Protection (Schedule 10).

We intend to publish the OJEU notice at the end of February, and will host an industry forum soon after. We will also publish high-level technical requirements at this stage. More detailed technical requirements, and a final version of the contract, will be published in time for the tender submission, and will cover topics such as:

- Charging limitations
- Ramping limitations
- Compliance testing
- Signalling requirements.

We will also endeavour to provide values for the Temporal Scarcity Scalar at this stage.

2 Contents

3 Introduction and Background

3.1 Background

EirGrid and SONI are the Transmission System Operators (TSOs) in Ireland and Northern Ireland. It is our job to manage the electricity supply and the flow of power from providers to consumers.

We have a responsibility to enable increased levels of renewable sources to generate on the power system while continuing to ensure that the system operates securely and efficiently. Our Delivering a Secure Sustainable Electricity System (DS3) programme seeks to address the challenges of increasing the allowable System Non-Synchronous Penetration (SNSP) up to 75% by 2020.

The results of the programme are now beginning to deliver benefits to the consumer. In recent months the maximum SNSP level allowable has increased to 65%. It is expected that similar trials will be conducted in the coming years with a view to achieving the DS3 programme's overall goal of a maximum 75% SNSP limit.

A key component of the DS3 programme is the System Services work stream. Its aim is to put in place the correct structure, level and type of services in order to ensure that the system can operate securely with these higher levels of non-synchronous generation.

3.2 Overview of System Services

EirGrid and SONI have licencing and statutory obligations to procure sufficient System Services to enable efficient, reliable and secure power system operation. The contractual arrangements and payment rates in Ireland and Northern Ireland were harmonised following the introduction of the SEM, with 7 products (POR, SOR, TOR1, TOR2, SSRP, RRS, and RRD) procured under these Harmonised Ancillary Services (HAS) arrangements.

New services are required to support a move to higher levels of non-synchronous generation. Four services (SIR, RM1, RM3, and RM8) were introduced from 1 October 2016 following the commencement of the new DS3 System Services arrangements, with FFR subsequently introduced from 1 October 2018. A further 2 services (DRR, FPFAPR), are in the process of being introduced, with DRR and FPFAPR required only at SNSP above 70%. All services are required to maintain the resilience of the power system as the SNSP levels increase. Table 1 provides a high-level summary of the DS3 System Services products – the services highlighted in green are those being procured through these arrangements.

Table 1 Summary of DS3 System Services[2]

Service Name	Abbreviation	Unit of Payment	Short Description
Synchronous Inertial Response	SIR	MWs^2h	(Stored kinetic energy)*(SIR Factor – 15)
Fast Frequency Response	FFR	MWh	MW delivered between 0.15 and 10 seconds
Primary Operating Reserve	POR	MWh	MW delivered between 5 and 15 seconds
Secondary Operating Reserve	SOR	MWh	MW delivered between 15 to 90 seconds
Tertiary Operating Reserve 1	TOR1	MWh	MW delivered between 90 seconds to 5 minutes
Tertiary Operating Reserve 2	TOR2	MWh	MW delivered between 5 minutes to 20 minutes
Replacement Reserve – Synchronised	RRS	MWh	MW delivered between 20 minutes to 1 hour
Replacement Reserve – Desynchronised	RRD	MWh	MW delivered between 20 minutes to 1 hour
Ramping Margin 1	RM1	MWh	The increased MW output that can be delivered with a good degree of certainty for the given time horizon.
Ramping Margin 3	RM3	MWh	
Ramping Margin 8	RM8	MWh	
Fast Post Fault Active Power Recovery	FPFAPR	MWh	Active power (MW) >90% within 250ms of voltage >90%
Steady State Reactive Power	SSRP	MVArh	(Mvar capability)*(% of capacity that Mvar capability is achievable)
Dynamic Reactive Response	DRR	MWh	Mvar capability during large (>30%) voltage dips

[2] Further detail on the DS3 System Services can be found at: http://www.eirgridgroup.com/how-the-grid-works/ds3-programme/

3.3 Fixed Contracts Arrangements

The DS3 Fixed Contracts (or Volume Capped) arrangements are designed with terms and requirements which will be suitable for those parties looking to invest in new service providers. This means that contracts will need to provide a level of certainty on which new providing units can be built e.g. fixed length and certainty in remuneration. These contracts will be for the provision of a subset of DS3 System Services and Over-Frequency Response, with high availability.

Previous documents of relevance include our Recommendations Paper[3] on the DS3 Fixed Contracts arrangements published on 6 September 2018, and also the SEM Committee DS3 System Services Fixed Contracts Procurement Arrangements Decision Paper[4] published on 7 September 2018.

The indicative timelines for the procurement process are as follows, with delivery of the services in September 2021:

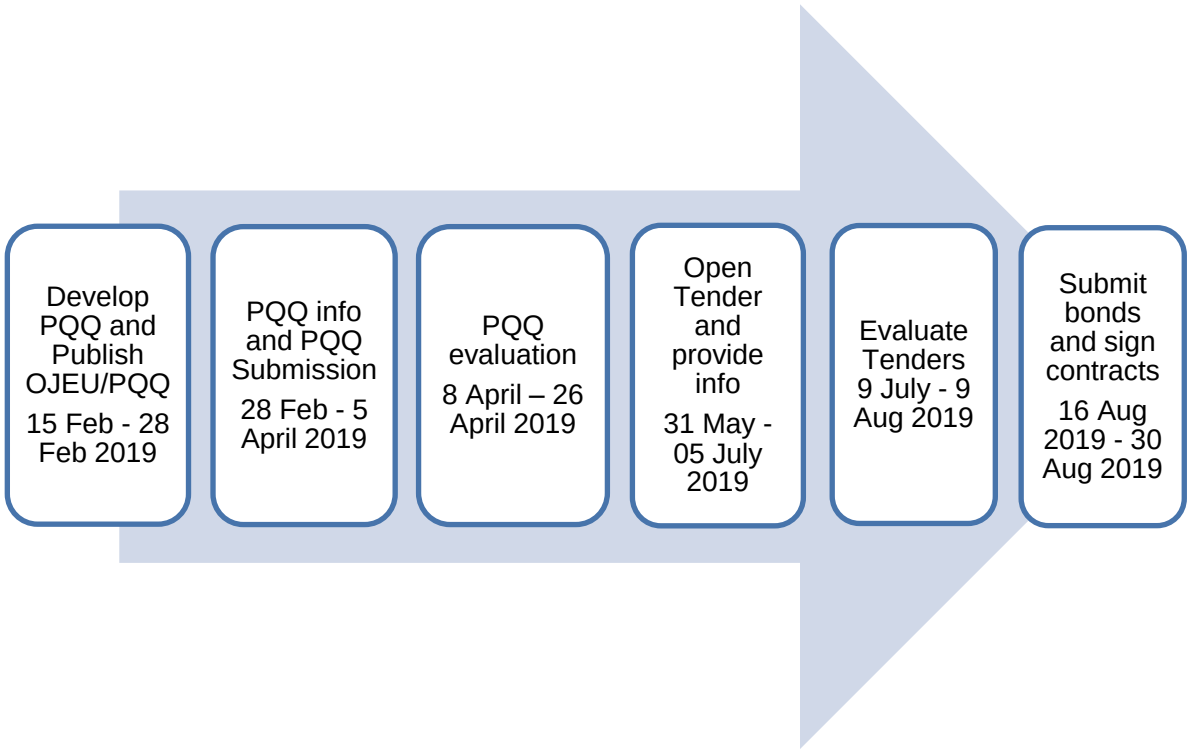

Figure 1: DS3 Fixed Contracts Procurement Timelines

[3] Recommendation on DS3 System Services Volume Capped Competitive Procurement http://www.eirgridgroup.com/site-files/library/EirGrid/DS3-System-Services-Volume-Capped-Recommendation-Paper-FINAL.pdf

[4] SEM C Fixed Contracts Recommendation Paper https://www.semcommittee.com/news-centre/ds3-system-services-fixed-contracts-procurement-arrangements

3.4 Purpose of this consultation process

The purpose of this consultation process is to discuss the contractual arrangements for the Fixed Contracts arrangements. We have also consulted on a number of items which sit outside of the contract which required further discussion.

4 Responses to the Consultation

The consultation closed on 7th December 2018. In support of this consultation, EirGrid and SONI hosted a stakeholder event in Dundalk on 15th November 2018.

In total, 13 responses were received. Parties who submitted non-confidential responses are listed below:

- ESB Generation Trading
- RES Renewable Energy Systems
- IWEA
- Powerhouse Generation
- Energia
- ESB Customer Solutions
- BGE Centrica
- Bórd na Móna
- SSE

All non-confidential responses will be published on the EirGrid and SONI websites, and all responses have been shared with the Regulatory Authorities.

5 Contract Details

All 13 respondents gave feedback, to a varying degree, relating to the text of the contracts and their schedules. This resulted in a large volume of comments. Rather than deal with each one specifically in this document, we will address the key themes that were raised under each question. The contracts themselves will be finalised ahead of the tender process to allow for a full legal review.

5.1 Contract Body Text

Question 1: What is your view in relation to the proposed Fixed Contracts contract?

5.1.1 Main responses themes

There was a large volume of comments relating to the body text of the contracts.

5.1.1.1 Termination Clauses

Many respondents raised concerns relating to the clauses for termination in the contract. Comments were made as to the inflexibility of the clauses, and how some of them triggered an automatic termination rather than giving the TSO an option to terminate. We have changed wording in some clauses to make them more flexible in this regard.

There were comments suggesting some of the clauses were too strict or severe. For example, some respondents felt that clause 9.1 might lead to situations where the TSOs could unilaterally terminate the agreement. This was not our intention, and we have removed this clause.

With regard to the other clauses relating to termination, given the duration of the contracts and the level of revenue assurance they give to Service Providers, we feel these clauses are appropriate to protect the electricity consumer and ensure value for money.

However we note the onus on reasonableness on any decision making on the TSOs' part, which has been emphasised in the wording of the latest draft. We would also note the inclusion of protections for the Service Provider in the case of Force Majeure, and the definition of Force Majeure under Schedule 1, particularly *"…any event or circumstance or number of events or circumstances or combination thereof which is beyond the reasonable control of a Party and which could not have been avoided and which results in or causes the failure of a Party to perform any of its obligations under this Agreement…".*

Although allowances are made for delays caused by TSOs, concerns were raised relating to the risk of delays caused by other third parties, particularly the DSOs. We believe the Service Provider, having a relationship with these third parties, will be in the best place to manage this risk and that it is appropriate that it sits with them.

5.1.1.2 Compliance with Grid Code and TSC

One issue raised was the need for compliance with both the relevant Grid or Distribution Codes and the Trading & Settlement Code (TSC), given that the contracts are designed for delivery of System Services rather than energy. The Grid and Distribution Codes ensure a safe and orderly operation of generating units connecting to the power system. As such, compliance is appropriate and necessary for units contracted under these arrangements. We note that there are mechanisms for units to seek derogations to Grid and Distribution Code requirements should they feel it is justified.

With regard to the TSC, we will treat units under these arrangements as per any other generating units on the system. Units under 10 MW will not be obliged to participate in the energy markets, however larger-sized units will. Interactions between these arrangements and the I-SEM are discussed in more detail in Section 7.5.2.

5.1.1.3 Scheduled Outages

Many respondents requested additional information regarding the 5-day allowance for Scheduled Outages that would not affect the Availability Performance Scalar. Questions asked included:

- Does the 5-day allowance need to be taken as a single block?
- Can days carry over from year to year?
- Can they be split across different services?

Also, questions were raised relating to the notice period for planned outages.

We can confirm that the 5-day allowance can be treated as five separate days i.e. **the 5 days allowed for Scheduled Outages need not be taken consecutively**. However, a single day cannot be split into sub periods (e.g. two separate 12-hour Scheduled Outage periods would be treated as two full days).

We will permit carrying over unused days from one Calendar Year to the next.

The 5-day period is for the unit as a whole and may not be split across different services.

To clarify further, Scheduled Outages should be carried out in coordination with the relevant TSO or DSO, and the allowance will only apply to outages designated as Scheduled by the TSO. However in relation to the notice period, we have removed specific values relating to this from the contract, given that clauses already exist to enforce Grid Code compliance and Good Industry Practice.

5.1.1.4 Regulatory Oversight

Some respondents raised concerns over the risk of regulatory interference in the contracts, for example "…*the contractual arrangements as currently drafted impose undue regulatory risk and that variations could be unilaterally imposed with Regulatory approval post award of contract*..."

There were also queries as to the objectiveness of the Dispute Mechanism, and whether applying to the Regulatory Authority for resolution was appropriate.

Both Regulatory Authorities (UR and CRU) have a wide range of economic, customer protection and safety responsibilities in the electricity sector, which are set out in legislation in the respective jurisdictions. The CRU is committed to carrying out all its functions in a fair, impartial, balanced and transparent manner. Similarly, UREGNI's values include being transparent, consistent, and accountable in its role. We note that legal avenues are available should a Service Provider or any industry participant be unhappy with their actions.

5.1.1.5 Duration of Contract

Some respondents requested that a longer contract be made available to participants who can deliver services in advance of 1st Sept 2021. The SEMC decision paper SEM-17-080[5] stated that contract arrangements for Volume Capped procurement should be "set at a maximum of 6 years", and discussions between the TSOs and the RAs have confirmed this decision.

5.1.1.6 Payment Rates

Some respondents noted that the specific Payment Rates, as determined by the tender process, were not listed in the Agreement. We have updated the contracts to include them for each service.

It was queried whether inflationary adjustments would be made to the Payment rates over the duration of the contract. We can confirm that no adjustment will take place. Providers are free to reflect their estimate of the impact of inflation through their bids.

5.1.1.7 Go-Live Date

It was suggested that introducing a new term to differentiate the Go-Live date that was planned for from the Go-Live date that was actually achieved. As such, we have included a new term 'Target Go-Live date' to represent the Go-Live date that will be targeted in milestones etc., and have adjusted text accordingly.

5.1.2 Our Recommendation

Where relevant, the wording of the contracts has been updated to reflect our statements in the previous section. In addition, we propose the following additional details for recommendation:

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[5] 'DS3 System Services Tariffs and Scalars SEM Committee Decision' https://www.semcommittee.com/sites/semcommittee.com/files/media-files/SEM-17-080%20DS3%20SS%20SEMC%20Decision%20Paper%20Regulated%20Arrangements%20Tariffs%20and%20Scalars%20Final%20version.pdf

1. **We conclude that the termination clauses in the contract are appropriate to safeguard the consumer. We have however made some modifications to the wording to increase flexibility on our option to terminate, and also have removed clause 9.1**
2. **Units must be compliant with the relevant Grid and Distribution Code(s), accounting for derogations that have been granted.**
3. **Units above the de-minimis threshold (10 MW) must be compliant with SEM Trading & Settlement Code and participate in the Balancing Market.**
4. **The 5-day scheduled outage period, which will not count against a provider's Availability Performance Scalar, can be split into 5 individual days. Unused days can be carried over into the subsequent year.**

5.2 Definitions (Schedule 1)

Question 2: Do you have any comments with respect to the definitions outlined in Schedule 1 of the Fixed Contracts contract?

There were many comments relating to the definitions in Schedule 1, including the fact that some terms were missing while others were not used in the agreement. These comments have been considered and many will be reflected in the final version of the contracts. Some significant changes include:

- A newly defined 'Target Go-Live Date' reflecting the agreed date for a unit's service provision rather than the actual 'Go-Live date' (see paragraph 5.1.1.7 above.)
- Removal of unused terms.
- Inclusion of previously undefined terms.

5.3 Operating Reserves (Schedule 2)

Question 3: Do you have any comments with respect to Schedule 2 (Operating Reserves) in the Fixed Contracts contract?

5.3.1 Main responses themes

There was a large volume of comments relating to this Schedule, mostly falling under the themes below.

5.3.1.1 Availability Scalar

Many comments related to the Availability Scalar. Some respondents suggested the Availability Scalar values were too harsh. We note however, that high service availability is a key

component of these agreements. Our design needs to ensure that adequate incentives (or disincentives) for a high level of service availability are in place, and we feel the proposed values provide this. They have already been approved by the SEM Committee through SEM-18-049.

A smoother curve for the Availability Performance Scalar calculation was suggested by participants. This proposed a continuous function for the scalar rather than the step-like function used. We note that the values of the Availability Performance Scalar have already been approved by the SEM Committee through SEM-18-049. We do not feel that a continuous function would provide much benefit to the process, and that it would also increase the complexity of the settlement process.

Respondents requested how months prior to Go-Live would be treated in terms of the Availability Performance Scalar. **We can clarify that, for the purposes of calculating the Availability Performance Scalar, the unit will be assumed to have been fully available for the months prior to the unit's Target Go-Live date**.

Respondents also questioned the need for OFR to feature in the Availability Performance Scalar calculation, given that it does not have a tariff. We note that the provision of OFR is a feature of the design of these arrangements, and as such we need to ensure that incentives (or disincentives) are present to support this.

Respondents felt that the termination clause applying after 3 continuous months of a scalar value of zero would not give a reasonable length of time to remedy the cause (e.g. replacement of a component). We would like to point out that, due to the monthly weighting used, it would take seven months of no provision of services for this clause to apply, assuming a full level of service availability in the months prior.

Finally, a detailed worked example of the Availability Performance Scalar calculation was requested. We will endeavour to provide this either alongside the forthcoming OJEU notice or as part of the forum that will take place to support this.

5.3.1.2 Bundling of Services

One respondent suggested that payment should be on the basis of the bundle as a whole rather than individual services. We appreciate that this would improve the simplicity of some aspects of the design; however it is inconsistent with previous design principles of DS3 System Services, and would further complicate other aspects, particularly where use can be made of existing processes and systems. As such we do not propose implementing this suggestion.

5.3.1.3 OFR Requirements

It was pointed out by respondents that there is no reference to the 15% OFR capacity requirement.

The contracted MW values for each service will be specified in Schedule 9 of each contract. As such, a reference to the 15% requirement is unnecessary, as it will already be incorporated into the specific MW values.

5.3.1.4 Availability Declarations

Respondents requested more details on how Availability will be declared by participants. We will provide further information, with high-level requirements to be outlined in the PQQ and a detailed signal list to follow.

5.3.1.5 Algebraic Inconsistencies

There were inaccuracies in some of the equations used in this Schedule, due to unnecessary or incorrectly defined scalars, missing values, typos etc. These have now been fixed.

5.3.1.6 Adjustment to Trigger Values etc.

Some respondent were concerned about the clause allowing the TSOs to request changes to certain characteristics (i.e. the Reserve Trigger, Reserve Droop, Reserve Step Sizes and Reserve Step Triggers) and requiring that these requests are accommodated within 90 seconds. They asked for clarification on the nature of these changes, and if they could add additional costs on to the Service Provider.

We have considered this feedback and have decided to lengthen this 90 second period to one week.

5.3.1.7 Non-zero Baseline

Respondents requested clarification as to whether a non-zero baseline would be utilised in calculation of available service volumes, specifically for battery technologies. That is, whether service provision could be considered through the interruption of demand as well as the increase of generation. We intend to allow for this and will adjust the contracts accordingly.

5.3.1.8 Units of Payment

It was suggested that the units of payment should be €/MW/h rather than €/MWh. We note that this would be inconsistent with the units used in DS3 System Services design to date, including the Tariff definitions, and as such propose to leave them unchanged.

5.3.1.9 Treatment of non-firm units

It was pointed out that, while the treatment of firm units was reflected in the wording, it did not clarify how non-firm units would be treated. We have discussed this further in Section 7.5.1 below and have updated the contract to reflect this.

5.3.2 Our Recommendation

Where relevant, the wording of the contracts has been updated to reflect our statements in the previous section. To emphasise, we propose the following for recommendation:

1. **A flat monthly weighting will be applied to the Total Availability Factor for the Availability Performance Scalar calculation.**

2. **For the purposes of calculating the Availability Performance Scalar, each Providing Unit will be assumed to have been fully available for the months prior to the unit's Target Go-Live date.**
3. **We have extended the period allowed to comply with Reserve Trigger, Reserve Droop, Reserve Step Sizes and Reserve Step Triggers change requests to one week.**
4. **We intend to allow for reserve provision through interruptible load from batteries and will ensure the contracts reflect this.**

5.4 Performance Bonding

Question 4: Do you have any comments with respect to the Bonding requirements and the Performance Bond milestones proposed?

5.4.1 Main responses themes

5.4.1.1 TSO Control

There was concern expressed by a number of respondents that many aspects of the Performance Milestones were not fully controllable by the project developer, and in particular many were at risk of a delay due to the actions (or inactions) of the TSO or DSO.

We note that clauses 4.2 and 4.3 give protections to the Service Provider in the case of TSO delay and Force Majeure. As with the termination clauses discussed in Section 5.1, it is worth emphasising the definition of Force Majeure under Schedule 1, particularly *"…any event or circumstance or number of events or circumstances or combination thereof which is beyond the reasonable control of a Party and which could not have been avoided and which results in or causes the failure of a Party to perform any of its obligations under this Agreement…",* and the onus on reasonableness on any decision making on the TSOs' part.

5.4.1.2 Milestone Details

Further details relating to the Performance Milestones were requested by respondents, specifically to do with the conditions required to meet them, their timing etc. We have reworded the Performance bond Milestones in Schedule 4, giving more detail on what is expected from providers.

5.4.1.3 'Curing' Period

Respondents requested that there might be a curing period of e.g. 6 months, which would allow for an unmet milestone to be remedied. We do not propose introducing such a period, however would reiterate the onus on reasonableness on any decision making on the TSOs' part. We have also adjusted wording so that breach of the Performance Bond conditions gives the TSO the option to draw on the bond, rather than it being an automatic trigger.

5.4.1.4 Collateral Requirements

Several respondents asked whether posting of the collateral could be by other means (e.g. cash). In principal we have no objections this, and are reviewing our options in this regard. Viable options will be made clear in the final draft of the contracts.

5.4.1.5 Credit Rating for Bond issuer

It was suggested by respondents that the Credit Rating criteria were too stringent, and that they would exclude a large number of widely used Irish and other banks. It was also requested that the text allow for a change in Issuer should the Service Provider wish to change their bank. Finally, a 'remedy' period was requested where, should the rating of the issuer drop below the criteria, either the Issuer is given time to improve their rating or the Provider is given time to find a new issuer.

We will allow for changing of Issuer and are reviewing the wording around the Credit Rating requirements in light of the comments above.

5.4.1.6 Bid Bonds

Two respondents have recommended the use of bid bonding in order to protect the procurement process against both underestimation of costs or underbidders looking for a resale opportunity. We have concluded that it would not be appropriate to introduce bid bonds at this stage, as it could be a barrier to entry to smaller participants. We feel that the requirement of a connection offer means that speculative bids are less likely.

5.4.2 Our Recommendation

Where relevant, the wording of the contracts has been updated to reflect our statements in the previous section. To emphasise, we propose the following for recommendation:

1. **Schedule 4 of the contract has been updated to provide more details on how units can meet the Performance Milestones.**
2. **We are open to other forms of collateral for use as a bond, and will include viable options in the final contract.**
3. **We have modified the requirements for the Performance Bond Issuer.**
4. **We do not intend to use bid bonds for this process.**

5.5 Operational Requirements & Parameters (Schedules 8 and 9)

Question 5: Do you have any comments with respect to the Operational Requirements and Parameters proposed in Schedule 8 and 9?

5.5.1 Main responses themes

5.5.1.1 Lack of information

It was pointed out that Schedule 8 refers to both charging and ramping limitations on Service Providers; however there is no information on these limitations provided in the contracts or in the Protocol document. Similarly, there was a lack of detail on compliance testing requirements and signalling requirements.

Where sufficient detail is not provided, additional information will be alongside the tender request at the latest.

5.5.1.2 Modifications by TSO

Respondents requested clarification as to whether the data in schedule 9 can be changed unilaterally by the TSOs. We can confirm that we will not change this data unilaterally, apart from where the clauses of the Variations section of the contract body text apply e.g. change of Grid Code, Distribution Code etc.

5.5.2 Our Recommendation

The TSOs will publish more details on technical characteristics such as:

- Charging limitations
- Ramping limitations
- Compliance testing
- Signalling requirements.

These will be provided alongside the tender request at the latest.

We do not intend to unilaterally change the content of Schedule 9 (apart for conditions covered under the clauses of the Variations section of the contract body text).

5.6 Rest of Schedules

Question 6: Do you have any comments with respect to the remaining content of the contract Schedules?

5.6.1 Main responses themes

5.6.1.1 Data Protection (Schedule 10)

Respondents questioned the need for this Schedule, and requested information as to what Personal Data the Service Provider would be collecting.

It was pointed out that an Appendix listed in the contract had not been provided. It was also queried as to whether this Schedule should be mutual and if similar obligations should be placed on the TSOs.

We acknowledge that it is unlikely that the Service Provider will be holding Personal Data through these arrangements, or data that would require a specific supplemental agreement to govern its management under GDPR legislation. As such we have removed Schedule 10.

However we reserve the right to insist on adequate protection measures in the event that Personal Data is shared through these arrangements in the future, to reflect our internal policies on Personal Data management and our obligations under GDPR legislation. This may require an agreement such as this Schedule or similar. We will look to include any necessary provisions to this effect within the final contract.

5.6.1.2 Length of Payment Process

Respondents questioned the length of time required for settlement and payment.

A large amount of data is required to be gathered, processed and reviewed in order to ensure the payment process is as smooth as possible. From our experience, the time period we have specified is reasonable to allow for a high quality settlement process. This issue was raised during the consultation process for the DS3 Regulated Arrangements, please refer to our response[6] (page 47 & 48) at that time for more information.

5.7 Our Recommendation

We have removed the Schedule specifically relating to Data Protection (Schedule 10).

[6] http://www.eirgridgroup.com/site-files/library/EirGrid/DS3-System-Services-TSO-Decision-Paper-on-Interim-Contracts.pdf

6 The Protocol Document

Many comments were received relating the protocol document – both the proposed addition relating to the Availability Performance Scalar, and the overall document itself. We intend to deal with the majority of these in coordination with the recently closed consultation on the Protocol document. However we will discuss briefly some of the issues raised here.

6.1 Modifications to the Protocol Document

There were some objections to including details relating to the Fixed Contracts in the protocol document at all, as the potential for changes to be made to this document puts risk on the service provider. There was a suggestion that, where changes to the protocol document cause additional costs to the service provider, they should be compensated.

The Fixed Contracts process is, in our opinion, a novel and innovative process, and there are few international examples to draw upon that would capture the distinct needs of our power system. As such, while we would like to provide certainty to prospective tenderers where possible, it is necessary that a limited number of elements regarding the service provision be subject to modification to allow for corrections and improvements. This is not just for the TSOs' benefit but also for the benefit of service providers, who are given opportunity to input into the content of the protocol through the consultation process, as well as the usual TSO/stakeholder interactions.

With regards to cost, we endeavour to ensure that any changes do not have a significant financial impact on existing service providers, and the consultation process gives providers the opportunity to respond in this context.

6.2 Availability Performance Scalar

Some respondents supported the design of the Availability Performance Scalar, however others raised issues with which they were unhappy.

One respondent felt that the Scalar presents a barrier to revenue stacking, raising the effective costs of DS3 service provision for the consumer, as well as reducing the overall utility of the contracted asset. They questioned whether this was the optimal approach to providing value to the customer when considering the power system holistically. We feel the Scalar is appropriate to ensure the high-level of service provision required, and note that the inclusion of an Availability Performance Scalar has been covered in previous SEMC decision papers.

There were several responses relating to the monthly weighting profile of the Total Availability Factor. Some respondents felt that this profile introduced additional complexity which was unnecessary, and felt that weighting each of the 12 months equally (flat weighting) would be

more appropriate. Another respondent suggested a more ‘tapered’ approach to the monthly weightings, with M-1 receiving a significantly higher weighting than the previous months.

Our intention with using a weighted profile was to avoid smoothing out of sizable outages so that they have no impact on the Availability Performance Scalar. However, on balance, we feel this may not justify the added complexity, and will **weight all of the previous 12 months equally when calculating the Availability Performance Scalar**. However, as with all components of the protocol document, this may be changed through future consultation should it lead to issues in practice.

Finally, respondents requested clarity as to how the Availability Performance Scalar would be calculated for the first year of the contract, given that there would not be availability data for the 12 months preceding. We can confirm that, **for Availability Performance Scalar calculation purposes, we will assume that all months preceding Target Go-Live have a Total Availability Factor of 1**.

6.3 Separate documents for each arrangement

Some respondents recommended keeping separate protocol documents for the Fixed Contracts and Regulated Arrangements, given their divergent requirements. We think this proposal makes sense, and **will develop a separate protocol document for the Fixed Contracts arrangements** which will mirror the relevant sections of the Regulated Arrangement protocol document where appropriate, as well as detailing the additional requirements for the Fixed Contracts.

6.4 Availability Discount Factor

One respondent suggested that the application of the Availability Discount Factor is not appropriate for these arrangements. We agree, given that a high level of availability will already be expected from the contracted units, and the Availability Performance Scalar acts as an incentive to maintain this. As such **we will not apply the Availability Discount Factor to units under these arrangements**.

7 Additional Provisions for the Fixed Contracts arrangements

The consultation paper outlined a number of provisions for the Fixed Contract arrangements. In this section we discuss the responses to these provisions, and make recommendations to the Regulatory Authorities.

7.1 Connection to the Electricity System

Question 8: What is your view in relation to the proposed restrictions and conditions regarding connection to the power system?

7.1.1 Consulted Proposals

In order to mitigate concerns relating to Single Point of Failure risk, the TSOs had initially proposed that the following conditions be met:

(i) there shall be no more than one unit contracted under the Fixed Contracts arrangements at any single distinct Connection Point, as defined in the associated Connection Offer and/or Connection Agreement between the relevant System Operator and the connectee;

(ii) the service provider must be a party to the associated Connection Offer and/or Connection Agreement for the single distinct Connection Point with the relevant System Operator; and

(iii) no two (or more) contracted units shall be connected to the Transmission or Distribution Systems in such a manner that they would be deemed **Electrically Contiguous**.

Two units are deemed Electrically Contiguous when a single failure or outage of an item of equipment would lead to more than one unit being unable to provide their services to the system. Condition iii) would be determined in advance of the tender process by EirGrid and SONI, and may consider amongst other things any relevant Single Line Diagrams which are available. In the case that condition iii) is not met, all impacted units would be excluded from receiving contracts.

7.1.2 Responses & Discussion

Of the 13 responses received, eleven specifically referred to this question.

7.1.2.1 Condition i)

Condition i) limits the number of contracts per connection point. One respondent noted that there are historic Connection agreements that allow multiple 'generators' to be behind a single Connection Point, and that these should not be discriminated against.

Another respondent queried whether this also applies to existing units contracted under Regulated Arrangements, and whether the unit would be prevented from expanding to take advantage of future arrangements. **The TSOs can confirm that this limitation only applies to units in these Fixed Contract Arrangements at present.** See the discussion on condition iii) below for further clarifications.

The same respondent questioned how this could apply to Demand Side Units, as they may not be in possession of a connection agreement, and the reference to a "single distinct Connection Point" is not appropriate for demand side units. This mirrored a comment that arose in our public forum, which suggested that this wording discriminated against Aggregating units. This is not our intention. As such we propose removing this reference from condition i).

On further consideration, we feel the aim of this proposal is already achieved through condition iii), and **therefore recommend removing condition i), on the understanding that condition iii) is maintained**.

[if iii) is not maintained, we would recommend changing the wording of i) as follows:

(i) there shall be no more than 50 MW of DS3 System Services contracted under the Fixed Contracts arrangements at any single distinct Connection Point, as defined in the associated Connection Offer, Connection Agreement, or equivalent between the relevant System Operator and the connectee;]

7.1.2.2 Condition ii)

Condition ii) states the service provider must be party to the connection offer at a single distinct connection point. It was pointed out, both through this consultation process and at our public forum, that this could potentially discriminate against aggregator units, where a single connection offer or a single distinct connection point may not exist.

This is not our intention. Under our license conditions, SONI and EirGrid are obliged to neither prevent nor restrict competition in the supply or generation of electricity. We have designed these arrangements to be technologically neutral, provided the technology is capable of providing the services as per the requirements of the arrangements.

In order to avoid undue discrimination, the TSOs therefore recommend **that condition ii) is changed to read as follows:**

ii. The service provider must be a party to the associated Connection Offer and/or Connection Agreement with the relevant System Operator (or where none exists, party to the equivalent such as the GASOA/DSUSOIA in the case of AGUs/DSUs);

7.1.2.3 Condition iii)

Condition iii) states that no two contracted units can be electrically contiguous i.e. behind a single point of failure. One respondent recommended this restriction be removed, stating that it may be unworkable as a developer may be negatively impacted by the actions of a third party developer, and it will result in underutilisation of grid assets. We understand these concerns, however our need to keep the system secure, which is the underlying principle of these contracts in the first place, takes priority. We note that no respondents provided alternative suggestions as to how we should manage the single point of failure risk, and as such we recommend keeping this condition (albeit with some modifications) .

Some respondents objected to the principle of excluding all electrically contiguous units, rather than selecting one to be allowed participate in the tender process. The TSOs can confirm that consideration of whether units are electrically contiguous will not form part of the PQQ process. This will, instead, be included within the assessment of tender submission.

Some respondents requested more clarity on what electrically contiguous might mean, and requested examples to help explain. Clarity was also requested on whether this rule applied to units contracted under the DS3 Regulated Arrangements.

The TSOs can clarify that the electrically contiguous rule will only consider units under the Fixed Contracts arrangements. Units contracted under DS3 Regulated Arrangements will not be considered for this rule. With regards to any future procurements, decisions will be made at the appropriate time in consideration of what is suitable for those arrangements, but it is not envisaged that this will impact units with pre-existing contracts.

In terms of further clarity, the electrically contiguous ruling will apply to units either directly or indirectly connected to a single piece of electrical equipment, where the failure of that piece of equipment leads to both or all of those units unable to provide services to the power system.

A non-exhaustive list of examples is as follows:

- Two (or more) units connected to a tail-fed transmission line
- Two (or more) units connected to a single busbar
- Two (or more) units connected to a single transformer
- Two (or more) units connected to any parts of the distribution network, where those parts of the distribution network connect to the transmission network via the same single transformer

We will not consider the following to be electrically contiguous:

- Two (or more) units connected to separate busbars at a transmission station, unless that transmission station is tail-fed
- Two (or more) units impacted by the outage of a piece of transmission equipment which partially reduces their ability to provide services, e.g. a constraint region

In general, we will only consider up to, and including, the first transmission station which has at least two transmission lines connecting it to the grid.

One respondent noted again that this rule seemed to be unfair to demand-side and aggregating units. Another noted that referring to a number of units rather than a MW size is unfair to multiple smaller units.

We accept this point, and note that referral to number of units rather than a MW size is not necessarily consistent with the decision on a 50 MW contract size limit. As such, we suggest rewording the proposal as follows:

iii. **no more than 50 MW of contracted service provision shall be connected to the Transmission or Distribution Systems in such a manner that they would be deemed Electrically Contiguous.**

7.1.3 TSOs' Recommendation

Regarding requirements on connections for service providers, the TSOs recommend the following proposals:

i. **The service provider must be a party to the associated Connection Offer and/or Connection Agreement with the relevant System Operator (or party to the GASOA/DSUSOIA in the case of AGUs/DSUs); and**

ii. **no more than 50 MW of contracted service provision shall be connected to the Transmission or Distribution Systems in such a manner that they would be deemed Electrically Contiguous.**

Two units are deemed Electrically Contiguous when a single failure or outage of an item of equipment would lead to more than one unit being unable to provide their services to the system. Condition ii) will be determined by EirGrid and SONI, and may consider amongst other things any relevant Single Line Diagrams which are available. In the case that condition ii) is not met as part of the tender process, only the provider with the lowest bid price would be eligible for a contract under these arrangements.

The TSOs can clarify that the electrically contiguous rule will only consider units under the Fixed Contracts arrangements. Units contracted under DS3 Regulated Arrangements will not be considered for this rule. With regards to any future procurement arrangements, decisions will be made at the appropriate time in consideration of what is suitable for the system, but it is not envisaged that this will impact pre-existing contracts.

7.2 Calculation of average SNSP and Temporal Scarcity Scalar

Question 9: What is your view on the proposed mechanism for determining the values of the temporal scarcity scalar to be applied?

7.2.1 Consulted Proposal

The consultation paper detailed an approach for calculating the Temporal Scarcity Scalar (TSS) value to be applied for the duration of these contracts. The approach can be summarised as follows:

1. Select the yearly wind profile that most closely matches the average from the most recent five years.
2. Run a Plexos study using this profile, with demand, generation portfolio and system operation inputs taken from a forecast of 2021/22
3. Take the half-hourly SNSP output from the Plexos study and convert to two sets of half-hourly TSS values (one for FFR, one for the remaining services)
4. Average these TSS values over each half-hour to get two TSS values, which are then applied for the duration of the contracts.

7.2.2 Responses & Discussion

We received 11 responses to this specific question. Respondents' reactions to the proposal were generally positive, with some saying the certainty and clarity was welcomed. One respondent commented that the Temporal Scarcity Scalar is irrelevant as the tender process is unlikely to clear near the price cap. Another suggested it would be simpler to remove the TSS from these contracts.

Several respondents queried the use of the first year of the contract for determining the average SNSP values, given that SNSP values are expected to increase over time. It was suggested that either the mid-point of the contract period or the full duration of the contract should be modelled. Some suggestions were also made as to how to improve the accuracy of the forecast.

Many of the responses requested that the final TSS values be made as early as possible to allow bidders to consider it in their tender submission.

We agree that the TSS is only of significance where it impacts the price cap, as bid offers should incorporate the TSS value and adjust themselves accordingly. We note that a decision has already been made to apply the TSS in these contracts. We also recognise that participants wish to see the final TSS as soon as possible.

As such, while acknowledging the concerns about the study year, we feel that a full 6 year study is unnecessary and would potentially delay delivery of results. **We therefore propose using the 2025 Calendar Year for determining the SNSP values**.

7.2.3 TSOs' Recommendation

The TSO's recommend that only one change is made to the original contract proposal i.e. that the study year be the 2025 calendar year. We will endeavour to publish the final TSS values alongside the OJEU notice (currently planned for the end of February) or soon after.

7.3 Other system conditions for TOR1 and 2 dispatch

Question 10: Do you have any comments in relation to the proposed system conditions for TOR1 and TOR2 dispatch?

7.3.1 Consulted Proposal

The Fixed Contracts arrangements allow for TOR1 & TOR2 dispatch for reasons other than a frequency event. In our consultation document we discussed some the details of this, and proposed the following:

- System conditions which might precipitate TOR dispatch include periods of local thermal overloads or constraint, instances of significant demand or generation loss where the frequency has not gone outside of the frequency thresholds.
- The dispatches for non-frequency event will be limited to 10 per year. The length of service provision required would be the same as dispatch subsequent to a frequency deviation i.e. TOR1 and TOR2 timescales.
- The impact on a provider's availability obligations will be the same as for dispatch due to a frequency event.

Our previous recommendation paper[7] stated that the duration of the service provisions, and 90 minutes after the frequency event (or the first trading period after that if later) will not be counted in the calculation of a service providers Availability Performance scalar. We note however that this proposal had not appeared in the initial consultation which led to that decision paper. As such, this was the industry's first opportunity to respond to it.

7.3.2 Responses & Discussion

Ten respondents directly addressed this question. Many welcomed the limit of 10 non-frequency event dispatches, and the clarity around the conditions which could cause it. However it was noted that this does not appear in the contracts or schedules. **We have now updated the contracts to reflect this.**

One respondent stated that these dispatches should be paid for, since they create additional costs to the service provider above those in the Regulated Arrangements. We note that, since the number of events is capped, providers should be able to estimate these costs in advance and can therefore incorporate them into their bundle bid.

Another respondent suggested that these services could be procured within the balancing market. We will discuss market interactions in more detail later in Section 7.5.2, but would note

[7] http://www.eirgridgroup.com/site-files/library/EirGrid/DS3-System-Services-Volume-Capped-Recommendation-Paper-FINAL.pdf

that we do not wish participants to be particularly active in the balancing market. By including the option to call on these services in the Fixed Contracts we give certainty to the provider while also ensuring costs to the consumer are appropriate.

There were several comments on the 90 minute post-event allowance for recharging.

One respondent queried whether the limit of 10 instances applies to either TOR1 or TOR2, and not 10 instances for TOR1 and 10 separate instances for TOR2. **We can clarify that the limit covers 10 individual dispatch requests, each of which can request a response as fast as 90s and a duration as long as 20 minutes.**

Finally, one respondent stated that the TSO should facilitate dispatching through RTU signals.

7.3.3 TSOs' Recommendation

We recommend that the proposals on TOR1 and TOR2 remain as per the consultation paper. We can clarify that the limit covers 10 individual dispatch requests, each of which can request a response as fast as 90s and a duration as long as 20 minutes. Refer to Section 7.5.6 for details on Availability obligations after responding to such a dispatch.

With regard to facilitating dispatching through RTU signals, we will provide further information, with high-level requirements to be outlined in the PQQ and a detailed signal list to follow.

7.4 Tie-break requirements

Question 11: Do you have any suggestions in relation to the application of non-price criteria in a tie-break scenario?

7.4.1 Consulted Proposal

In the consultation paper, we discussed in general terms how tie-break criteria could be used as part of the procurement exercise to differentiate between participants with equivalent price bids. We stated that we were no longer considering speed of response of FFR as a criterion.

We asked whether respondents considered the volume of Over Frequency Response (OFR) and also the size of the service contract as appropriate criteria, and also requested additional suggestions.

7.4.2 Responses & Discussion

Nine respondents addressed this question directly. Several respondents felt that it would be unlikely that a tie-break situation would actually occur, though they recognised the prudence of preparing for it. Many agreed that speed of response would not be a reliable criterion, though one respondent felt it might work

While one respondent supported the use of OFR capacity for settling a tie-break, the majority felt it was not a fair criterion. It was stated that this would discriminate against more developed projects, who would be less flexible with the level of OFR they could plan for delivery of, since it could be limited by the MIC of their application.

With regard to size of contract, two respondents felt this was a reasonable approach. One respondent suggested that a go-live date could be included as part of the bid and that this could be used as a tie-break criterion. Another respondent suggested that if both (or all) tied bids can be accepted without going over 140 MW then they should be.

Finally, one response (confidential) felt that using technical criteria above what was required by the contract would not be ideal. They suggested a methodology that would reduce the likelihood of a tie-break and would lead to a conclusive tender process result.

7.4.3 TSOs' Recommendation

The TSOs agree that a tie-break based on technical criteria is not ideal, particularly as many of the units will not exist at the time of tender process and technology criteria may not be accurately assessable on a comparative basis. **As such we will not use technical criteria to settle a tie-break situation.** The exact details of a tie-break methodology will be made clear as part of the tender documents.

In order to reduce the likelihood of a tie-break in the first place, we will request that the bundle discount bid submitted by participants be expressed to the nearest cent (i.e. .01 €/MW) to reduce the likelihood of matching bids.

7.5 Other issues

In this section we consider issues raised by respondents which are not directly connected to the questions asked in the consultation document.

7.5.1 Network risk

Several respondents commented regarding the treatment of non-firm units. While this was not referred to in this consultation, it was decided on in a recent SEMC decision paper[8], and this consultation provided stakeholders the first opportunity to respond to it.

Specifically, SEM-18-049 states: *Service providers with non-firm connections will take on the risk of network unavailability due to network limitations and will not be remunerated if unavailable due to network limitations.*

[8] DS3 System Services Fixed Contracts Procurement Arrangements Decision Paper https://www.semcommittee.com/sites/semc/files/media-files/SEM-18-049%20DS3%20System%20Services%20Fixed%20Contracts%20Procurement%20Arrangements.pdf

Many respondents felt this would place a level of risk on project developers which could have a severely negative impact on the viability of their projects. In discussion with the RAs, we can attempt to clarify the impact of this decision on the basis of our understanding.

Where a unit is contracted to provide a service, and an outage to the network (either Transmission or Distribution) would prevent full delivery of that service, the following would apply on a trading period basis:

1. The unit would only be paid for the level of service provision that is firm, or the level of provision allowed by the network constraint (whichever is greater).
2. For the calculation of the Availability Performance Scalar, the unit would be treated as if it were fully available.

We assume that no other reason is limiting the unit's ability to provide services.

This places network risk on the service provider in accordance with the SEMC decision paper.

As an example, consider a unit with a 50 MW contract under the Volume Capped arrangements. It has a connection that is firm up to 30 MW. The unit is in 'good health' and fully available to deliver 50 MW to its connection point.

i. If a network outage limits its output to 20 MW, it would be paid as if it can provide 30 MW of services

ii. If a network outage limits its output to 40 MW, it would be paid as if it can provide 40 MW of services

Consider a similar unit that is fully firm (up to 50 MW).

i. If a network outage limits its output to 20 MW, it would be paid as if it can provide 50 MW of services

ii. If a network outage limits its output to 40 MW, it would be paid as if it can provide 50 MW of services

Now, consider a similar unit that is non-firm.

i. If a network outage limits its output to 20 MW, it would be paid as if it can provide 20 MW of services

ii. If a network outage limits its output to 40 MW, it would be paid as if it can provide 40 MW of services

In each case above, the unit would be considered as if it were fully available for the sake of the Availability Performance Scalar calculation.

7.5.2 I-SEM Arrangements

Issues were raised by respondents related to the Balancing Market, and the potential conflict between obligatory participation and the high availability requirement in these arrangements. Service Providers over 10 MW in size will be obliged to submit both simple and complex offers

into the Balancing Market, which may lead to them being issued dispatch instructions not related to the services they are contracted for.

We are conscious of this issue and are working on a mechanism which would allow units to fulfil their high-availability requirement as much as possible without being in breach of Trading & Settlement rules. One possibility could be through a rule in the scheduling and dispatch software which would ensure that a unit's Physical Nomination is followed. On rare occasions, Grid Controllers in the NCCs could choose to deviate from these PNs, for example under the conditions outlined in Section 7.3.

With regard to units that require replenishing an energy store (i.e. recharging), it is up to them to manage their state of charge post-event. They may choose to do this using the ex-ante markets or solely through the Balancing Market, bearing in mind the risks and costs involved with either approach. We recommend extending the 'grace' period, which assumes full availability for scalar purposes after dispatch, to 8 hours – see Section 7.5.6.

We leave it to Service Provider's to manage their own participation in the Capacity Market. We note that, as it stands, energy-limited generators have the ability to apply a 'DecTol' with the effect of reducing or removing the requirement for Capacity Market Participation. Other units can use bid pricing to manage their participation, or may choose to seek a derogation from the RAs. We note that the 10 dispatch limit would make it difficult for units to fulfil obligations under the Capacity Market. We therefore recommend that the 10 dispatch limit could be increased or removed upon agreement by both parties.

7.5.3 Contract Size

A number of respondents expressed dissatisfaction with the contract size limit of 50 MW. Some noted that the timing of the Enduring Connections Process (ECP) meant that this decision came too late for it to be reflected in connection applications, bearing in mind that a previous proposal had suggested a 30 MW size. Another respondent felt the size limit was unnecessarily conservative.

We note that this issue has been discussed in our Recommendation Paper[3] on the DS3 Fixed Contracts arrangements published on 6 September 2018, as well as our clarification note[9] issued in April 2018. We also note that the decision on the contract size has already been made in SEM-18-049. As such we see no value in further discussion on this issue.

Two respondents felt that, for units with contracts less than 50 MW, any future Volume Capped procurement processes should allow them to purchase additional volumes up to the 50 MW limit. We will consider this request should any future procurement processes be required.

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[9] 'Clarification Note DS3 Volume Capped consultation proposed contract size limit' http://www.eirgridgroup.com/site-files/library/EirGrid/DS3-Volume-Capped-Consultation-Clarification-Document.pdf

7.5.4 Limitations on service usage

One participant suggested that the overall use of service from contracted providers should be limited, including responses to frequency events, as the frequency of usage will impact wear on the providing equipment. We note the relationship, however given that the sole purpose of these contracts is to secure a reliable level of system services we do not feel limiting the use of these services would provide value for the consumer.

7.5.5 Compensation for OFR

It was suggested by respondents that OFR is specifically compensated for, since there is a cost associated with providing it. We note however that providers should be aware of these costs, and bid offers can incorporate them and be adjusted accordingly. As such the only real implication on providers would be if the tender cap was not enough to accommodate these costs. We believe that the bid cap provides ample revenue opportunities for units to recover these costs, and do not see a need to increase the cap to account for FFR.

7.5.6 Availability Obligations Post-Response

Our previous Recommendation Paper[3] proposed a grace period after responding to a frequency event or dispatch instruction, which would not be counted against a unit's Availability Performance Scalar. This consisted of the full duration of the response time plus 90 minutes. While this proposal was not specifically mentioned in this consultation, it gave respondents their first opportunity to address the concept.

Many felt that it would be too short to allow a unit to manage its position efficiently, and could also force a unit to charge when energy prices are high. This would not be ideal from either a market or a System perspective.

We believe extending this period to 8 hours would not have a significant impact on a unit's ability to respond to system events as required under these arrangements. Events which would require an energy-limited unit to fully drain its energy resource are rare, and two in succession are rarer still.

We therefore recommend that**, for the sake of calculating a unit's Availability Performance Scalar, a unit will be assumed to be fully Available for all services from the beginning of an event up until the end of the first trading period to end 8 hours after the event, assuming the unit responded as required**. **This 8 hour period can be extended to account for a TSO action preventing recharge. This will also apply to responses to a dispatch instruction** as per Section 7.3**.**

7.5.7 Overlap with Regulated Arrangements

Respondents asked for confirmation as to how units contracted under these arrangements could provide services under the Regulated Arrangements. We can confirm that **units contracted under these arrangements can only contract under the Regulated**

Arrangements to provide those services not contracted in the Fixed Contract arrangements.

7.5.8 Further Consultation

Some respondents requested that further consultation takes place for some details of these arrangements. At this stage the TSOs have no plans to consult further on the Fixed Contracts arrangements. However we are committed to engaging with industry and as such we will hold a forum with industry to discuss the content of this document as well as to assist with the OJEU process in advance of the PQQ submission deadline.

8 Summary of Recommendations

In consideration of the consultation responses received, we have made several changes to the contract wording. The contracts themselves are being reviewed by our legal experts and will be published ahead of the tender process. However the key changes are listed below, as well as general responses to the issues raised.

- We feel the termination clauses in the contract are appropriate to safeguard the consumer. We have however made some modifications to the wording to increase flexibility on our option to terminate, and also have removed clause 9.1.
- Units must be compliant with the relevant Grid and Distribution Code(s), accounting for derogations that have been granted.
- Units above the de-minimis threshold (10 MW) must be compliant with SEM Trading & Settlement Code and participate in the Balancing Market.
- The 5-day Scheduled Outage period, which will not count against a provider's Availability Performance Scalar, can be split into 5 individual days. Unused days can be carried over into the subsequent year.
- The definitions in Schedule 1 have been reviewed and updated.
- For the purposes of calculating the Availability Performance Scalar, each Providing Unit will be assumed to have been fully available for the months prior to the unit's Target Go-Live date.
- We have extended the period allowed to comply with Reserve Trigger, Reserve Droop, Reserve Step Sizes and Reserve Step Triggers change requests to one week.
- We intend to allow for reserve provision through interruptible load from batteries and will ensure the contracts reflect this.
- Schedule 4 of the contract has been updated to provide more details on how units can meet the Performance Milestones.
- We are open to other forms of collateral for use as a bond, and will include viable options in the final contract.
- We have modified the requirements for the Performance Bond Issuer to be more reflective of the financial landscape on the island.
- We do not intend to use bid bonds for this process.
- The TSOs will publish more details on technical characteristics in sufficient time to allow these details be considered as part of a unit's tender submission. This includes:
    - Charging limitations
    - Ramping limitations
    - Compliance testing
    - Signalling requirements.

- We have removed the Schedule relating to Data Protection (Schedule 10)

With regard to the Protocol Document, a full review is taking place as part of the recently closed consultation specific to that document. However, we are making the following proposals:

- A flat monthly weighting will be used in calculation of the Availability Performance Scalar i.e. each of the previous 12 months will be weighted equally.
- A separate Protocol Document will be created for these arrangements
- We will not apply the Availability Discount Factor to units under these arrangements

With regards to issues outside of the contract contents and protocol document, we make the following recommendations:

- The service provider must be a party to the associated Connection Offer and/or Connection Agreement with the relevant System Operator (or party to the GASOA/DSUSOIA in the case of AGUs/DSUs);
- No more than 50 MW of contracted service provision shall be connected to the Transmission or Distribution Systems in such a manner that they would be deemed Electrically Contiguous.
- Only units contracted under these arrangements will be considered when assessing whether units are Electrically Contiguous.
- For non-firm connections, units will only receive payment for the availability of services that can be accommodated by the network. However the calculation of the Availability Performance Scalar will assume that all available services can be accommodated by the network.
- The value of the Temporal Scarcity Scalar will be fixed for the duration of these arrangements, and will be determined using a 2025 Plexos study.
- Tie-breaks in the bidding process will not be settled based on technical characteristics.
- Specific details regarding interactions with I-SEM arrangements are being developed and will be made clear to participants in advance of bid submission.

9 Next Steps

9.1 OJEU & PQQ notice

We aim to issue the OJEU notice for this procurement process by the 28th Feb, alongside details of the Pre-Qualification Questionnaire (PQQ). Successful completion of the PQQ will be a necessary criteria for entering the tender process.

9.2 Industry Forum

In order to assist prospective bidders with the procurement process, we will be holding a forum shortly after launch of the OJEU notice. The agenda will cover the contents of this paper, as well as the OJEU notice itself.

A Link to register for this forum will be provided nearer the time. Should there be any items you wish to be clarified in relation to this or any preceding Recommendation and Decision Papers please contact DS3@soni.ltd.uk or DS3@EirGrid.com. Please note, we do not guarantee all items will be addressed during the session.

9.3 Procurement timelines