ESO

Dynamic Response Services August 2024 Submission

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Response Release 3 Terms and Conditions

Dear Industry and Colleagues,

In accordance with Commission Regulation (EU) 2017/2195 of 23 November 2017 as converted into retained EU law (EBR), we are proposing to update our terms and conditions relating to balancing with respect to our Dynamic Response products (DM, DR and DC).

The proposed changes cover a range of updates to our services as well as providing additional clarity where this has been requested. A summary of key changes can be found in the 'Summary of changes and implementation' section of this document.

In accordance with EBR, we have now concluded consulting on these updates to those terms and conditions.

Annexed to this document is a table showing how we believe the updated terms and conditions (and corresponding parts of the GB codes) map across to the terms and conditions related to balancing described by Article 18 of EBR.

If you have any queries regarding this proposal, please contact box.futureofbalancingservices@nationalgrideso.com

Yours sincerely,

Jonathan Wisdom

Market Change Delivery Manager

ESO

Table of Contents

Introduction

The Response Service Terms and Response Procurement rules make up the terms and conditions for our Dynamic Response Services.[1]

Over the past year we engaged extensively with current and prospective service providers on these terms and conditions, including through Roadshows in London and Edinburgh as well as 1-1 meetings and a pre-consultation webinar. On 27 June 2024, we published a consultation setting out a range of proposed changes reflecting this engagement alongside our internal priorities.[2]

We received 16 responses to this consultation. The feedback included has helped shape the final submissions included in this document. On several topics we have engaged further with providers to understand their feedback and explore possible revisions.

This document is structured as follows:

- In the introduction, we set out our approach to the consultation and submission document
- In the 'Summary of changes and implementation' section, we set out at a high level the proposed changes, when we intend for them to come into effect, as well as monitoring and enforcement considerations.
- In the Submissions part of the document, we provide detail on each of the terms and conditions changes we are proposing to make as part of this consultation process. We summarise the feedback we received, set out how we have considered it including where it has led to changes in our proposed terms and conditions since the consultation, and sign-post the relevant parts of the Service Terms and Procurement Rules.

Overview of consultation feedback, and our response

For each submission (ie, proposed change), we provide a single overview of all the responses we received. In this overview, we highlight core themes while ensuring we represent all points and questions raised in responses. Where appropriate we have included and asked more quantitative questions which has provided an overall view of general support or opposition for specific changes. We then provide a single response in the 'Outcome following feedback' sub section, in which we address all points.

This represents a change from previous years where we would write a single response to each provider. We think this change allows us to better show how our consideration of feedback in the round has informed our decision-making. It also means each respondent only has to read one response, rather than 16, to understand our full view on responses on a particular issue. We recognise such an approach will not always be appropriate. For example, for Reserve, given this is a new service, the feedback has been more substantive and wider ranging. This makes efforts to provide a single overview of feedback and single response unwieldy and unhelpful; it is not feasible to summarise pages of feedback to a single question.

Submissions

We intend that each of the proposed changes may be considered by Ofgem as separate 'submissions' such that they can be reviewed and hence approved by Ofgem in isolation. While in practice we expect all submissions to be approved at the same time, this ensures any delays or concerns by Ofgem around an individual change does not result in an undue delay to other changes independent of that individual change.

We recognise the changes in the Availability proposal refer to changes made under the state of energy management proposals. We do not think the policy intent of each change is dependent on the other, but should Ofgem only approve one change, we would need to revise the referencing in the other.

Quick Reserve consultation

[1] Available at: https://www.nationalgrideso.com/industry-information/balancing-services/frequency-response-services/new-dynamic-services-dcdmdr#document-library
[2] Available at: https://www.nationalgrideso.com/industry-information/balancing-services/frequency-response-services/new-dynamic-services-dcdmdr#ebr-article-18-consultation-documents

In parallel to this submission, we are also submitting to Ofgem our new Quick Reserve Procurement Rules and Service Terms for approval. In that submission, we are seeking approval on a proposed change to the Response Services Procurement Rules that allows co-optimisation of response and reserve services.

Summary of changes and implementation

1. We propose removing the Maximum Ramp Rate. This change would offer participants more flexibility to adjust their baselines and stack value.
2. We propose to clarify the Service Terms around available / unavailable declarations. This includes when and how providers should declare available or unavailable. Reflecting feedback, we have made some additional amendments to the Service Terms to further remove ambiguity around the circumstances in which a provider shall declare a unit unavailable due to its state of energy.
3. We propose to clarify the Service Terms around state of energy rules during service delivery. Reflecting consultation feedback, we have revised the Service Terms to focus state of energy management rules around maintaining an acceptable state of energy rather than providing prescriptive energy recovery requirements. We consider these changes (i) make clearer what the requirement is, ie that providers must at all times protect their unit's state of energy, and (ii) make clearer how to comply with the requirement.
4. We propose the terms shall set out the percentage amounts of offered quantity that providers should reserve in their sell orders, such that they can manage state of energy effectively. At the moment, these quantities are included in guidance only.
5. We propose requiring providers to submit operational metering and operational baselines at all times, ie 'Background Submission Data Rules'. This change has a particular impact on non-BMUs as BMUs already must submit this data in accordance with the Grid Code.
6. We propose the introduction of a new tiered penalty regime which will address instances of non-compliance through a progressive series of actions and provides an opportunity for rectification. These changes allow us to provide more effective and proportionate deterrents against more material and repeated non-compliance.
7. We propose to be able to send instructions to service providers to disarm or re-arm outside of contracted service periods such that the instruction is effective from the start of the next contracted service period.
8. We propose to increase the Maximum Sell Size to 100MW for each of the dynamic response products.
9. We propose that for response units which are not energy limited, providers may choose to nominate a zero deadband.
10. We propose that where there is a transfer of response contract, ESO transfers the availability payments to the secondary provider.
11. We propose updates to 'Schedule 3 – Availability Payments' including clarifications and corrections to formulas.
12. We propose housekeeping changes that do not fundamentally change the terms and conditions but aim to promote clarity or consistency across terms.

We provide more detail on each in the Submissions section.

Implementation

Ofgem could approve our changes as soon October 2024, and we intend to publish new Service Terms and Procurement Rules as soon as feasible following approval, ie within a few working days. These documents would become the prevailing terms and conditions, published on our website.

In the meantime, we will continue to offer opportunities for providers and other stakeholders to engage with us on our proposals.

All of our changes will be in effect upon the publication of the new Service Terms and Procurement Rules apart from:

- **Tiered Penalty Reform** and
- **Zero Deadband for non-energy limited assets**

In both cases, we will publish a document setting out the date from which the change will come into effect. In the case of the new performance regime as part of our penalty reform package, we will provide at least 30 days' notice from the publication of such document to the change coming effect. For both penalties and Zero Deadband, the terms and conditions themselves provide that these provisions will not be in effect until the date specified by ESO by notice.

For three other changes, we will provide a grace period in which we consider the terms in effect but will not enforce non-compliance. This reflects provider feedback on implementation and ensuring rules are properly understood. In these cases, we offer an indicative timeline for when we will commence enforcement, but in each case, we will offer notice in writing. We wish to provide flexibility on the effective date to account for any lessons learned during this grace period.

- **State of energy management Rules**:
    - Anticipated enforcement date: three months from publication of terms
    - Notice: 30 days prior notice in writing
- **Requiring operational metering and operational baselines at all times**
    - Anticipated enforcement date: at least six months from publication of terms.
    - Notice: 30 days prior notice in writing
- **Disarming and re-arming instructions outside contracted service periods**
    - Anticipated enforcement date: six months from publication of terms.
    - Notice: 30 days prior notice in writing

Submissions

1. Removal of Maximum Ramp Rate

We propose removing the Maximum Ramp Rate. This change would offer participants more flexibility to adjust their baselines and stack value. We received strong support for this proposal.

We intend to progress with this proposal as set out in the consultation, with no amendments.

Response overview

16 out of 16 respondents agreed with the proposal to remove the Maximum Ramp Rate. Some expanded saying they considered this could improve participation, creating a fairer market and lower costs.

System security

One respondent, while agreeing, highlighted the importance of the ESO monitoring the effect of the change and being prepared to act should there appear to be a risk to system operability.

Impact on different technology types

One respondent, while agreeing, recognised this would be beneficial to battery providers, and suggested we should do more to encourage other types of participants.

Implementation and enforcement

Five respondents referred to the need for clarity around, and sufficiency of, implementation timelines; one respondent suggested six weeks before implementation, while another said two weeks would be sufficient. One respondent said timelines and certainty around existing rules could have been communicated to market more clearly; inconsistency in messaging can lead to wasted resources preparing for rule changes.

Outcome following feedback

We propose to remove the Maximum Ramp Rate in accordance with our consultation proposal. We recognise respondents strongly support this proposal.

System security

As set out in our consultation we will monitor the effect of removing the Maximum Ramp Rate. In parallel we are carrying out a wider review of the system impacts of fast ramping energy resources.

Impact on different technology types

We recognise this change benefits energy limited assets. However, it will mean aligning requirements with that of non-energy limited assets. Meanwhile, we are taking action to promote participation from other types of participants, including through our other proposed change in this submission around offering a 'Zero Deadband' for non-energy limited assets.

Implementation and enforcement

We recognise the importance of clarity around implementation timelines and our approach to enforcement. We understand the issues raised by a respondent with respect to our previous communication around enforcement. As such we will make clear the timelines for this change coming into effect and our current approach to enforcement.

We intend that the removal of Maximum Ramp Rate shall be in effect as soon as the document is published subject to and following Ofgem approval, which we expect to be late October or early November. Before this date we do not intend to enforce the prevailing Maximum Ramp Rate. We understand the case to provide a time to allow for provider IT changes before rule changes, but in this instance we consider that because we have previously communicated we will not enforce the Maximum Ramp Rate, such as in our '2024 Roadshow slides',[3] we should seek to bring the terms in line with practice as soon as possible.

[3] Available in Market Engagement 2024 section of our Dynamic Services Document Library https://www.nationalgrideso.com/industry-information/balancing-services/frequency-response-services/new-dynamic-services-dcdmdr#document-library

More broadly, we hope that the ‘Summary and Implementation’ section will give stakeholders clarity of when rules come into effect and our intentions around enforcement.

Updated Service Terms

We propose the following changes to bring this change into effect:

- the removal of clauses 6.8 and 6.9 from the Service Terms
- Removal of the definition of “Maximum Ramp Rate” from Schedule 1 - Defined Terms
- Removal of “Maximum Ramp Rate for Baselines” from Schedule 2 – Capability Data Tables.

2. Availability description

We propose to clarify the Service Terms around available / unavailable declarations. This includes when and how providers should declare available or unavailable.

Reflecting feedback, we have made some additional amendments to the Service Terms to further remove ambiguity around the circumstances in which a provider shall declare a unit unavailable due to its state of energy.

Response overview

Of the 16 respondents that answered this question, 13 agreed with this change or had no further comments. Three respondents did not specify whether they agreed or not but raised questions or concerns about the proposal.

Partial availability

Two respondents would like us to reconsider our position on partial availability.

Contracted Response Energy Volume (REV) and state of energy requirements throughout service

Four respondents highlighted that the requirement to have the contracted REV at the beginning of a service period can be challenging when they have been contracted for another service or have been issued a BOA (bid/offer acceptance) immediately prior.

One provider suggested the same measurement used to identify compliance with the state of energy rules should be applied at every point in a contract, including EFA/contract boundaries. They are concerned that if units are only to maintain state of energy at REV at the start of service, then a unit acting in bad faith trade into the volume immediately afterward the start of service and not be penalised.

One provider stated a clarification would also be useful on when ESO will take the state of energy measurements.

Resubmission of availability and state of energy

One provider said it would be good to understand how long providers have to resubmit actual availability in cases of an asset under-performing or having issues.

Two providers asked if a unit is declared as unavailable due to state of energy depletion which has been managed in accordance with the service terms then how does ESO intend to assess this for the purposes of availability payment given that there are no reason codes associated with the unavailability declaration.

Outcome following feedback

We have proposed further clarifications to the service terms following feedback received from industry during the consultation process. We have had in depth follow up calls with several providers who raised concerns on the clarity of these rules in order to understand where further clarity is needed. Reflecting this feedback. we have made several clarifications to 5.2 to 5.7 of the Service Terms. These changes make it more explicit that providers shall only declare unavailability with respect to state of energy if they have complied with state of energy management rules and have delivered until becoming unable to deliver the product any further.

Partial availability

We have not previously provided for partial availability, and we are not now proposing to allow it. This consultation did not include any change to that policy. We recognise some respondents would like the option of partial availability where a unit has less than the contracted quantity. We do not allow this due to material gaming risks, ie that providers will misuse that option to repurpose some of the capacity for more attractive commercial opportunities closer to real time. Moreover, a key principle of the response services is the certainty that they will be available when required. We will continue to monitor and evaluate the case for partial availability and whether future design changes could make it feasible to include.

Contracted Response Energy Volume (REV) and state of energy requirements throughout service

These points mostly relate to state of energy management rules and so we cover the points raised on this issue in full in 'Outcome following feedback' section of our 'State of energy management (SoE) rule – During service delivery' submission. Specifically in the subsections 'Requirements around protecting state of energy' and 'SoE management across successive service periods.'

As these points relate to availability, we wish to make clear that not having Contracted Response Energy Volume at the start of the EFA block is not cause to declare unavailable. Although, should you fail to have Contracted Response Energy Volume at the start of the EFA block it will be cause for penalisation. State of energy should not be cause for declaring unavailable unless the asset has followed the State of energy Management Rules but finally becomes unable to deliver the contracted quantity.

Resubmission of availability and state of energy

Providers should declare unavailable as soon as they are aware they can no longer deliver, whether due to technical unavailability or due to depletion of state of energy such that they can deliver no more (but have complied with State of Energy Management rules). Providers still have until the 5th of the following month to update any performance monitoring data if needs be. Performance data should match re-declarations made in real time, and it is not permitted for providers to re-declare unavailable due to poor performance. 'Strategic unavailability' – as in clause 15A of the Service Terms – is a serious breach which can result in severe penalties.

If a provider has to declare unavailable due to its state of energy becoming depleted due to delivering a response contract, the provider should declare unavailable through the usual means as soon as possible. The state of energy monitoring that takes place after the event will ensure that no penalties are incurred so long as the state of energy management rules have been followed.

We understand the need for additional transparency to demonstrate how state of energy levels will be monitored throughout service delivery. We will engage with industry on updated guidance to ensure that expectations of how these rules work in practice and how they are monitored is clearly understood.

Revised Service Terms Text

We propose the following changes to the Service Terms to bring this into effect:

- Changes section 5 Service Availability: paragraphs 5.1, 5.2, 5.3, 5.6, 5.7 and 5.9

3. State of energy management (SoE) rules – During service delivery

We propose to clarify the Service Terms around state of energy rules during service delivery.

Reflecting consultation feedback, we have revised the Service Terms to focus state of energy management rules around maintaining an acceptable level of SoE rather than providing prescriptive energy recovery requirements. We consider these changes (i) make clearer what the requirement is, ie that providers must at all times protect their unit's state of energy, and (ii) make clearer how to comply with the requirement.

We intend to provide a grace period of three months (from the publication of the new Service Terms), in which we would monitor but not enforce these requirements. We will provide 30-days' notice before enforcement.

Response overview

Of the 15 respondents to this question, nine said they were in favour of this proposal or had no specific comments. Five respondents provided a response but did not specify in that response whether they agreed or

disagreed with our proposal. Overall, eight respondents, including those who agreed, asked additional clarifying questions.

This topic generated the most substantive feedback across the consultation. While there was broad agreement about the intent and a view that the consultation terms represented an improvement, respondents highlighted areas of ambiguity in the requirements and concerns around compliance and enforcement.

Requirements around protecting state of energy

A respondent highlighted there should be a clear statement in the opening paragraph of the SoE management guidelines c6.11 a clause to the effect of 'Response Units should not degrade their response energy volume for commercial reasons' to create a fairer playing ground, reduce costs, and improve system security. They added, service Terms 6.11(iv) could be bolstered by adding a clause to the effect of 'your PN should never reflect a counter intuitive way of getting back to the correct SoE, in line with good industry practice.'

Recovery requirements

One respondent asked how providers should determine whether and how to adjust baselines at the next available opportunity to recover SoE. They noted that SoE may change further during the time between the start of a Settlement Period at which point it makes the assessment and the soonest time for which it can adjust its baseline (which will be ~90 minutes accounting for gate closure). It asked whether the provider should consider the effect of anticipated service delivery on SoE when determining whether and how to adjust baselines.

One provider states it should be clarified that energy recovery through BM actions should not be possible.

Ambiguity around 'acceptable range'

One respondent asked for a definition of 'acceptable range'. They suggested it is not clear whether it is required to recover a minimum of 20% per Settlement Period or if the aim to return to the full contracted REV, and it should specify whether this is net of any volume already provided.

Monitoring of SoE management

Several respondents asked how we will effectively monitor SoE, including with regard to what information we will collect, how we will account for round trip efficiencies and battery degradation.

There were responses to our availability question that we are considering as part of our SoE management rules. Four respondents to our question on this highlighted the requirement to have the contracted REV at the beginning of a service period can be challenging when they have been contracted for another service immediately prior, or have been issued a BOA shortly before. Two respondents asked for clarification around when compliance with state of energy requirements is assessed; one expressed concern that if we only measure compliance at the start of service then providers may deplete it immediately after.

SoE management across successive service periods

Three respondents questioned how we will consider SoE across contiguous and adjacent service periods. Specifically, they asked for clarity around how we'll account for cases where the SoE at the start of a service period is degraded by service delivery in the preceding service period.

Another respondent said there is ambiguity around 'continuous delivery' of a response product, this respondent has requested the arithmetic that will be completed to allow the concession in 6.11.v (ie to not deem a provider unavailable where there has been continuous delivery).

Housekeeping

A typographical error was noted by one respondent, under clause 6.11, which references 6.8 (which is no longer used).

Outcome following feedback

Proposals on state of energy management rules generated the most substantive feedback across the topics in this consultation. We have reflected on this input and proposed new service terms that we think address the core themes around fairness, clarity of requirement, and transparency of monitoring. We considered that to address these themes in the round, we should rethink how we express state of energy management rules rather than just trying to tweak current wording. This has resulted in us simplifying the terms instead of adding more detail. First, we set out the proposed revisions to the rules then set out how this addresses the feedback we received in the consultation.

Revisions since consultation

The prevailing SoE management rules are expressed in terms of energy recovery requirements. That is, rules require that when a unit's SoE falls below its Contracted Response Energy Volume (CREV), it must adjust its baseline at the soonest opportunity by either the Energy Recovery volume (defined as 20% of the CREV) or a smaller amount of MWh if that is sufficient to bring its SoE back to CREV. We recognise some providers found these rules unclear with regard to how other energy actions should be accounted for when taking actions to recover energy. For example, service delivery could deplete or – where a unit has both a high and low contract - recover a unit's SoE, as could other scheduled import and export actions and BOA instructions.

We propose revising terms to express SoE management rules in terms of an allowable range of SoE. Rather than suggest requirements and monitoring are on the basis of how much energy is deliberately recovered per settlement period, we instead set out that units' compliance will be assessed on the basis of maintaining its SoE within an allowed range, representing capability to import or export MWh in line with the contract. SoE is already submitted by providers as part of performance monitoring data. This represents a simpler approach to compliance, and more clearly offers providers flexibility in how they manage SoE. Crucially, it aligns the terms more closely to the outcome we are trying to achieve, ie, that units must maintain at least a minimum capability to deliver the service, rather than focusing on the behaviours and actions of the provider.

Our revised terms define the allowable range as an SoE that enables a unit to deliver the 'Minimum SoE Requirement' for each auction product. For example, for a unit which has a high frequency contract and low frequency contract, it must be capable of importing a minimum amount of MWh and exporting a minimum amount of MWh at all times.

The Minimum SoE Requirement is calculated for the start of each Settlement Period and shall:

- At the start of the contracted service period be equal to the CREV
- Decrease commensurate with service activation in the previous Settlement Period
- Increase commensurate with the 'Energy Recovery Adjustment Volume' calculated for the previous Settlement Period, such that the Minimum SoE Requirement moves back towards the CREV

Service activation represents the amount of energy delivered in accordance with the frequency conditions and the delivery profile of the relevant auction product(s). At the start of each Settlement Period (SP*n*), the Energy Recovery Adjustment Volume is calculated for SP*n*+3. It is calculated as the lower of

(i) twenty percent (20%) of Contracted Response Energy Volume and

(ii) the difference between the CREV and the Minimum State of Energy Requirement at the start of SP*n,* minus aggregate ERAVs calculated for SP*n*, SP*n*+1, and SP*n*+2.

This calculation reflects the energy recovery rules in the prevailing terms. There are two key differences. First, we are setting out this calculation explicitly. Consultation respondents indicated the current rules were not clear with regard to how recovery volume requirements are calculated, for example, how we account for energy actions (including subsequent service delivery and previously scheduled energy recovery) occurring between a provider calculating its energy recovery requirement and the soonest opportunity at which energy recovery actions can be delivered. By setting out this calculation, we think we remove this ambiguity. Second, the Energy Recovery Adjustment Volume is applicable to the Minimum SoE Requirement, rather than to the Response Unit's SoE. The unit must maintain its SoE above the Minimum SoE Requirement, but has more flexibility with regard to how it manages its SoE to stay within the allowable range.

For example, if a unit's CREV on a low contract was 10MWh, then the Minimum SoE Requirement would be 10MWh at the first Settlement Period of the service period (SP1). If in SP1, there were low frequency conditions that created an activation volume of 3MWh, the Minimum SoE Requirement for SP2 would be 7MWh (10MWh – 3MWh). At the start of SP2, the ERAV calculation is made for SP5 as the lower of:

(iii) twenty percent (20%) of CREV
= 2MWh

(iv) the difference between the CREV and the Minimum SoE Requirement at SP2, minus aggregate ERAVs calculated for SP2, SP3, and SP4
= 3MWh – 0MWh (because there is no ERAV for SP2, SP3 and SP4)
= 3MWh

The ERAV for SP5 therefore is 2MWh, and thus the Minimum State of Energy Requirement increases by 2MWh for the start of SP6. At the start of SP3, we make the ERAV calculation for SP6.

Figure 1, shows how the Minimum SoE Requirement on a Low Frequency contract could vary throughout the contracted service period using the scenario described above. We overlay the SoE of reference unit managing its SoE within the allowable range. This is to highlight why at the start of a SP we make the ERAV calculation for SPn+3, and it is applicable in SPn+4. If at the start of SP2, a unit recognised its SoE is insufficient, the soonest it would be able to adjust its baseline to recover energy, accounting for gate closure, is SP5 (ie SP*n*+3). It should then have recovered energy by the start of SP6 (ie SP*n*+4).

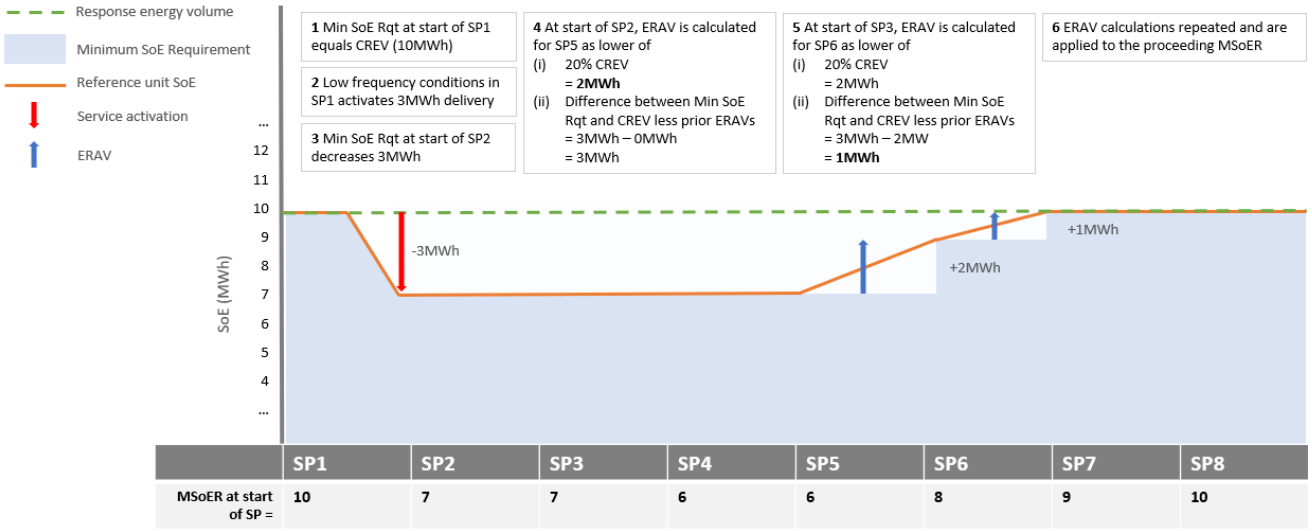

Figure 1 Minimum SoE Requirement varies throughout service

Where units have stacked dynamic services contracts, the Minimum SoE Requirement will reflect the cumulative CREV of its contracts at the start of the service period and then be depleted by service activation across all contracts in the same direction.

Ultimately, our prevailing rules, those which we consulted on, and now our revised rules all provide for the same minimum state of energy which is allowed to be maintained throughout a service period. The difference is that rather than requiring units to recover a set amount, we are requiring them to stay within an allowable range.

Figure 2 shows how this can have different implications for SoE management approaches. In this figure, we include Unit 2, which has a CREV of 10MWh, but starts the service period with its SoE at 12MWh, ie 2MWh above its CREV. Service activation in SP1 means that at the start of SP2 the unit has an SoE lower than CREV. However, it does not need to recover energy in SP5 because the additional headroom it started with means its SoE is anticipated to be above the Minimum SoE Requirement at the start of SP6.

These revisions therefore offer providers more flexibility in how they manage their SoE, for example by – per the scenario in figure 2 – starting service with more headroom upfront so that they have to recover less later in the period. All the while, we maintain the same minimum SoE capability that can be expected from any unit in a service period.

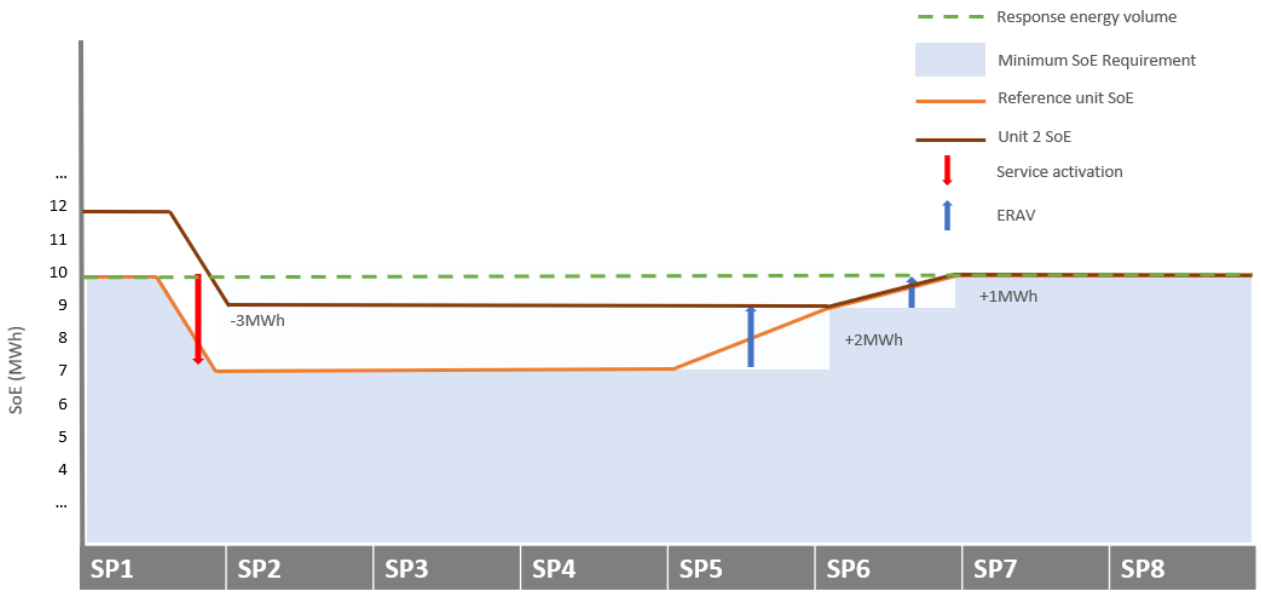

Figure 2 Alternative approaches to compliant SoE management with revised rules. Unit 2, whose SoE is below REV at SP2, does not need to adjust its baseline at the soonest opportunity to remain compliant with revised SoE management rules.

We intend to provide further guidance on this before the changes to service terms go live. We also propose that there shall be a period of monitoring before we take enforcement action. For the avoidance of doubt, any provider acting in a way compliant with the current service terms would necessarily be compliant with the revised service terms.

We have already walked through this approach with several providers who have welcomed the changes, are positive about the flexibility it offers and clarity it provides around monitoring. We continue to offer 1-1s to any provider who wishes to discuss the revised service terms in this submission, and we are planning other events to explain the changes.

As set out in the 'Summary of changes and implementation' section, we intend to provide a grace period of three months in which we will monitor compliance with these rules, engage with providers on compliance, but not enforce. This provides time for providers to familiarise themselves with the rules and understand current compliance levels.

How proposed revisions address consultation feedback

Requirements around protecting state of energy

Our revisions clearly provide that units must protect state of energy at all times such that it is never below the Minimum SoE Requirement. This will explicitly prohibit providers from degrading SoE such that units have less SoE than contracted response energy volume less any activation volumes (and plus recovery volumes). We held a 1-1 with the respondent who expressed this concern to set out how we consider our revisions address it; the respondent was very supportive of our proposed revisions.

Recovery requirements

We recognise the concerns that the prevailing rules – and the rules we consulted on – left grey areas with regard to how energy recovery requirements must be met, for example, how service delivery or BM actions might impact how much energy must be recovered per settlement period. We consider our revised rules are much clearer in this respect. So long as the unit's SoE is above the Minimum SoE Requirement, it shall be considered compliant. This gives units freedom to manage and recover SoE in more efficient ways. BM actions could theoretically be used to manage SoE, but providers must always have regard to the prevailing guidance on stacking of the dynamic services with BOAs[4].

[4] Available in Appendix 1 of the following document:
https://www.nationalgrideso.com/document/300231/download

Meanwhile, expressing the Energy Recovery Adjustment Volume formulaically (replacing previous language around recovering at the soonest opportunity) adds clarity to how this volume is defined.

Ambiguity around 'acceptable range'

Our revised terms set out a new and clear definition of an allowable range of SoE, which enables, for each relevant Auction Product, delivery of at least the applicable Minimum SoE Requirement. In turn, we define the Minimum SoE Requirement as the contracted response energy volume net of service delivery and accounting for Energy Recovery Adjustment Volumes. This addresses uncertainty around the previous terms which some providers thought were ambiguous with regard to the definition of the acceptable range and whether being outside the range provided for a penalty.

Monitoring of SoE management

We intend to monitor SoE management using performance monitoring data which includes a unit's SoE. We consider this is simpler than monitoring how much energy is recovered in a settlement period, including because we do not have to delineate recovery actions from other energy actions.

We intend to monitor SoE throughout a contracted service period, ie, not just at the start of the service period. We intend to monitor at the boundary of settlement periods so that we capture the net effects of activation, recovery, or other energy actions in each settlement period.

SoE management across successive service periods

We recognise that service delivery at the end of one contracted period could affect the SoE at the start of the following contracted service period. Generally, we consider providers should account for SoE requirements in successive contracted service periods at the bid stage and then during service delivery adjust baselines to maintain SoE within the allowable range of the first service period while preparing for the second. Nonetheless, we understand that stacking of bids and substantive service delivery can create challenges in managing SoE across this boundary. We propose to work with providers to understand the likelihood of these scenarios emerging, possible mitigating actions providers could take, and scenarios where there is scope for grace periods or other performance monitoring approaches to account for such scenarios, eg where there has been extended periods or multiple concurrent periods of high or low system frequency as provided for by 6.11 vi. Our proposed three month grace period will provide time to monitor how frequently and often this issue may materialise, and how far providers can mitigate this risk.

Housekeeping

We have addressed the typo.

Revised Service Terms

We propose the following changes in the Service Terms to bring this change into effect:

- Changes to section 6: Service Delivery including: 6.11, 6.12, 6.13
- Addition of the following definitions in Schedule 1 – Defined Terms:
    - "Energy Recovery Adjustment Volume"
    - "Minimum State of Energy Requirement"

4. SoE rule – Submitting sell orders

We propose the Procurement Rules shall set out the percentage amounts of offered quantity that providers should reserve in their sell orders, such that they can manage state of energy effectively. At the moment, these quantities are included in guidance only.

We intend to progress with this proposal as set out in the consultation, with no amendments.

Response overview

Of the 13 respondents who answered this question all respondents were in favour of the proposal to include the requirement to reserve capacity at the stage of submitting sell orders in the Procurement Rules rather than just include it in guidance. Of these 13 responses common themes that arose were that this proposal will

improve standardisation and fairness across the market and the rules are more explicitly clear than they have been before.

Percentage values

Two respondents questioned the percentage values, with one expressing concern that these numbers show a preference for two hour duration batteries.

Additional guidance

One respondent has requested some additional guidance and justification of these percentages. This included requesting a definition of the word 'reserve'.

Outcome following feedback

We propose to include in the Procurement Rules minimum percentages of offered quantity that providers should reserve in their sell orders. These quantity percentages are included in guidance at the moment; we consider moving into the Procurement Rules will clarify requirements that units must have sufficient capability to manage SoE.

Percentage values

The values give us assurance that the response procured will be available if needed. These percentages are to reflect that a unit should be capable of recovering at least 20% of contracted response energy volume in a single settlement period.

An example to highlight how these numbers are calculated:

> If you have a 20MW DC contract, then your contracted response energy volume (REV) is 5MWh.
> A unit should be capable of recovering 20% of REV, ie 1MWh, in one Settlement Period.
> To recover 1MWh in in one Settlement Period you would need to charge at 2MW for 30 minutes.
> So the extra capacity you need to reserve at the bidding stage is 2MW which is equal to 10% of your contracted 20MW.

The same calculations can be used for all three of the services to indicate the relevant percentage requirement.

We do not consider this advantages or disadvantages longer duration batteries because it relates to the capacity not duration of the battery, but we will keep these numbers under review, and we welcome further discussion on this matter.

Additional guidance

We recognise the importance of clarity in understanding how this rule works in practice and we will publish more worked examples alongside further justification of these numbers in the provider guidance document.

By the word 'reserve,' we mean unit capacity that providers should exclude from sell orders, ie an additional quantity that their battery is capable of delivering. For example, if a battery is capable of delivering of 20MW, then to bid 18MW would be to 'reserve' 2MW.

Revised Procurement Rules

We propose the following changes to the Procurement Rules to bring this into effect:

- Changes to paragraph 8.3.3
- Addition of the following definitions in Schedule 1 – Defined Terms
    - "Maximum Unit Registered Capacity"
    - "Reserved Capacity"
- Moved definition of "Stacking" or "Stacked" from Defined Terms in the Service Terms to Schedule 1 - Defined Terms in the Procurement Rules.

5. Requiring operational metering and operational baselines at all times

We propose requiring providers to submit operational metering and operational baselines at all times, ie 'Background Submission Data Rules'. This change has a particular impact on Non-BMUs as BMUs already must submit this data in accordance with the Grid Code.

We intend to progress with this proposal as set out in the consultation, with no amendments.

We will provide 30 days' notice prior to this change being enforced. We welcome submission of this data prior to enforcement however, as we already have the capability to receive and process this data for operational benefits.

Response overview

Of the 15 respondents who answered the question, five respondents said they agreed with the proposal and three respondents said they disagreed. Seven respondents did not explicitly say whether they agreed, though two of those indicated concern.

Operational case

There were mixed views on the operational case; three respondents (including two who disagreed with the proposal) said they agreed there was a system operability case for the data, while three respondents said they could not see the operational case.

Three respondents said Dynamic Services contracts are not the appropriate vehicle for introducing such an operational requirement, including because it applies outside of contracted service and does not relate to a providers capability to deliver the service. One suggested such a requirement could be more appropriately delivered through the Distributed Energy Resource (DER) Visibility programme.

Impact on non-BM participation

A common theme was burden on participants with non-BMUs, with seven respondents expressing concern that these units would be disproportionately affected. Respondents highlighted that there are different cost drivers for non-BM providers and so additional requirements would add some costs of the BM without the benefits. Similarly, a couple of respondents raised concern that this would unlevel the playing field across non-BMUs outside of contracted service, with those who are registered response providers having additional responsibilities.

On wording of the proposed service terms, several respondents asked for clarity around whether ESO intends to enforce adherence to baseline submissions and thereby preclude NIV chasing by prohibiting scheduling post-gate closure.

Implementation

Regarding implementation, respondents said the ESO should give a clear and sufficient timeline before enforcement. No respondents suggested any technical challenges or material costs. One respondent suggested seven days would be sufficient notice to implement changes, while another said it would require four to five months for a unit – which we discussed in a follow up conversation and understood it was due to particular circumstances around that unit. One respondent was not comfortable with the wording that ESO will make "endeavours" to provide calculation of submission rates and suggested that calculations should be carried out and communicated to providers twice daily - once in the morning and once shortly before the auction, the latter of which would determine whether the submission rate was met.

Outcome following feedback

We intend to introduce this requirement in accordance with the consultation proposal.

Operational case

In response to a couple of comments in the responses around the case for change, we wish to provide some more detail about why we are introducing this measure. First, the lack of operational metering data makes forecasting more challenging and can exacerbate forecasting errors. Demand forecasting reflects historic BM

output. Non-BMU output therefore represents supressed demand but does not behave like demand. And each 1MW generation increase is represented as a 1MW demand decrease, giving a 2MW error in our calculation of demand. This undermines forecasting accuracy. Because non-BMU metering data from response participants is noncontinuous – only received during contracted periods – we cannot currently use it in our forecast models effectively. Access to the operational metering data at all times can improve our demand forecasting tools which the control room use to balance supply and demand. Second, receiving baselines only during contracted service means visualisations of step changes as units come in and out of service, undermining usefulness as a tool to indicate system position. For example, this visibility of scheduled non-BMU output could reduce the incidence of balancing engineers preparing for an anticipated demand change that ultimately does not appear to materialise because it is met by non-BM generation. Access to additional non-BMU baselines can help mitigate this risk in some cases, reducing costs of balancing actions.

We consider this requirement for Dynamic Services providers represents a proportionate, targeted step along a journey towards wider visibility of distributed energy resources, allowing us to bring forward benefits. Participants already have the capability to record and submit the data, by virtue of them doing so during contracted service. We have the capability to receive, process, and use the data to improve forecasting and situational awareness. Meanwhile, because these units are price sensitive and flexible, they are disproportionately likely to drive forecasting errors and situational awareness challenges compared to other distributed energy resources (DER).

Impact on non-BM participation

We do not intend for nor expect this measure to represent a barrier to participation for non-BM participating units. Some providers were specifically concerned about the requirement to submit baselines would prohibit units from making scheduling changes after gate closure, removing revenue opportunities (such as NIV chasing associated with scheduling closer to real-time). While we expect baselines to be submitted in accordance with good industry practice, ie representing a provider's best estimate of its units' output at the time, the proposed service terms do not include provision to enforce compliance with the baseline and thus we will not penalise units for scheduling decisions made after gate closure. The requirement and enforcement is around the submission of the data. We recognise that some providers may make scheduling changes after gate closure which reduces our ability to rely on the validity of baselines hour ahead. Nonetheless, we consider that some visibility is an improvement and a material step towards improved DER visibility that will be progressed further over time by other programmes of work.

Since receiving responses to our consultation, we have had further engagement with several respondents on this matter, in which we set out the additional detail that is captured in this 'Outcome following feedback' section. The outcome of this engagement has been positive and we consider it has addressed and mitigated the concerns raised by providers; principally, by clarifying the proposed terms do not provide for enforcing adherence to background submission of baselines.

Implementation

Per the proposal, we do not intend to enforce this requirement until a date that we specify in a document that we will publish. We expect this will be at least 6 months after the publication of the Service Terms but we will provide 30 days' notice in writing to industry prior to go live. In that document, we will set out in more detail how and when we will carry out and communicate the calculation of the submission rate for the assessment period. For avoidance of doubt, our provision to make "best endeavours" to provide calculation of submission rates refers to our communication to the provider of submission rates in advance of any action taken due to insufficient submission rates; it does not refer to the calculation itself. We will include further detail and guidance around this requirement and communication processes in the document we will publish.

Revised Procurement Rules

We propose to make the following changes to the Procurement Rules to bring this into effect:

- Addition of paragraph 6.8
- Addition of section 6A
- Addition of paragraph 8.10
- Addition of the following definitions in Schedule 1 – Defined Terms:
    - "Assessment Period"
    - "Background Submission Data"

- "Background Submission Data Commencement Notice"
- "Background Submission Data Rules"
- "First Assessment Period"
- "Required Threshold"

6. Penalty Reform and Unit Suspension

We propose the introduction of a new penalty regime which will address instances of non-compliance through a progressive series of actions and provides an opportunity for rectification. These changes allow us to provide more effective and proportionate deterrents against more material and repeated non-compliance.

Reflecting consultation feedback, we have added some additional text to paragraph 15A.3 which clarifies how we intend to count defaults.

The tiered penalties regime will not come into effect alongside the publication of the Service Terms, this will come into effect at a later date. We will provide industry with 30 days written notice prior to the tiered penalties regime go live.

Response overview

Of the 15 respondents who answered the question, 11 respondents agreed with the proposal to introduce a tiered penalty regime, three respondents did not explicitly say whether they agreed, while one respondent was not wholly supportive.

Transparent decision-making and account manager discretion

Two respondents raised questions about the monitoring mechanism, enforcement, and consistency and fairness of account manager decision-making.

Reporting

Three respondents emphasised the need for transparency in monitoring, assessment, and application of penalties. They suggest making penalty information public to discourage non-compliance and encourage equal service quality, and one advocated for clear communication through the SMP. One suggested the release of preliminary settlement results, and early information on non-compliance findings.

One respondent raised concerns on lack of transparency in data sharing, particularly regarding participant REV, and the need for industry self-policing. They suggested exploring retrospective penalties, and leveraging historic non-compliance evidence, suggesting options such as clawing back availability payments or charging ABSVD.

Clarifications and guidance

Two respondents requested more detailed outlines and examples of breaches for BMUs and non-BMUs. They emphasised the importance of sharing and consulting on guidance for applying the tiered penalty regime and suggested a preliminary assessment of penalties to resolve any ambiguities.

One respondent has concerns about the clarity of Section 15 of the Service Terms. They are unsure about the duration over which defaults will be monitored, how a service provider would be suspended, and how multiple units of a provider would be evaluated for suspension. They also mention the need for clarification on performance monitoring and the handling of underperforming assets.

Another provider asked for more clarity on the SoE recovery rules and suggests that the ESO clarifies that it is not a breach where the contracted unit is issued with BOAs preventing SoE recovery.

Further concerns about the impact on battery asset's offering into the BM while delivering ancillary services were raised by another respondent. They suggest that if penalised for pricing ancillary services at the opportunity cost, providers will need to reassess their pricing strategy and recommend a reset of the tiered system after a suitable amount of time.

Rationale and intent

Two respondents questioned the rationale behind the severity of penalties and requested clarity on proposed penalty tier and terminology used in the service terms 15A.3 to understand the frequency of defaults. One

raised a question about the clarity of Section 15A.8, particularly regarding whether inaccuracies or discrepancies can be considered defaults even when no default has occurred.

One respondent expressed concerns about potential disincentivizing of smaller assets, additional barriers, and sought clarity on default counting, whether corrected data would still be considered a default.

Appeals

One respondent suggested arrangements for appeals where appropriate.

Outcome following feedback

We propose to introduce a tiered penalty regime in accordance with our consultation proposal. We acknowledge that the majority of respondents support this proposal. This change will ensure a fairer, more transparent market, where instances of non-compliance are penalised accordingly. Following the close of the consultation we engaged with respondents further in order to better understand areas of concern and ambiguity to ensure that the rules and corresponding guidance are understood.

Transparent decision-making and account manager discretion

We recognise the significance of this change for providers and that greater transparency into our penalisation methodologies will better support providers to be compliant. We will publish additional guidance, with further examples, and, where possible, we will outline how we monitor potential breaches, though we will need to be mindful of any information that could incentivise gaming.

While most checks can be automated, there are cases where this is not appropriate. For example, we must account for non-compliance where specific circumstances, intent, or other context is relevant. In such situations, a discussion with the account managers takes place first in order to understand provider behaviour. With regard to the seriousness of the default taking into account harm, intent and the compliance record of the service provider (as more fully set out in the service terms in paragraph 15A.11) we may escalate directly to a higher penalty tier. We will ensure all account managers have Standard Operating Procedures to ensure standardisation across providers and their account managers.

Reporting

We currently cannot share a report of a running number of breaches with providers, this is something that we will investigate in future iterations. If providers are worried about any potential breaches, they can contact their account manager and they will be able to update more regularly than waiting on the monthly statement. We do not currently intend to make non-compliance reports public, this is something that we can consider for future iterations, subject to further industry engagement.

We acknowledge the raised concerns regarding non-compliance of providers in the past and the request for the implementation of retrospective penalties, particularly around state of energy management. We have given this thorough consideration. On balance we consider that given we are proposing clarifications to state of energy management rules, it is inappropriate in this instance to penalise historic non-compliance.

Clarifications and guidance

To address the queries raised by respondents, we will provide additional transparency through guidance which will include detailed examples to highlight the penalties process. We will engage with industry to ensure that this guidance on how penalties will be applied as well as the criteria for each breach is fully understood.

The penalties regime will be applied over a 365-day rolling window. Defaults will be removed from their account allowing them to move back down the tiers when behaviours change over time.

Over the course of one Settlement Period (SP), a unit can default for each of the stated checks. This will result in being deemed unavailable for one SP in tier 1 and will result in the relevant number of defaults to the next tier. The same applies in Tier 2 although the financial penalty will be deemed unavailable for the EFA block rather than the SP. We have added some additional text to paragraph 15A.3 which clarifies this point.

Regarding SoE and stacking with BOAs, we have clarified the SoE management rules in the service terms and provided robust guidance which will address the concerns raised on SoE. For more information on the

relationship between Dynamic Response and BM, please refer to our updated Stacking BOAs with Frequency Response guidance[5].

For data correction or resubmission, only the Performance data can be resubmitted. If the Performance data is resubmitted, the breach calculation will be rerun to evaluate the new data. Based on the detection or absence of a breach in the updated data, a new payment or penalty will be calculated.

Rationale and intent

We understand the concerns raised around jumping from tier 3 to tier 4 as a result of a single breach. We consider however that repeated failure to comply with rules should result in progressively more material penalties. We also think that the disincentive provided by these rules will reduce likelihood that a provider would reach these tiers.

To provide some additional clarity on suspension, units will be suspended on a unit basis. This will be done through the party that has the contractual terms signed with the ESO. Should this move to tier 4 (deregistration), all of the relevant assets within that unit will be deregistered.

The intention of the penalty regime is to create a fairer market for all participants. It is not intended to, nor do we believe it will create disproportionate penalties for smaller assets. We will work with industry both before and after the launch of the penalties regime to ensure that it incentivises the correct behaviour and we will take any necessary steps to rectify this if this is not the case.

Appeals

There is an appeal process in place as per the current and draft service terms, these will be separate processes for monetary appeals and unit suspension. Clause 2 of Schedule 4 describes the process for default tiers one and two. Clause 27 describes the process for default tiers three and four.

Penalties implementation

The tiered penalties regime will not come into effect alongside the publication of the Service Terms, this will come into effect at a later date. We will provide industry with 30 days written notice prior to the tiered penalties regime go live.

Revised Service Terms

We are proposing the following changes to the Service Terms to bring this change into effect:

- Changes to paragraph 15.3
- Changes to paragraph 15.11
- Addition of section 15A
- Changes have also been made to Clause 6, to ensure consistency with the introduction of the tiered penalty regime

Revised Procurement Rules

We are proposing the following changes to the procurement rules to bring this change into effect:

- Changes to paragraph 4.2 – 4.3
- Changes to paragraph 5.3,5.3.1, 5.3.2, 5.4
- Addition of paragraph 6.8 – 6.9
- Addition of the following definitions in Schedule 1 – Defined Terms
    - “Deregistered”
    - “Suspension”
- Changes to Schedule 2 – Registration and Pre-qualification procedure under the following headings

[5] Available in Appendix 1 of the following document: https://www.nationalgrideso.com/document/300231/download

- Registration as Registered Service Provider
- Registration as Registered Auction Participant
- Pre-qualification of eligible Assets
- Allocation to Auction Units
- Suspension of Auction Units

7. Disarming and re-arming instructions outside contracted service periods

We propose to be able to send instructions to service providers to disarm or re-arm outside of contracted service periods such that the instruction is effective from the start of the next contracted service period.

We intend to progress with this proposal as set out in the consultation, with no amendments.

We intend to provide a grace period on enforcement of six months from the publication of the new terms.

Response overview

Of 14 respondents who commented, 12 said they agreed (including two who said "fine" or "no issue"). A further two did not say if they agreed or disagreed.

Operation

There were three comments around the operation of the proposal. One respondent asked that we amend wording to ensure that disarm/arm signals don't get sent outside two minutes before/after a contracted window. Another asked whether if issued a signal, that signal is in effect until receipt of another signal (or until end of that service period). One respondent highlighted that the two minute requirement to acknowledge or action an instruction might be challenging due to communications latency.

Implementation

Four respondents indicated there would be no challenges around implementation, while seven respondents said ESO should provide sufficient lead-in time before go live to allow IT development work. One respondent suggested ESO should provide some slack for first few instructions to allow industry to test processes.

Outcome following feedback

We intend to make the change in accordance with our consultation proposal.

Operation

We do not intend to limit the time in which we may send a disarm/re-arm instruction to two minutes before or after a service period. Doing so would undermine the flexibility we are intending to provide with this proposal, ie the ability to send the instruction at the point we recognise there is a security case to disarm/re-arm units, rather than waiting until a service period. This flexibility gives the control room confidence in the state of units prior to the beginning of service periods. We also do not consider we should change the requirement to acknowledge the instruction within two minutes or bring it into effect within two minutes (if the instruction is sent during or no more than two minutes prior to the start of a service period). This is because acknowledging and acting on the signal within two minutes is not a new provision and providers have previously demonstrated their capability to comply with the two minute requirement when it was brought into service in 2023. None found the two minute requirement unworkable. Similarly, we continue to offer voluntary testing of the mechanism.

Implementation

We intend for this to come into effect from go-live of the services. As a system security measure, it is important we have the capability to bring this into effect as soon as possible. We offer testing to ensure providers are capable of complying. We will provide a 6 month grace period to allow providers to carry out any necessary development work prior to enforcement.

Revised Service Terms

We are proposing the following changes to the Service Terms to bring this change into effect:

- Changes to paragraphs 6.14 – 6.17

8. Maximum sell size

We propose to increase the Maximum Sell Size to 100MW for each of the dynamic response products.

We intend to progress with this proposal as set out in the consultation, with no amendments.

Response overview

Of the 14 respondents who answered this question 12 were in favour or had no further comments. One did not specify whether they agreed or disagreed and one respondent did not agree with the proposal.

Further increase

Two respondents who agreed would have preferred to see this volume increase to 300MW.

Testing requirements

One provider was against this proposal stating that the limit places additional testing requirements on providers in the future if/when this limit is increased again.

Procurement volumes

One respondent was concerned that one negative impact is that this could block the pathway for smaller assets if larger assets could bid more competitively. They believe the solution to this is to increase procurement volumes.

Limit maximum non-divisible size

Another respondent states that a more appropriate rule would be to have a limit on maximum non-divisible size per asset concerned that the current system and maximum sell size creates risk of exploitation of the system by bigger participants.

Outcome following feedback

We propose to increase the maximum sell order size to 100MW for DM and DR to align with DC in accordance with our consultation proposal. We recognise the majority of respondents support this proposal.

Further increase

We understand the frustrations from respondents who wish to see this number increased higher to 300MW. We have undertaken analysis to evaluate the highest number that we can increase the maximum sell size to. This number cannot currently be increased further due to the procured volumes of DM and DR, as it risks a large proportion of this volume being contracted by one unit, which results in a higher risk of this large proportion of pre-fault services being unavailable. We recognise that this is smaller than that proposed for Quick Reserve, however due to the differences in the services, mainly due to the fast-acting speed required for the dynamic services, there are fewer options that could replace these services should there be large amounts of service unavailability. We also benefit in the dynamic response services from having response spread across the country and not limited to few or one location. We find units responding closer to faults perform much better than those further away.

Testing requirements

We understand the re-testing burden although are not able to increase the maximum sell size to a number larger than 100MW until the risks as stated above are mitigated.

Procurement volumes

Procurement volumes are to ensure protection over the largest loss, these volumes are kept under review but are only increased when needed.

Limit maximum non-divisible size

Regarding the solution proposed by one respondent as the maximum non-divisible asset the risk remains the same as the asset could not be partially available, risking a large proportion of the service being unavailable should there be an issue with the asset.

This is something that we will continue to monitor and will increase when safe to do so.

Revised Procurement Rules Text

We are proposing the following changes to the procurement to bring this change into effect:

- Changes to paragraph 8.3.3
- Addition of the following definition to Schedule 1 – Defined Terms
    - "Maximum Sell Size"

9. Zero Deadband for non-energy limited assets

For Response Units which are not energy limited, providers may choose to nominate a zero deadband.

We intend to progress with this proposal as set out in the consultation, with an additional reference to the Zero Deadband Schedule 2 of the Service Terms.

Response overview

Nine respondents provided comments on this question; four respondents agreed with the proposal while five did not say whether they agreed or disagreed.

Effectiveness

Of those who agreed, three said they considered the proposal delivered the policy intent (the other did not provide additional comment). Meanwhile, two other respondents suggested it would not deliver the policy intent because response times would remain a barrier. Another respondent asked what non-energy limited assets ESO expect will participate.

Effect on different technologies

Three other respondents questioned whether it is right to create different rules for different technology types. One said ESO should provide more evidence on the cost and carbon impacts. Another asked if ESO would consider changing other design features to enable participation.

Clarity and implementation

A couple of respondents had questions about the wording and implementation. One respondent asked about what we meant by 'where applicable, Zero Deadband' in the service terms. This respondent questioned whether we could achieve the policy intent by stating the deadband rules do not apply to non-energy limited assets. Another asked whether the zero deadband is obligatory for non-energy limited assets and why opt-in decisions around deadband cannot be changed.

Outcome following feedback

We intend to introduce this change per our consulted on proposal, and recognise there was in general support for it.

Effectiveness

From speaking with a range of stakeholders we understand this change could facilitate participation of large synchronous generators. We recognise that the initiation time and time to full delivery will remain challenging, and prospective participants will have to demonstrate capability to provide the service.

Effect on different technologies

We consider this proposal is aligned with the principle of enhancing access to our services and reflects realities of how different capabilities can offer the service. There is precedent for this, such as our inclusion last year of service terms that provided for data derived metering; these terms are part of a programme of ongoing work to explore how new types of asset can participate in Dynamic Response.

Clarity and implementation

We do not intend to revise the wording from that included in our consultation as we consider the changes deliver our policy intent clearly and efficiently. 6.5 of the proposed Procurement Rules prescribes the cases in which a Zero Deadband is applicable and as such we consider references in the service terms to the applicability of the Zero Deadband are sufficiently clear. We do not see a case to change the terms to say the deadband rules do not apply for non-energy limited assets. First, this is because the service parameters are defined with reference to the deadband;[6] saying a deadband does not apply for non-energy Limited assets would require a change to how we define delivery profiles. We think on balance that is a more complex way to achieve the same outcome. Second, this is because the Zero Deadband is not obligatory for non-energy limited assets; we consider this is covered in 6.5 of the proposed Procurement Rules. We are not proposing to allow the opt-in status to be changed because we do not think this would be a functionality used by participants and it would create more complex performance monitoring arrangements.

Revised Procurement Rules

We are proposing the following changes in the Procurement Rules to bring this change into effect:

- Addition of paragraph 6.5
- Addition of the following definition in Schedule 1 – Defined Terms
    - "Zero Deadband"
- Additional text added in Schedule 2 – Registration and Pre-qualification procedure under the following heading
    - Allocation to Auction Products

Revised Service Terms

We also propose the following changes to the Service Terms to bring this change into effect:

- Changes to paragraph 6.7 iv
- Changes to paragraph 6.11 vi
- Changes to Schedule 2 – Capability and Data Tables
- Changes to Schedule 3 – amends to determination of K factor

10. Transfer: pay secondary provider

Where there is a transfer of response contract, ESO transfers the availability payments to the secondary provider.

We intend to progress with this proposal as set out in the consultation, with no amendments.

Response overview

Seven stakeholders responded to this question; six agreed with the proposed change and one did not say if they agreed or disagreed. Only one who agreed provided additional comment, saying they considered this change would increase the likelihood ESO will get the service it has paid for.

Allow transfer to more than one unit

The respondent who did not say whether they agreed or disagreed suggested the ESO should allow participants to transfer response contracts to more than one unit.

[6] in Schedule 2 we set out that the profile is linear between the deadband frequency range and the knee point frequency. We provide that where a Zero Deadband applies, the deadband frequency range is equal to 50Hz +0.

Outcome following feedback

We will continue with our proposal per the consultation.

Allow transfer to more than one unit

With respect to the comment around allowing transfers to more than one unit, we do not intend to provide for this at this point. This would represent a substantive change of policy intent; 21.6 of the Service Terms explicitly provides that Contracted Quantity shall not be split amongst two or more Response Units. More generally, a Response Contract applies in relation to a single Response Unit (as described in 1.3 of the Service Terms). Therefore, allowing for this would require substantive changes to how we procure and monitor delivery. We welcome further discussion with stakeholders to inform the case for such a change for the future evolution of the service.

Revised Service Terms

We propose the following changes to the Service Terms to bring this change into effect:

- Updated through out section 21
- Associated references in Service Terms clauses 5.1, 5.9, 6.1, 11.1, 11.2, 12.1, 12.2, 12.7 have also been updated accordingly.

11. Updates to Schedule 3

We have made some updates to Schedule 3 of the Service terms:

Change One: Settlement formula

There are updates to the settlement formula to accurately reflect the penalties for negatively priced bids.

Response overview

Seven respondents said they agreed with or had no issue with the change, while another six provided no comment. One other respondent had a follow up question asking if the market clears negatively the formula will result in a negative price to pay to the ESO if an asset is unavailable for a SP.

Another respondent added a comment in relation to ABSVD to highlight we should apply ABSVD to Non-BMUs as well as BMUs to create an even playing field.

Outcome following feedback

We propose to change the settlements formula as per our consultation proposal, to ensure that the penalties in place reflect negatively priced bids. Hence, resulting in negative penalties when the market clears negatively (i.e. a balance to be paid to ESO). This is to encourage the availability of the contracted service.

Although the point raised on ABSVD sits outside of this consultation, we understand that it is an important topic and its something that we are currently progressing and we will share implementation plans with industry when we have greater certainty on implementation timelines.

Revised Service Terms

Amendments have been made to the settlements formula in Schedule 3 of the Service Terms

Change Two: Metered Response formulas

Clarifications are added to the formulas with regard to Metered Response (MR) to add separated MR for bundled services.

Response overview

Of the six respondents who answered this question, all agreed. One of the respondents who was in favour of this change highlighted that this change will give a more accurate reflection and penalty of non-delivery on the relevant side only when delivering in bi-directional contracts.

Another respondent understood that the intention of this change limits the potential loophole when declaring unavailable for one side but they do not think this is correct when multiple services are stacked and they

declare unavailable for one of the stacked services. They think using ±Infinity, or ±(Nameplate Power) as the bounds in grace periods would solve this.

Outcome following feedback

We propose to introduce this change as proposed in the consultation documentation. We recognise the support from providers in ensuring that penalties are reflective of the non-delivery of the relevant side when delivering bi-directional contract.

We understand the concern raised by the respondent which highlights the potential loophole when declaring unavailable for one of multiple stacked services in the same direction. We wish to highlight that because these services are stacked together in the same delivery curve we cannot give a grace period to only one of the stacked services in the same direction it would need to be granted to them all.

Revised Service Terms

Changes have been made to the formulas and associated text relating to Metered Response in Schedule 3 of the service terms.

Change Three: Switching from unavailable to available in bundled services

Clarification has been added regarding switching from unavailable to available in bundled services and the grace period given to these, ie, high flags switching will only give allowance to the high side.

Response overview

Five respondents agreed, another respondent raised a concern, while nine did not comment. The respondent who raised the concern said that these proposals don't appear to recognise the reality of the auxiliary loads on a typical site and the challenges that can arise with such stringent requirements.

Outcome following feedback

We propose to introduce this change as proposed in the consultation documentation. We will work with industry in order to understand any technical challenges and work around these as appropriate.

Revised Service Terms

Changes have been made to Performance Bounds section in Schedule 3 of the Service Terms to bring this change in to effect.

12. Other housekeeping changes

In addition to the above proposals, we are making some housekeeping changes. These changes do not fundamentally change the terms and conditions of the service. These are:

- Combining Tables of Definitions into one table (the separate tables were required for launch of EAC but are no longer required).
- References to Flexibility Services Standard Agreement.

Response overview

We do not consider these changes in scope of EBGL Article 18, but nonetheless welcome stakeholder comment.

Out of the 11 respondents who answered this question, 9 had no comments or questions regarding the housekeeping changes.

One respondent raised a concern about the ENA Flexibility Services Standard Agreement. Specifically, the introduction of liability caps (except for death and personal injury due to negligence) has been implemented, but it remains unclear whether the liabilities under the Service Terms and Procurement Rules should also be capped.

Another respondent was overall encouraged by the direction of travel toward pro-active, automated policing of ESO markets based on a transparent tiered penalty regime. They highlighted an oversight in the proposed terms related to the SoE management guidelines (c6.11), suggesting the inclusion of a clause stating that "Response Units should not degrade their response energy volume for commercial reasons," aligning with the intent of SoE during delivery.

Outcome following feedback

Although we do not consider these changes in scope of Article 18, we welcome the additional feedback the respondents have provided.

Regarding the ENA Flexibility Services Standard Agreement, we would like to confirm that there is indeed a cap on liabilities in our service terms. This cap is the amount in the transmission limit, as stated in the glossary section of the agreement.

We understand the concerns raised by the respondent on the oversight of the proposed terms around SoE management, we have answered this concern in our response to change 3 (State of Energy: Service Delivery).

13. Changes for QR Procurement rules

As set out in the introduction, the ESO is in parallel to this consultation, launching a consultation on Quick Reserve. As part of that consultation, we are seeking feedback in relation to a change to the Response Procurement Rules that facilitates co-optimised procurement of the Response and Reserve services.

As such, this section is for information only.

Revised Procurement Rules

The Quick Reserve consultation has proposed the following changes to the Response Procurement Rules, these are not to be considered as part of this consultation although we have included for illustrative purposes, these have been highlighted yellow within the tracked change versions of the document.

- An update to the definition of ‘Market Welfare’ which includes a reference to both response products and Quick Reserve.
- The addition of ‘Quick Reserve’ in the table of definitions.
- The addition of ‘Quick Reserve Auction Products’ to the table of definitions.
- The addition of ‘Quick Reserve Procurement Rules’ to the table of definitions.

ESO

Appendix 1: Mapping Table

EBR Article 18 mapping for the Response Terms and Conditions

Please note: This table cross references the terms and conditions related to balancing described in article 18 of Commission Regulation (EU) 2017/2195 of 23 November 2017 (as incorporated into EU retained law, and as amended by the Electricity Network Codes and Guidelines (Markets and Trading) (Amendment) (EU Exit) Regulations 2019/532) ("**EBR Article 18**") against the corresponding parts of the GB codes and relevant contractual provisions, with particular reference to the Response service. This cross referencing includes the terms and conditions for balancing service providers and the terms and conditions for balance responsible parties.

References in this table to the 'Response Service Terms' means the document titled 'Response Services Service Terms'. References to the 'Response Procurement Rules' means the document titled 'Response Procurement Rules' and identified as being part of 'Release 3' (to distinguish it from the document which shows the updates made to those procurement rules as part of the separate package of proposed changes to the balancing terms and conditions to introduce Quick Reserve which are solely designed to allow optimisation across both services).

Nothing in this table shall prejudice or otherwise affect the operation of the GB codes and relevant contractual provisions, and in the event of any conflict or inconsistency between this table and EBR Article 18 the latter shall prevail.

Table 1 – Mandatory Elements

Below is the mapping of EBR Article 18 with references to the relevant Response terms and conditions.

Article	*Text*	*Code or Document*	*Section*
18.2	The terms and conditions pursuant to paragraph 1 shall also include the rules for suspension and restoration of market activities pursuant to Article 36 of Regulation (EU) 2017/2196 and rules for settlement in case of market suspension pursuant to Article 39 of Regulation (EU) 2017/2196 once approved in accordance with Article 4 of Regulation (EU) 2017/2196.	Grid Code	OC9.4
		BSC	G3, P1.6, P5, Q4.3.4, Q5.4, Q5A and T1.7
18.4	The terms and conditions for balancing service providers shall:	-	-

Article	*Text*	*Code or Document*	*Section*
18.4.a	Define reasonable and justified requirements for the provisions of balancing services;	Response Procurement Rules Response Service Terms	**Response Procurement Rules** 4 – Registration of Registered Auction Participants 5 – Pre-qualification of Eligible Assets 6 – Allocation of Eligible Assets to Auction Units 12 – Formation of Response Contracts **Response Service Terms** 5 – Service Availability 15A – Performance Regime
		BSC	A, H3, H4.2, H4.7, H4.8, H5.5, H6, H10, J3.3, J3.6, J3.7 and J3.8
		CUSC	4.1.3
		Grid Code	BC1, BC2, BC3 & BC4
18.4.b	allow the aggregation of demand facilities, energy storage facilities and power generating facilities in a scheduling area to offer balancing services subject to conditions referred to in paragraph 5 (c);	BSC	K3.3, K8, S6.2, S6.3 and S11, S12, S13 and S14
		Grid Code	DRSC 4.2, BC1.4
		Response Procurement Rules	**Response Procurement Rules** 4 – Registration of Registered Auction Participants 5 – Pre-qualification of Eligible Assets Schedule 2 – Registration and Pre-Qualification Procedure
18.4.c	allow demand facility owners, third parties and owners of power generating facilities from conventional and renewable energy sources as well as owners of energy storage units to become balancing service providers;	BSC	K3.2, K3.3, K8
		Response Procurement Rules	**Response Procurement Rules** 4 – Registration of Registered Auction Participants 5 – Pre-qualification of Eligible Assets 6 – Allocation of Eligible Assets to Auction Units Schedule 2 – Registration and Pre-Qualification Procedure

Article	Text	Code or Document	Section
18.4.d	require that each balancing energy bid from a balancing service provider is assigned to one or more balance responsible parties to enable the calculation of an imbalance adjustment pursuant to Article 49.	BSC	T4, Q7.2, Q6.4
18.5	The terms and conditions for balancing service providers shall contain:	-	-
18.5.a	the rules for the qualification process to become a balancing service provider pursuant to Article 16;	Response Procurement Rules	**Response Procurement Rules** 4 – Registration of Registered Auction Participants 5 – Pre-qualification of Eligible Assets 6 – Allocation of Eligible Assets to Auction Units Schedule 2 – Registration and Pre-Qualification Procedure
		Grid Code	*BC5, BC4.4.2*
		CUSC	4.1
		BSC	J3.3, J3.6, J3.7, J3.8, K3.2, K3.3 and K8
18.5.b	the rules, requirements and timescales for the procurement and transfer of balancing capacity pursuant to Articles 32 and 34;	Response Procurement Rules Response Service Terms	**Response Procurement Rules** 6A – Background Submission Data 7 – Buy Orders 8 – Sell Orders 9 – Market Clearing Rules 12 – Formation of Response Contracts **Response Service Terms** 21 – Transfer of Response Contracts
18.5.c	the rules and conditions for the aggregation of demand facilities, energy storage facilities and power generating facilities in a scheduling area to become a balancing service provider;	Response Procurement Rules	**Response Procurement Rules** 4 – Registration of Registered Auction Participants 5 – Pre-qualification of Eligible Assets Schedule 2 – Registration and Pre-Qualification Procedure
		BSC	K3.3 and K8
		Grid Code	BC1.4 and BC1A.10

Article	*Text*	*Code or Document*	*Section*
18.5.d	the requirements on data and information to be delivered to the connecting TSO and, where relevant, to the reserve connecting DSO during the prequalification process and operation of the balancing market;	Response Procurement Rules Response Service Terms	**Response Procurement Rules** 4 – Registration of Registered Auction Participants 5 – Pre-qualification of Eligible Assets 6A – Background Submission Data 8 – Sell Orders Schedule 2 – Registration and pre-qualification Procedure **Response Service Terms** 6 – Service Delivery 15 – Monitoring and Metering Data 15A – Performance Regime
		BSC	O
		Grid Code	DRC, *BC5 BC1.4,*
		CUSC	4.1.3.14 and 4.1.3.19
18.5.e	the rules and conditions for the assignment of each balancing energy bid from a balancing service provider to one or more balance responsible parties pursuant to paragraph 4 (d);	BSC	T4
		Response Procurement Rules Response Service Terms	**Response Procurement Rules** 12 – Formation of Response Contracts **Response Service Terms** 20 – Assignment 21 – Transfer of Response Contracts
18.5. f	the requirements on data and information to be delivered to the connecting TSO and, where relevant, to the reserve connecting DSO to evaluate the provisions of balancing services pursuant to Article 154(1), Article 154(8), Article 158(1)(e), Article 158(4)(b), Article 161(1)(f) and Article 161(4)(b) of Regulation (EU) 2017/1485;	Response Procurement Rules Response Service Terms	**Response Procurement Rules** 6A – Background Submission Data **Response Service Terms** 5 – Service Availability 6 – Service Delivery 15 – Monitoring and Metering Data 15A – Performance Regime
		Grid Code	BC1.4, BC1.A.10,
		CUSC	4.1.3.19
18.5. g	the definition of a location for each balancing product taking into account paragraph 5 (c);	Grid Code	BC1.4

Article	Text	Code or Document	Section
18.5.h	the rules for the determination of the volume of balancing energy to be settled with the balancing service provider pursuant to Article 45;	BSC	T3
18.5. i	the rules for the settlement of balancing service providers defined pursuant to Chapters 2 and 5 of Title V;	Response Service Terms	**Response Service Terms** 7 – Availability Payments 8 – Payment Procedure 15A – Performance Regime Schedule 3 – Availability Payments Schedule 4 – Payment provisions
		BSC	T1.14, T3 and U
		CUSC	4.1.3.9 and 4.1.3.9A
18.5. j	a maximum period for the finalisation of the settlement of balancing energy with a balancing service provider in accordance with Article 45, for any given imbalance settlement period;	Response Service Terms	**Response Service Terms** 7 – Availability Payments 8 – Payment Procedure Schedule 3 – Availability Payments Schedule 4 – Payment Provisions
		BSC	U2.2
		CUSC	4.3.2.6
18.5. k	the consequences in case of non-compliance with the terms and conditions applicable to balancing service providers.	Response Procurement Rules	**Response Procurement Rules** 4 – Registration of Registered Auction Participants 5 – Prequalification of Eligible Assets 6A – Background Submission Data Schedule 2 – Registration and Pre-Qualification Procedure
		Response Service Terms	**Response Service Terms** 5 – Service Availability 6 – Service Delivery 14 – Termination of Response Contracts 15 – Monitoring and Metering Data 15A – Performance Regime
		BSC	H3, Z7 and A5.2
		CUSC	4.1.3.9, 4.1.3.9A and 4.1.3.14

Article	Text	Code or Document	Section
18.6	The terms and conditions for balance responsible parties shall contain:	-	-
18.6. a	the definition of balance responsibility for each connection in a way that avoids any gaps or overlaps in the balance responsibility of different market participants providing services to that connection;	BSC	K1.2, P3 and T4.5
18.6. b	the requirements for becoming a balance responsible party;	BSC	A, H3, H4.2, H4.7, H4.8, H5.5, H6, H10, J3.3, J3.6, J3.7, J3.8,, K2, K3.3 and K8
18.6.c	the requirement that all balance responsible parties shall be financially responsible for their imbalances, and that the imbalances shall be settled with the connecting TSO;	BSC	N2, N6, N8, N12, and T4,
18.6. d	the requirements on data and information to be delivered to the connecting TSO to calculate the imbalances;	BSC	O, Q3, Q5.3, Q5.6, Q6.2, Q6.3, Q6.4
		Grid Code	BC1.4.2,3,4, BC1 Appendix 1 BC2.5.1,
18.6. e	the rules for balance responsible parties to change their schedules prior to and after the intraday energy gate closure time pursuant to paragraph 4 of Article 17;	BSC	P2
		Grid Code	BC1.4.3,4,
18.6.f	the rules for the settlement of balance responsible parties defined pursuant to Chapter 4 of Title V;	BSC	T4, U2
18.6.g	the delineation of an imbalance area pursuant to Article 54(2) and an imbalance price area;	-	*GB constitutes one imbalance area and imbalance price area and they are equal to the synchronous area*
18.6.h	a maximum period for the finalisation of the settlement of imbalances with balance responsible parties for any given imbalance settlement period pursuant to Article 54;	BSC	U2.2
18.6.i	the consequences in case of non-compliance with the terms and conditions applicable to balance responsible parties;	BSC	H3,Z7 and A5.2
18.6.j	an obligation for balance responsible parties to submit to the connecting TSO any modifications of the position;	BSC	P2
18.6.k	the settlement rules pursuant to Articles 52, 53, 54 and 55;	BSC	T4, U2

Article	Text	Code or Document	Section
18.6.l	where existing, the provisions for the exclusion of imbalances from the imbalance settlement when they are associated with the introduction of ramping restrictions for the alleviation of deterministic frequency deviations pursuant to Article 137(4) of Regulation (EU) 2017/1485.	Deterministic frequency deviation is a continental European concept and is not a characteristic of the GB system. Therefore, this requirement does not apply to GB.	N/A

Table 2 - Non- Mandatory elements

Article	Text	Comment
18.7. a	-	Sub-paragraph 18.7.a was repealed pursuant to paragraph 18(6)(a) of Schedule 2 of the Electricity Network Codes and Guidelines (Markets and Trading) (Amendment) (EU Exit) Regulations 2019/532.
18.7. b	where justified, a requirement for balancing service providers to offer the unused generation capacity or other balancing resources through balancing energy bids in the balancing markets after day ahead market gate closure time, without prejudice to the possibility of balancing service providers to change their balancing energy bids prior to the balancing energy gate closure time due to trading within intraday market;	NG ESO does not expect to require this from Balancing Service Providers, except where balancing capacity or energy has been contracted. Although in the BM defaulting rules apply if data is not updated, there is no legal requirement for parties to offer unused generation capacity or any other balancing resource.
	-	Sub-paragraph 18.7.c was repealed pursuant to paragraph 18(6)(c) of Schedule 2 of the Electricity Network Codes and Guidelines (Markets and Trading) (Amendment) (EU Exit) Regulations 2019/532.
18.7. d	specific requirements with regard to the position of balance responsible parties submitted after the day-ahead market timeframe to ensure that the sum of their internal and external commercial trade schedules equals the sum of the physical generation and consumption schedules, taking into account electrical losses compensation, where relevant;	NG ESO does not expect to require this from Balancing Service Providers. No BSC party is required to contract to match its Final Physical Notifications (FPNs).
18.7. e	an exemption to publish information on offered prices of balancing energy or balancing capacity bids due to market abuse concerns pursuant to Article 12(4)	NG ESO does not expect to require this exemption. Such data is published on Insights Real-Time Information Service (IRIS).

18.7. f	an exemption to predetermine the price of the balancing energy bids from a balancing capacity contract pursuant to Article 16(6)	-
18.7. g	An application for the use of dual pricing for all imbalances based on the conditions established pursuant to Article 52(2)(d)(i) and the methodology for applying dual pricing pursuant to Article 52(2)(d)(ii).	NG ESO does not expect to apply for the use of dual pricing for all imbalances. A single imbalance price was adopted by the GB market in November 2015.