

DS3 System Services Consultation – Volume Capped Procurement

This questionnaire has been prepared to facilitate responses to the consultation. Respondents are not restricted to this template and can provide supplementary material if desired.

Please send responses in electronic format to DS3@eirgrid.com or DS3@soni.ltd.uk

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Note: It is the TSOs' intention to publish all responses. If your response is confidential, please indicate this by marking the following box with an "x". Please note that, in any event, all responses will be shared with the Regulatory Authorities.

Response

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<p><u>Question 3:</u> Do you have any comments on the availability obligation proposed?</p>	<p>emphasise its concern regarding SOC management under the proposals and the need for appropriate allocation of risk such that providers are not penalised due to circumstances that are outside of their control, such as imposition of charging/discharging restrictions (trickle charge / discharge) if such provisions are not sufficient to facilitate achieving mandated availability requirements.</p> <p>We also request that DS3 fixed contracts provide certainty that the technical requirements for service provision cannot be changed post award of contract by the TSO given the substantial material impact such changes could have on the profitability of a project, warranties and asset lifespan.</p> <p><u>Answer 3:</u> It is difficult to assess the overall proposal without an understanding of what the likely allocation for planned maintenance might be. Energia recommend an allocation of at least 7 days for planned maintenance is provided.</p> <p>Other considerations absent from the consultation paper but helpful to assessing the appropriateness of the availability requirement include:</p> <ul style="list-style-type: none"> • How availability will be assessed – i.e. will it be monthly or annual? Energia recommends annual appraisal of availability to avoid unnecessary imposition of penalties – e.g. it is possible that while any one incident could take longer than a day to fix, when assessed over a year the 97% target could still be met or exceeded. • Whether availability in any half hour is binary or a percentage calculated relative to contract volume – e.g. if availability is less than contract requirement in half hour is availability deemed to be 0% or Actual Availability / Contract Volume? Energia recommends availability should be calculated as a percentage of actual availability relative to contract volume to avoid any loss of incentive to provide partial availability, if possible, whenever a forced outage occurs. • What is the baseline used for measurement of service provision for a battery storage system. Will provision of service be measured from 0MW, or from the current position of the system – e.g. if contracted for 10MW of frequency services and system
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	<p>is charging at 5MW, if required to respond to an under-frequency event that necessitates delivery of the full contract volume, would the system need to provide a 5MW discharge or a 10MW discharge? Energia recommends the baseline is set at the current system charge / discharge level and not 0MW to extract the maximum potential service availability from storage systems.</p> <ul style="list-style-type: none"> • Does unavailability due to SoC management count in performance assessment of availability for a service? Will provisions provided for trickle charge / discharge be sufficient to ensure mandated availability requirements can be met? If requirement for SoC management is caused by TSO dispatch of TOR1 and/or TOR2 will any resultant unavailability be counted in performance assessment? Energia recommend that the risk imposed by the provisions set out for SoC management and any mandated availability requirement are carefully considered to ensure they appropriately allocate risk and avoid penalising service providers for unavailability due to circumstances that are outside of their control. Furthermore, that any unavailability due to charging / discharging necessitated because of provision of frequency response services (or dispatch of TOR 1 and/or TOR2 if such services are used for purposes other than frequency response) is not taken into account during performance assessment. • Will wider market arrangements and interactions support availability requirements mandated under contracts? Energia recommend that the interaction of contractual obligations across energy, capacity and DS3 markets (a 10MW or larger BESS may be obliged to participate across all three markets) are consistent with, and supportive of, availability requirements mandated under the DS3 fixed contract terms. • Will treatment of network constraints be aligned with availability? Energia recommends that units with firm access are not liable for loss of payment under DS3 due to network constraints. Furthermore that Option 1 in section 3.2.2. Of consultation paper is implemented – see our answer to question 5. <p>Assuming the recommendations provided above are adopted Energia believes a 97%</p>
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<p>pricing requirements and the mechanism for assessing bids and determining price?</p>	<p><i>TSO Proposal: Contracts should start no later than 31st May 2021 and will end no later than 31st May 2027</i></p> <p>Energia recommends the two year build period is applied from award of contract in each procurement round, not applied as a firm service delivery date for contracts secured across all procurement rounds. It would be unequitable to impose a shorter build time for contracts secured through later procurement rounds.</p> <p><i>TSO Proposal: Applicants will be required to submit a performance bond on the date of execution of the contract, chargeable in the event of non-delivery. The size of the performance bond will be based on the contracted service MW volume of the applicant</i></p> <p>A bonding process is essential to filter out ‘ghost projects’, minimising risk to security of supply and the consumer, but care needs to be taken to ensure the process is appropriately designed and not an unnecessary barrier to market entry for new participants. It is therefore essential that the process correctly allocates risk and does not impose penalties for non-delivery of milestones if the cause is demonstrably outside the control of the developer – e.g. due to issues with / delays by independent third party bodies such as the TSO, DSO, planning authorities, etc. The process and criteria for calling of the bond must also be clearly defined, with a mechanism to fairly deal with unforeseen, or unanticipated, project development issues.</p> <p>Energia agrees bonding should be based on the contracted service MW volume of the applicant but notes that the financial level of performance bonding must be set at an appropriate level to achieve the objectives of the bonding process set out above. Energia views the performance bonding proposed (£12,000/MW) as appropriate if compliance risk under the bonding process is appropriately allocated and Option 2 is adopted as set out in section 3.2.1 of the consultation paper – see our answer to question 4 above.</p> <p><i>TSO Proposal: Prices should be submitted for each System Service within the bundle to enable the relevant scalars to be applied and to ensure the proposed tariff limits are respected.</i></p> <p>Energia agree that prices should be submitted for each System Service within the bundle but not primarily for the purposes of imposing bid caps at tariff limits as suggested, but to guarantee adequate remuneration for each service so as to avoid the risk of unhappy winners via the competitive procurement process. The issue with imposing the bid caps as currently</p>
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	<p>proposed is discussed in more detail below.</p> <p><i>TSO Proposal: The recommended service tariffs set the tariff cap for bids. Prices submitted should therefore not exceed these rates on a per System Service basis.</i></p> <p>Energia very much welcomes the effective simplification of the DS3 framework for fixed contracts but is concerned that maintenance of the wider scalar framework and tariff based bid caps unnecessary complicates bid development and assessment, and imposes unhelpful revenue restrictions, both of which may hinder the effective operation of the competitive process. Competition tends to deliver best results when competitive arrangements are transparent, simple to understand and easy to engage in. To this end we recommend that all proposed scalars and tariff based bid caps are removed from assessment of bids and remuneration for provision of services to facilitate a more straightforward procurement process and to ensure participants can bid at the level required to support their investment.</p> <p>If bid caps at regulated tariff are not removed then additive scalar values (i.e. scalars that facilitate payment at, or greater than 1) must be maintained (e.g. the continuous provision scalar) to help ensure total possible remuneration under fixed contracts is set at a level sufficient to deliver required investment. Erosion of scalar value while maintaining bid caps at regulated tariff risks undermining investment signals. We observe that bid caps for new capacity under the I-SEM capacity market are set significantly higher than bid caps for existing capacity, and it is unclear why a similar approach is not being adopted for DS3 fixed contracts. Capping remuneration for new investment at what seems an arbitrary level (which may result in a remuneration level below that received by existing providers), is unusual, and when considered within the context of a competitive procurement mechanism, could undermine investment signals and unnecessarily put at risk renewable targets, which, over the longer term, would impose upon consumers significant ongoing costs associated with underutilisation of renewable generation assets.</p> <p><i>TSO Proposal: Bids will be assessed as outlined above with ongoing remuneration based on a typical wind year at contract award stage.</i></p> <p>As discussed above Energia believe there is merit in considering further simplification of the competitive procurement process for fixed contracts to remove the need for any application of the temporal scarcity, and other scalars, providing it was coupled with the removal of tariff</p>
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	<p>based bid caps and the setting of a revenue ceiling sufficient to incentivise and support new investment. Such an approach would be similar in principle to the mechanism used in the I-SEM capacity market and support a market based determination of price via the competitive procurement process. While we do not necessarily agree with it, we note the ultimate policy objective for DS3 and capacity markets over the longer term is to align procurement of capacity with procurement of DS3 system services, which may be easier to achieve if the design of the DS3 competitive procurement mechanism is more closely aligned with the capacity market.</p> <p>If the current scalar framework is maintained then Energia support Option 2 as per the TSO proposal. This option removes the substantial revenue risk associated with application of real-time SNSP as envisaged under Option 1, which undermines DS3 investment signals.</p> <p><i>TSO Proposal: Pay-as-bid pricing will be used for the volume capped procurement exercise</i> Energia's preference is for a form of pay-as-clear pricing (as used in the I-SEM capacity market and I-SEM DA and ID auctions for energy contracts) subject to appropriate mechanisms to avoid unhappy winners and minimise unhappy losers.</p> <p>Pay-as-clear pricing creates strong economic incentives for competitive bidding behaviours, due to the risk that any 'inflation' of bid prices could result in foregone infra-marginal rent (rather than increasing potential reward under a pay-as-bid regime), but we acknowledge that potential issues could arise in a combinatorial auction if the pay-as –clear pricing mechanism is not appropriately designed. We do not however believe these issues are insurmountable. One option may be to separate the auction pricing mechanism from the auction clearing mechanism, clear the auction on a least cost bundled bid basis, but set prices based on the maximum bid price cleared for each service. Another option may be to clear the auction on a least cost bundled bid basis, set individual service prices based upon the price bid for each service within the marginal bundled bid, but introduce a make whole mechanism for any cleared bids that submitted a price for an individual service that is greater than the price set for that service by the marginal bundled bid.</p> <p>Combinatorial auctions are more complex than simple bid-stack auctions and designing an appropriate auction clearing and pricing mechanism is fundamental to the success of the competitive DS3 procurement process. Energia therefore recommends that the detailed</p>
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	<p>used in the assessment of bids (the TSO proposal outlined in section 4.2.4 of consultation paper) then Energia support Option 1 above. This option removes the substantial revenue risk associated with application of real-time SNSP as envisaged under the alternative option, which undermines DS3 investment signals.</p> <p><i>TSO Proposal: The Performance Scalar outlined in Table 4 will be applied in order to incentivise availability</i></p> <p>Energia appreciate the need to incentivise availability for delivery of system services but care needs to be taken to ensure that any revenue risk imposed to incentivise availability is apportioned appropriately and providers are not unduly penalised for any lack of availability for system services that is not demonstrably within their control – e.g. due to imposed restrictions on SoC management (e.g. trickle charging / discharging mechanism), TSO dispatch of TOR1 and/or TOR2, or competing contractual obligations (between CRM, ETA and DS3).</p> <p>Energia observe that it is difficult to provide definitive comments on the specific proposal in the consultation paper without understanding how availability will be measured and assessed (see our answer to question 3 above), as well as the wider suite of proposed performance scalars and any other measures, such as potential application of GPIs. Please note, we do not believe GPIs are required given the broader performance incentives being proposed.</p> <p>Energia therefore request that this proposal is further consulted upon as part of the upcoming detailed contract consultation in July, where it can be considered in conjunction with other related areas.</p> <p><i>Option1: Product Scalar for faster response is applied in the calculation of bundle price for the basis of assessment</i></p> <p><i>Option2: Product Scalar for faster response is applied after assessment i.e. in actual remuneration only</i></p> <p><i>Option3: Applicants are sorted on speed of response with those faster than 200ms prioritised over those which are slower</i></p> <p>As outlined in previous answers (see question 7 which we cross reference here) Energia believe there is merit in considering further simplification of the competitive procurement process for fixed contracts to remove the need for any application of scalars, including the product scalars</p>
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	<p>(minimum response time could be mandated as per suggested approach taken for reserve trigger and trajectory), providing it was coupled with the removal of tariff based bid caps and the setting of a revenue ceiling sufficient to incentivise and support new investment, similar to the mechanism employed in the I-SEM capacity market.</p> <p>If scalars are maintained then we support Option 2 as neither Option 1 nor Option 3 seems feasible. Option 1 would effectively penalise faster response times, while option 3 introduces a reasonably crude and inefficient selection criteria.</p> <p><i>TSO Proposal: The product scalar for Continuous Provision of Reserve from FFR to TOR1 will not be applied</i></p> <p>Energia believe there is merit in considering further simplification of the competitive procurement process for fixed contracts as discussed above and in our answers to previous questions (which we request are cross referenced here).</p> <p>If scalars are maintained then we do not support the removal of the product scalar for Continuous Provision of Reserve. Energia observes there is a risk under the proposals within the consultation paper that remuneration under fixed contracts may be capped at a similar level, or below that of standard contracts, and note this is contrary to normal market practice that tends to set revenue caps for new investment at a higher level than existing units so as not to create an arbitrary barrier to entry and to allow the market to determine the price required for new investment competitively (e.g. the I-SEM capacity market).</p> <p><i>TSO Proposal: Locational incentive/scalar should not be applied for delivery of services under this initial stage of volume capped procurement arrangements (though may be used in the future if such a locational signal is necessary).</i></p> <p>Energia believe there is merit in considering further simplification of the competitive procurement process for fixed contracts as discussed above and in answers to previous questions (which we request are cross reference here).</p> <p>If scalars are maintained, and locational scalars are implemented for DS3 fixed contracts post contract award their value must be set at greater than or equal to 1 to avoid undermining revenues on previously awarded contracts, jeopardising investments.</p>
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<p><u>Question 10</u>: Do you have a view on the market interactions outlined here and the proposed mechanism for mitigating?</p>	<p><i>TSO Proposal: No minimum volume per jurisdiction will be set</i> Energia agrees with the TSO proposal that no minimum volume per jurisdiction should be set.</p> <p><u>Answer 10</u>: We address each of the TSO options / proposals relevant to this question in turn as set out below.</p> <p>As a general comment Energia emphasise the importance of ensuring coordination of wider market arrangements for battery storage to remove any potential unnecessary barriers to market entry. The general principle that market arrangements must not impose unnecessary barriers to entry should be applied to all potential cross market interactions, relevant codes, and charging and remuneration regimes with regards to their specific application to battery storage. We therefore welcome the upcoming workshop that will examine some of these issues on 15th May.</p> <p><i>TSO Proposal: Service providers must meet the applicable Grid Code or Distribution Code requirements for their connection</i> It is not immediately clear which code provisions are applicable to battery storage and Energia would welcome further clarification in this area. It would also be useful if the hierarchy of code versus DS3 contractual obligations could be clarified, so the risk of retrospective changes to relevant codes following execution of fixed DS3 contracts can be understood and assessed. To minimise this risk Energia recommend that fixed contract holder are guaranteed derogations for any retrospective changes to grid code (post contract award) that have a material negative impact either on revenues, or meeting DS3 fixed contract obligations, or that any such changes are treated as “changes in law”, with any costs associated with grid code compliance paid for by the TSO.</p> <p>While appreciating the point is self-evident, it is important that grid code (and any other relevant code) requirements are not unnecessarily inconsistent with battery storage capabilities, and are supportive of delivery upon obligations imposed under DS3 fixed contracts.</p> <p><i>TSO Proposal: Service providers will be subject to the network charges applicable to their</i></p>
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	<p>connection.</p> <p>Energia request clarification of the proposed network charges applicable to battery storage. These are fundamental in determining opex costs and therefore assessing investment cases. In particular, care needs to be taken to ensure the network charging regime does not impose unnecessary barriers to entry, or create unintended consequences for battery storage. For example, differences in network charging regimes between jurisdictions could introduce arbitrary locational bias between Northern Ireland and the Republic of Ireland. Furthermore, the approach to network charging needs to treat battery storage fairly, reflecting the fact that it is neither a typical consumer, nor generator of electricity, but rather a temporal transporter. Double charging for transmission and distribution asset costs must be avoided, and charging regimes should ensure that levy costs (e.g. PSO, etc.) imposed on battery storage are not disproportionate or unreasonable, given its requirement to churn electricity (e.g. when price arbitraging, or providing over and under frequency response services).</p> <p>Energia observe network charging and its appropriate application to battery storage is an important area for project developers, transmission / distribution system operators and for consumers, and may have significant implications in the future. We therefore recommend it is given careful consideration and consulted upon further in the near future.</p> <p><i>TSO Proposal: Service Providers should manage their own positions in the energy market to ensure they can fulfil the service and availability outlined in their contract</i></p> <p>Energia would welcome reassurance that service providers will, in practice, be able to appropriately manage their positions in the energy market to meet their obligations via DS3 fixed contracts without incurring financial loss – i.e. that the DS3 and energy trading arrangements work as a coherent whole. We would also welcome clarification on how energy imbalances generated as a result of provision of DS3 services will be treated under I-SEM energy trading arrangements, and that providers will not be subject to uninstructed imbalance payments.</p> <p><i>TSO Proposal: Service providers must adjust their balancing bids to recharge after an event or may utilise their trickle recharge function (within the appropriate frequency conditions).</i></p> <p>Energia request that the provisions for SoC management are clearly defined and that they are demonstrably consistent with availability obligations imposed under fixed contracts to avoid</p>
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	<p>imposition of financial risk on service providers which, given the wider market rules, is beyond their ability to adequately control. For example, we note the potential requirement to be capable of over-frequency response, but to maintain availability for this service a battery storage system may need to discharge. There is no facility envisaged presently for trickle discharging, and relying on under-frequency response or balancing market dispatch to discharge (both of which are not directly in the control of the service provider) may restrict availability for these services below that required under fixed contracts imposing financial loss. Energia therefore recommend that a trickle discharge function is introduced if the technical capacity to provide over-frequency response is maintained. Energia also observe that the setting of the maximum power rating for the trickle charging / discharging mechanism also needs to be set at an appropriate level (we suggest at least 75% of MIC) and applied uniformly across all battery systems, to ensure an equitable playing field. If the power rating for the trickle charge function is set too low relative to availability requirements it imposes unreasonable financial risk, as battery systems will have to rely on the balancing market to effectively manage SoC, but have no certainty of timely dispatch given market gate closures.</p> <p><i>TSO Proposal: Service Providers should manage their own positions in the capacity market to ensure they can fulfil the service and availability outlined in their contract</i></p> <p>To avoid unnecessary barriers to market entry contractual obligations for DS3 and CRM should be compatible. For example, providers of system services should not be penalised under the CRM during scarcity events for provision of DS3 services and vice versa. The rationale for this position was outlined by IWEA in its response to SEM-18-009 and is reproduced below.</p> <p>“... IWEA would emphasise the pressing need to ensure coordination of wider market arrangements for battery storage to remove any potential unnecessary barriers to market entry. While the specific example presented below relates to the interaction of the CRM with the DS3 arrangements, the general principle that market arrangements should not impose unnecessary barriers to ‘revenue stacking’ applies to all potential cross market interactions, for example, between DS3 and the I-SEM energy trading arrangements.</p> <p>IWEA expect new battery storage projects will target provision of DS3 system services as a primary revenue stream. To facilitate market entry for battery storage technologies however DS3 system service provision needs to be ‘stackable’ with other potential revenue streams, and</p>
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<p><u>Question 11</u>: Do you agree with the proposed mechanism for assessing applications?</p>	<p>conflicting contractual obligations avoided. In particular, market arrangements should in the event of a clash:</p> <ul style="list-style-type: none"> • Clarify which obligations should be prioritized; and • Minimise the provider's exposure to penalties to avoid unnecessary barriers to market entry. <p>It is useful to consider how this challenge is addressed in GB, a market that has already faced and is resolving similar types of issues for battery storage. In GB, the Capacity Market rules have an Annex titled 'Relevant Balancing Services'. The principle underlying this Annex is that providers of system services should not be penalised in the Capacity Market when (compliantly) providing these system services. The formulae within the Annex essentially amend the Capacity Provider's Capacity Obligation to match/exceed their balancing service obligations. For instance, if you are contracted to provide frequency response, then as long as you successfully respond to frequency as per your frequency response contract, then you do not suffer any penalty during a Capacity Market system stress event. This 'Relevant Balancing Services' Annex is very helpful in clarifying obligations for storage providers and ensuring penalties do not act as potential barriers to entry.</p> <p>The primary principle underlying the I-SEM CRM should be similar to GB: namely, that providers of system services should not be penalised under the CRM during scarcity events for provision of DS3 services and vice versa. However, it is not clear how this is operationally implemented for all DS3 products, including those that are not directly dispatched by the TSO. IWEA would therefore be grateful for substantially more clarity on how 'revenue-stacking' of DS3 services with other potential revenue streams, including the I-SEM CRM, will be facilitated. We believe this would be particularly helpful to developers of storage projects, as well as beneficial to other technology providers."</p> <p><u>Answer 11</u>: Energia is broadly supportive of the high-level mechanisms outlined for assessing applications but reserve the right to comment further when the detailed proposals become clear. However we would note that timelines for submission of bids under the 1st DS3 fixed contract procurement round need to be dovetailed with receipt of connection offers under</p>
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	<p>ECP1 timeframes. Notification of offers must be made at least 2 months in advance of bid submission to allow sufficient time for refinement of investment cases and development of bids.</p> <p>In relation to step 5, as previously noted, we recommend there is substantially more detailed discussion and consultation on the auction mechanism employed for DS3 fixed contracts.</p>
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