



**Response by Energia to SEM Committee
Consultation SEM-14-059**

DS3 System Services Procurement Design

5 September 2014

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Executive Summary

There is a fundamental need for system services to be delivered to achieve the realisation of renewable targets and associated benefits. In this regard, we welcome the SEM Committee's recognition that:

- Significant investment is required to deliver the required services by 2020;
- Current capabilities require remuneration to maintain system security standards; and
- Delivery of system services is necessary for the continued reliable operation of the power system, the achievement of renewable targets and delivery of significantly value to the system and the consumer.

Having carefully reviewed all procurement options described in the consultation paper (Option 1 through Option 5) we definitively conclude that none meet the required delivery standard. Given concerns regarding market power in the ancillary services sector we have particular concern regarding auction based process. We suggest an alternative approach based on a modification of Option 1 and the TSO recommendations in their May 2013 Recommendations Paper to the SEM Committee. We contend that this approach is most likely to deliver the necessary system services (thereby ensuring long-term benefits to the consumer) and would be implementable within the timetable required.

Proposed RA Position and Energia Concerns

The consultation paper is effectively a proposed decision (or position) in favour of Option 5 (Multiple Bid Auctions) for the procurement of system services, with Option 1 (Regulated Tariffs) a mooted fall-back¹; it incorporates a redefinition of the payment basis for services rendered which fundamentally changes the risk profile for service providers and exasperates market power concerns in the energy market; and reflects an overarching focus on cost based remuneration. Energia is firmly of the view, for the reasons summarised below, that these proposals, if implemented, will put at risk the delivery of the required system services, thereby frustrating government policy and jeopardising the realisation of the established potential long-term benefits for I-SEM consumers.

1. We note the SEM Committee's stated 'preference for a competitive market-based solution for the procurement of system services and the consequent desire for a market based approach over the current regulated approach. A similar shift in regulatory policy is reflected in the draft I-SEM decision to which we responded with significant consternation. If the underlying market conditions are uncompetitive, market mechanisms accentuate rather than minimise competitive distortions to the detriment of the consumer. The IPA report commissioned by the RAs and published alongside consultation paper SEM-14-059 provides clear evidence that each group of system services on the island of Ireland would

¹ Page 63 of SEM-14-059 states that where the auction fails to produce a viable result, or sufficient quantities, for one or more of the services, the additional volume will be remunerated through a regulated tariff. Option 1 is clearly seen as the fall-back and the alternative to Option 5.

represent a highly concentrated market (with HHI>2,000), dominated by ESB. It is therefore a fallacy to assume that a market mechanism could deliver an efficient competitive outcome or effective price discovery in the all-island context.

2. The RAs have taken an inappropriate view regarding the balance of risks by placing excessive focus on the risk of over payment without due regard to the cost to the consumer of non-delivery of services, including the frustration of government renewable policy. The requirement to deliver services and the realisation of the benefits to the consumer associated with their delivery should be the key focus and driver of decision making with consideration toward incentivising generator performance and ensuring that the consumer does not pay more for services than the identified benefits. As a corollary to the above:

- All options refer to remuneration on the basis of cost even though the RAs have recognised the value the services bring to the system. We suggest that the principle of value based remuneration should be upheld irrespective of the procurement option implemented.
- The proposed payment basis across all options is fundamentally different from that currently employed and proposed by the TSOs in their Recommendations Paper. For example 'Dispatch' has been redefined to mean when the TSO actually uses the service and 'Availability' now relates to market position. The proposed change in payment basis appears to be an attempt to conflate system services with the energy market by incentivising a complex interaction with energy market behaviours that will distort energy market outcomes and further exacerbate market power concerns. This is particularly the case given the expected high concentration of system service revenues that will be paid to ESB². The payment basis put forward by the RAs fundamentally changes the risk profile for service providers undermining the conditions for investment and therefore service delivery. It also further exacerbates market power concerns in the energy market. We therefore suggest that the definition of payment basis should be based on the original TSO recommendations.
- It is unclear that existing capabilities and requirements under grid code would be appropriately remunerated for services provided under all options. Investments have already been made for existing services and these also need adequate remuneration. All units should be guaranteed a contract for services provided up to Grid Code standard and the tariffs applicable should be value-based but no less than existing rates for existing services. Existing capabilities should not be discriminated against on the basis of price or contract eligibility, and system service revenues should not be unduly prejudiced by future changes to Grid Code. These are minimum requirements to ensure adequate remuneration for existing services and capabilities necessary for the

² As for example evidenced in the TSO paper "DS3: System Services Valuation Further Analysis" – see graph on p.22

secure and reliable operation of the system and to maintain confidence for future investment.

3. Option 5 will not deliver the required services; it is overly complicated from a practical perspective; it cannot give efficient outcomes for the consumer as claimed; it is entirely ill-suited to the highly concentrated all-island market that is dominated by ESB; its selection appears predicated upon assumption rather than supported by evidence; and it is unclear what failure criteria would be applied by the TSOs that would be objective, transparent, and legally defensible. Options 3 and 4 suffer many of the same problems.
4. In addition, the prospect of Option 5 reverting to regulated tariffs as described under Option 1 for some providers or services if the auction fails to produce a viable result (however specified) or sufficient quantities, increases the risk of investments and seriously questions the point of implementing Option 5, given that that auctions would have to be highly regulated in any event³ and will revert to Option 1 on unspecified grounds. Therefore proceeding with Option 5 would effectively mean two procurement options needing to be consulted upon and fully progressed.

Energia Recommendations

Given the fundamental concerns expressed above we are therefore firmly opposed to Option 5 or any other form of market based approach for procurement of system services. Instead we recommend a regulated approach and favour a modification of Option 1 and the TSO recommendations as follows:

1. Pricing: The pricing of services needs to be adequate to ensure that services are actually delivered, both to incentivise new investment and appropriately reward existing capabilities. Under Option 1 as described in SEM-14-059, the RAs express a preference for a cost based approach using a BNE plus regulated return. This is not technology neutral and is unlikely to deliver the required services. The TSOs have recommended a value based approach under this option and we agree with this in principle. This would set an implicit cap on total payments at the value of production cost savings and would allocate this value across services on the basis of their relative value as a uniform tariff for each service. The TSO's proposed approach with scalars could be further explored to identify a fair allocation method for services that would otherwise be oversubscribed. This would set a fair price for existing providers and new investments provided that there was also the possibility of contract term flexibility. If a new investment required revenues above these levels, it could not be justified by production cost savings. We would argue that an extended period of price certainty at these tariff levels could be awarded to new investments where a need for a 10 year contract was established (see 2 below).

³ Page 63 of SEM-14-059 states that a "Bidding Code of Practice would be developed and applied to all units participating in the system services auctions. It is envisaged that all bids would be cost based and subject to monitoring through the MMU".

2. Contract length: A 5 year period of regulated revenues is too short to underpin an investment in large scale new plant, such as an OCGT or compressed air energy storage. It may in some cases be sufficient to underpin retrofitting of existing plant or investment in some technologies. There should therefore be flexibility given to the TSOs, where there is a need identified for particular services, or a specific case for new plant investment can be made, that longer term contracts, up to a maximum of 10 years, could be awarded. This should be driven by the TSOs having an informed view of the requirements needed by a particular investment project in terms of contract term. A methodology could be developed by the TSOs to identify the circumstances in which a case could be made for such contracts. Contracts could be awarded with an extended 5 year term where a need could be demonstrated and approved by the Regulatory Authorities.
3. Payment basis: The payment basis put forward by the RAs fundamentally changes the risk profile for service providers to the detriment of investment and service delivery, and further exacerbates market power concerns in the energy market as explained above. We therefore suggest that the definition of payment basis should be based on the TSO recommendations.
4. Products: We would stress the need for lower minimum generation to be specifically incentivised as a stand-alone system service product. The IPA report identifies significant benefits associated with CCGTs lowering their minimum generation levels and recommends further work in this area. Whilst some new services such as SIR may reward lower minimum generation levels the incentive is binary depending on whether minimum inertia thresholds can be met or not and this is largely a function of technology type. In other words, if a particular machine cannot meet the inertia threshold, and there is very little that can be done about this; the SIR product provides no incentive to reduce minimum stable generation. Another modification to products that we highly recommend is the need to pay for the ramping products on the basis of capability rather than dispatch. Dispatch based payments for this product has the perverse effect of not paying for the product once utilised.

We would contend that Option 1 with the proposed adjustments above in respect of price, contract term, payment basis, and product would be most likely to deliver the necessary system services.

1. Introduction

Energia welcomes the opportunity to respond to the SEM Committee consultation paper SEM-14-059 on the Procurement Design of DS3 System Services. Energia has consistently stressed the importance of delivering enhanced system services in a timely and effective manner, otherwise curtailment of wind will continue unabated and government policy will be frustrated. We trust this consultation response is constructive to that end and look forward to further engagement with all key stakeholders, including the RAs and TSOs, in ensuring an effective and timely implementation.

2. Evaluation of Costs and Benefits

We positively acknowledge the SEM Committee's acceptance in SEM-14-059 that substantial capital investment is necessary by 2020 along with current capabilities to deliver the required system services. The DNV Kema study suggesting incremental capital investment in the range of €500-600m is helpful in understanding the scale of the investment challenge. However we should stress that the actual annual cost of delivery cannot be stipulated based on these estimates as the RAs seem to be attempting in SEM-14-059⁴.

In terms of benefits, we welcome the SEM Committee's acknowledgment that delivering required system services, conservatively estimated, is worth in excess of €301m per annum to the system⁵. It is important to recognise that these projected benefits are conservative estimates, based on: modest projections of demand; no interaction with the energy market; assumed efficiency of interconnector flows that is not guaranteed under I-SEM⁶; and a presumption that RoCoF is resolved which clearly has yet to be determined⁷.

3. General Concerns

Having carefully reviewed all procurement options described in the consultation paper (Option 1 through Option 5) we definitively conclude that none meets the required delivery standard or best serves the interests of the consumer for reasons briefly explained in the subsections below. Given concerns regarding market power in the ancillary services sector we have particular concerns regarding an auction based process and discuss this further in section 4.

⁴ A range of €70-84m per annum is suggested in SEM-14-059 based on the DNV Kema and IPA analysis annualised over a 20 year period and applying a WACC of 6.6%.

⁵ An additional €241m per annum over and above the current €60m for ancillary services has been conservatively estimated, thus giving a total annual value of at least €301m.

⁶ Please cross reference Energia's response and accompanying reports submitted in response to the draft I-SEM Decision.

⁷ A programme of testing RoCoF capability is required before implementation and the existence of an Alternative Solutions Project to RoCoF further underlines the uncertainty that exists pertaining to RoCoF.

3.1 Incorrect Balance of Risks

The RAs have taken an inappropriate view regarding the balance of risks by placing excessive focus on the risk of over payment without due regard to the cost to the consumer of non-delivery of services, including the frustration of government renewable policy. This fails to serve either the short or long term interest of consumers, let alone strike an appropriate balance between them which is the stated preference of the SEM Committee.

1. It is clear from the analysis, and accepted by the RAs, that renewable targets will not be met without system service delivery to increase SNSP to 75%.
2. It is also clear from the analysis that system benefits from reduced curtailment of wind, conservatively estimated, are at least €301m per annum.

The requirement to deliver services and the realisation of the benefits to the consumer associated with that should be the key focus and driver of decision making with consideration towards incentivising generator performance and ensuring that the consumer does not pay more for services than the identified benefits.

We discuss in sections 3.2, 3.3 and 3.4 the corollaries to above.

3.2 Focus on Cost Based Pricing

There is an over-arching focus inherent in all options of only allowing cost based remuneration, even with a marginal clearing price. This does not reflect the analysis of the value these services provide to the system even though the RAs want to incentivise units of most value to the system to enter and remain on. The cost based approach for remuneration of system services, which ostensibly aims to minimise the risk of perceived overpayment for services rendered, will fail to achieve the required 75% SNSP, and will not deliver the significant identified benefits to the consumer. We suggest that the principle of value based remuneration should be upheld irrespective of the procurement option implemented.

3.3 Proposed Changes to Payment Basis

The proposed payment basis across all options is fundamentally different from that currently employed and proposed by the TSOs in their May 2013 Recommendations Paper. For example 'Dispatch' has been redefined to mean when the TSO actually uses the service and 'Availability' now relates to market position. The proposed change in payment basis appears to be an attempt to conflate system services with the energy market by incentivising a complex interaction with energy market behaviours that will distort energy market outcomes and further exacerbate market power concerns. This is particularly the case given the expected high concentration of system service revenues that will be paid to ESB⁸. The payment basis put forward by the RAs therefore fundamentally changes the risk profile for service providers undermining the conditions for investment and therefore service delivery. It also

⁸ As for example evidenced in the TSO paper "DS3: System Services Valuation Further Analysis" – see graph on p.22.

further exacerbates market power concerns in the energy market. We therefore suggest that the definition of payment basis should be based on the TSO recommendations.

3.4 Treatment of Existing Capabilities and Services

It is unclear that existing capabilities and requirements under grid code would be appropriately remunerated for services provided under all options. Investments have already been made for existing services and these also need adequate remuneration. All units should be guaranteed a contract for services provided up to Grid Code standard and the tariffs applicable should be value-based but no less than existing rates for existing services. Existing capabilities should not be discriminated against on the basis of price or contract eligibility, and system service revenues should not be unduly prejudiced by future changes to Grid Code. These are minimum requirements to ensure adequate remuneration for existing services and capabilities necessary for the secure and reliable operation of the system and to maintain confidence for future investment.

4. Specific Concerns with Preferred RA Position

The consultation paper is effectively a proposed decision (labelled preferred position) in favour of Option 5 (Multiple Bid Auctions) for the procurement of system services, with Option 1 (Regulated Tariffs) a mooted fall-back. This section considers this preferred RA position in greater detail.

In addition to the major concerns expressed above pertaining to all options proposed, we have particular concerns with Option 5 relating to market power, complexity, subjectivity and inefficiency as discussed in the subsections below. Options 3 and 4 suffer many of the same problems.

4.1 Market Power

We note the SEM Committee's stated 'preference for a competitive market-based solution for the procurement of system services'⁹ and the consequent desire for a market based approach over the current regulated approach. A similar shift in regulatory policy is reflected in the draft I-SEM decision to which we responded with significant trepidation. If the underlying market conditions are uncompetitive, market mechanisms accentuate rather than minimise competitive distortions to the detriment of the consumer.

According to the European Commission, a market could be viewed as 'concentrated' if its HHI exceeds 1,000 and 'highly concentrated' if its HHI exceeds 2,000. The IPA report commissioned by the RAs and published alongside consultation paper SEM-14-059 provides clear evidence that system services on the island of Ireland would represent a highly concentrated market (with HHI>2,000), dominated by ESB. It is

⁹ See page 69 of SEM-14-059.

therefore recommended by IPA that ‘competitive mechanisms will need to be developed within a strong regulatory framework’¹⁰.

The SEM Committee’s ‘minded to’ position to implement Option 5 (Multiple Bid Auctions) is irreconcilable with the clear evidence of market dominance and cannot be credibly justified with reference to a highly questionable assessment of options against select decision making criteria which is unsupported by evidence and fails to consider the potential for competitive distortions and associated inefficiencies. On the latter note for example Option 5 is adjudged to perform best under Criterion 1 (representing consumer interest) “because an individual price is set for each service on a competitive basis” [page 59 of SEM-14-059]. This incorrectly assumes that a market mechanism delivers competitive outcomes in the all-island context and that an optimal solution is achievable under this design.

A market for system services, as proposed under Option 5, is inappropriate given high levels of market concentration on the island of Ireland and the unknown and potentially undesirable and ineffectual steps the RAs would take to mitigate this. The consultation paper states that a Bidding Code of Practice would be developed and applied to all units participating in the system services auctions and envisages all bids being cost based and subject to monitoring through the MMU. This suggests that a highly regulated approach would underlie the pricing of ‘competitive bids’ in any case and it is highly questionable how effective this approach would be in reality in mitigating market power and providing the conditions for delivery of necessary investment¹¹.

It is therefore a fallacy to assume that a market mechanism will deliver an efficient competitive outcome in this context. Furthermore as discussed in section 3.3 above, the proposed payment basis further exacerbates market power concerns in the energy market. In this regard Option 5 tends to a greater interaction between the energy market and the system services market because payments under this option are exclusively based on ‘Availability’ or ‘Dispatch’ as defined in SEM-14-059.

4.2 Complexity and Subjectivity

The complexity of the multiple bid auction¹² and single clearing requirement, lends itself to multiple solutions and non-transparent selection process by the TSO. This will undermine any confidence in the market thus placing investments under risk.

Option 5 is further complicated by the need for market power mitigation measures as discussed in section 3.4.1 above, and with its emphasis on ‘Availability’ and ‘Dispatch’ as the basis for payment it favours base load and large portfolio players and does not provide a bankable source of revenue for investment purposes.

¹⁰ IPA Final Report, ‘Economic Appraisal of DS3 System Services for the CER and UR’, 8 July 2014, page 63.

¹¹ The current BCoP applies in an energy market governed by SRMC bidding rules and a complex bidding structure which is very different from system services.

¹² Option 5 is further complicated by the need for market power mitigation measures as discussed in section 3.4.1.

The proposed methodology to allocate services to sealed bids where bids are “in merit” regardless of the contract term and to remove bids which are “out of merit” could give completely different solutions depending on the order in which services are assessed. Given the inevitable subjective approach, we believe that the outcome of the auction process is likely to be legally challenged.

4.3 Inefficiency

It is assumed that Option 5 yields efficient outcomes for the consumer yet this is unsupported by evidence and does not take into account competitive distortions germane to the highly concentrated all-island system services market that is dominated by one large portfolio player. Nor does it take into account the distortions created by regulatory interventions that would be necessary under this option. Furthermore, the computational challenge of solving a complex multi-objective optimisation problem as would be presented under Option 5 has not been considered in SEM-14-059. Thus even in an ideal fully competitive market it is highly unlikely that this option would deliver efficient outcomes for the consumer.

4.4 Summary of concerns with Option 5

In summary therefore Option 5 will not deliver the required services; it is overly complicated from a practical perspective; it cannot give efficient outcomes for the consumer as claimed; it is entirely ill-suited to the highly concentrated all-island market that is dominated by ESB; its selection appears predicated upon assumption, abstracting from the market reality, and is unsupported by evidence; and it is unclear what failure criteria would be applied by the TSOs that would be objective, transparent, and legally defensible. Options 3 and 4 suffer many of the same problems.

The prospect of Option 5 reverting to regulated tariffs as described under Option 1 for some providers or services if the auction fails to produce a viable result (however specified) or sufficient quantities, increases the risk of investment and seriously questions the point of implementing Option 5, given that the auctions would have to be highly regulated in any event and will revert to Option 1 on unspecified grounds. Therefore proceeding with Option 5 would effectively mean two procurement options needing to be consulted upon and fully progressed.

4.5 Consideration of Option 1

Option 1 (Regulated Tariffs) has some attractive features but is not fit for purpose as currently proposed in SEM-14-059, as discussed further below.

1. It is proposed in SEM-14-059 that regulated tariffs be determined on a BNE cost plus regulated return basis. Our concerns with a cost based approach have been explained in sections 3.1 and 3.2 above. In addition, it is difficult to see how a BNE reference plant could be regarded as “technology neutral”, and it may not be the appropriate technology to deliver all the required services. The pricing of services needs to be adequate to ensure that services are actually delivered and

thus we favour a technology neutral, value-based approach which is acknowledged as a possibility under this option in SEM-14-059¹³.

2. It is proposed that regulated tariffs would be set for a 5 year period and that existing units would be entitled to a renewal of their contract (at the new tariff rates). 5 years with an extension right (albeit with price risk) would have some certainty value but this may not be sufficient to support large scale new investments.
3. Option 1 payments for SIR, FPFAPR, SRP and DRR are proposed to be paid on 'Capability' which is improvement over Option 5 which is proposing these services are paid on the basis of 'Availability'. This implies less interaction with the energy market and greater certainty for investment under Option 1 vis-à-vis Option 5. However, Option 1 still has products paid for on the basis of 'Availability' and 'Dispatch'. The payment basis needs to be re-defined in line with the TSO recommendations.
4. Under Option 1 the TSO will be obliged to assess the services required to achieve the desired outcomes of curtailment minimisation. Since the TSOs are responsible for delivery of DS3 with an explicit target of 75% SNSP it is more likely that they will take ownership of delivering the desired mix of services, than under a competitive bid case where TSO sees risk of procurement challenges.

5. Suggested Way Forward

There is some merit in the TSO recommendation, as published in their May 2013 Recommendations Report to the SEM Committee¹⁴. We suggest in this response how this can be modified to provide the most appropriate way forward for the timely delivery of enhanced system services and the realisation of associated benefits.

1. Pricing: The pricing of services needs to be adequate to ensure that services are actually delivered, both to incentivise new investment and appropriately reward existing capabilities. Under Option 1 as described in SEM-14-059, the RAs express a preference for a cost based approach using a BNE plus regulated return. This is not technology neutral and is unlikely to deliver the required services. The TSOs have recommended a value based approach under this option and we agree with this in principle. This would set an implicit cap on total payments at the value of production cost savings and would allocate this value across services on the basis of their relative value as a uniform tariff for each service. The TSO's proposed approach with scalars could be further explored to identify a fair allocation method for services that would otherwise be oversubscribed. This would set a fair price for existing providers and new investments provided that there was also the possibility of contract term flexibility.

¹³ Page 35 of SEM-14-059 states with reference to Option 1 that "the basis of the price proposed could be determined in advance for each product based on the value of that service relative to the combined value of all the other services".

¹⁴ We have not previously commented on this paper and its recommendations bearing in mind that further analysis and development of procurement options was in progress, as recently published in and with SEM-14-059.

If a new investment required revenues above these levels, it could not be justified by production cost savings. We would argue that an extended period of price certainty at these tariff levels could be awarded to new investments where a need for a 10 year contract was established (see 2 below).

2. **Contract length:** A 5 year period of regulated revenues is too short to underpin an investment in large scale new plant, such as an OCGT or compressed air energy storage. It may in some cases be sufficient to underpin retrofitting of existing plant or investment in some technologies. There should therefore be flexibility given to the TSOs, where there is a need identified for particular services, or a specific case for new plant investment can be made, that longer term contracts, up to a maximum of 10 years, could be awarded. This should be driven by the TSOs having an informed view of the requirements needed by a particular investment project in terms of contract term. A methodology could be developed by the TSOs to identify the circumstances in which a case could be made for such contracts. Contracts could be awarded with an extended 5 year term where a need could be demonstrated and approved by the Regulatory Authorities.
3. **Payment basis:** The payment basis put forward by the RAs fundamentally changes the risk profile for service providers to the detriment of investment and service delivery, and further exacerbates market power concerns in the energy market as explained above. We therefore suggest that the definition of payment basis should be based on the TSO recommendations.
4. **Products:** We would stress the need for lower minimum generation to be specifically incentivised as a stand-alone system service product. The IPA report identifies significant benefits associated with CCGTs lowering their minimum generation levels and recommends further work in this area. Whilst some new services such as SIR may reward lower minimum generation levels the incentive is binary depending on whether minimum inertia thresholds can be met or not and this is largely a function of technology type. In other words, if a particular machine cannot meet the inertia threshold, and there is very little that can be done about this; the SIR product provides no incentive to reduce minimum stable generation. Another modification to products that we highly recommend is the need to pay for the ramping products on the basis of capability rather than dispatch. Dispatch based payments for this product has the perverse effect of not paying for the product once utilised.

Given the fundamental concerns expressed above we are therefore firmly opposed to Option 5 or any other form of market based approach for procurement of system services. It is contended that Option 1 (Regulated Tariffs) with amendments as proposed above would be most likely to deliver the required services. If the tariffs fail to attract the necessary volume of services, adjustments can be made quickly with regulatory approval to facilitate the provision of services. There is a lesser threat of legal challenge to the procurement process, though the TSO will need to use its judgement in procuring the services, and given the overall cap on service costs, this is likely to require scarce allocation of some services. The TSOs will need to be able to demonstrate a fair and equitable process and rational decision making in this case.