Response by Energia to the SEM Committee Consultation Paper SEM-16-059

Offers in the I-SEM Balancing Market

18 November 2016

Executive Summary

This SEM Committee consultation on Offers in the I-SEM Balancing Market (SEM/16/059) is arguably the most important consultation paper issued by the SEM Committee in the design of I-SEM. The decisions taken in respect of this consultation will markedly affect the efficacy and efficiency of all I-SEM energy markets and consequently have significant bearing on the economic welfare of generators and customers. The importance of this decision and the SEMC's 'minded to' position also raises the prospect of serious challenge with consequential implications for the I-SEM implementation programme. It is therefore necessary that the decision-making process is evidence-based and supported by appropriate analysis and assessment. Energia has grave concerns over the procedural deficiencies contained in this consultation paper. Supported by legal inputs from Arthur Cox and an expert economic report from NERA, Energia's response highlights significant and fatal errors in both the proposed approach and the options put forward by the SEM Committee in this consultation.

First, the proposed removal of the cost-reflective condition in generators' licence raises very significant issues of principle which go to the heart of the justification for the regulation of electricity generation in Ireland and the extent of the discretion afforded to the regulatory authorities in the discharge of their statutory duties and powers. It is Energia's very firm view that the approach proposed by the SEM Committee in terms both of the removal of the cost-reflective condition in generators' licence and its replacement with an obligation to comply with rules to be decided by the SEM Committee, including the determination of eligible costs, would amount to an unlawful exercise of powers by the Regulatory Authorities and would bring about a regulatory framework that would be characterised by fundamental legal uncertainty and that would be in direct conflict with constitutional and statutory requirements, as well as judicial precedent. For these reasons, the changes proposed in the consultation paper are opposed in the strongest terms.

Second, the SEM Committee appear to have had no regard for precedent and have called into question the fundamental principles of regulatory stability, transparency and consistency. It is important to recognise that the current bidding control arrangements do not exist in the ether. These arrangements and associated documents were the subject of consultation and decision, and have been the subject of subsequent interpretation and clarification by the SEM Committee. Some key conclusions from these documents include;

1. The SEM Committee's absolute and repeated preference for flexible, high-level bidding principles over any form of prescription or bidding rules.
2. The primary objective of the bidding controls is to remove the ability for any party to profit from market power and this should be enforced by the Regulatory Authorities, through a licence condition, and acting through the Market Monitoring Unit.
3. The deleterious effects for all, including customers, of failing to ensure generators are appropriately remunerated.
4. The ability, indeed the requirement, on the part of generators to include the following cost-items in their Commercial Offer Data; Variable O&M, including long-term maintenance costs; foregone revenue; increased risk to plant and machinery associated with the unit's operation; probabilistic estimates of cost, where such cost-items form part of the generator's Short-Run Marginal Cost.
5. Repeated endorsements of the current bidding control arrangements, specifically their efficacy in preventing possible market power abuses, especially where local market power has arisen due to system constraints.

At no point in this consultation paper do the SEM Committee seek to explain their rejection of these fundamental precedents nor do they assess the impact of doing so.

Third, the SEM Committee's proposed rejection of a minimal change approach to the current arrangements is unsupported by evidence or analysis. Despite endorsing the efficacy of the current bidding controls, the SEM Committee attack core concepts and precedents underlying the controls and seek, through misinterpretation and misunderstanding of basic economic concepts, to undermine the suitability of the current arrangements for the I-SEM Balancing Market. In doing so the SEM Committee appear to have had regard to irrelevant considerations; failed to have regard to relevant considerations; failed to address the core issue of market power; confused their own errors of interpretation of the controls with purported failings of the controls; misinterpreted core principles of regulation, principally flexibility and clarity/transparency, and; have done so in an attempt to address perceived issues with the current rules that are unrelated to I-SEM. Both Energia and NERA find there is no substantive basis to the criticisms made by the SEM Committee against the current arrangements. NERA have also rejected the SEM Committee's argument, that for the purposes of this consultation paper, namely market power mitigation, the relevant issues do not change as we move from SEM to I-SEM, despite the changes in market design; "[*T*]*he increase in number of organised markets under I-SEM is irrelevant*"[1].

Specifically on the SEM Committee's apparent criticism of the current arrangements on the basis that they have been the subject of challenges by generators, NERA correctly note that errors of interpretation were committed by the SEM Committee and not the generators[2]. NERA also note that where the SEM Committee attempt to justify change on the basis of the issues that have arisen in the SEM with regard to Carbon Revenue Levy (CRL) and Gas Transportation Capacity (GTC) "[*T*]*he CRL and GTC examples do not therefore provide grounds for giving more flexibility to the regulatory authorities. Relying on those examples would imply that the regulatory authorities want to increase their scope to commit errors of interpretation, which cannot be the intention.*"[3]

Fourth, the SEM Committee's proposed options and redefinition of core economic concepts are again unsupported by evidence or analysis and do not stand up to scrutiny. Furthermore, the proposed scope of the options, the uncertain and unfettered discretion the SEM Committee have sought to create for themselves, is contrary to statute and fundamental principles of constitutional justice, and would negatively impact on efficiency, competition, customers, generators and the overall perception of regulatory risk in I-SEM. The SEM Committee's proposed exclusion of costs that are today SRMC cost-items, is unsupported, unjustified with reference to economic principles and, without relevant analysis, arguably contrary to the SEM Committee's statutory duty to ensure market participants can finance their licenced activities[4] and the constitutional rights of generators.

Similar wide ranging regulatory discretion has previously been sought by regulators in Great Britain and these powers have been struck down by the Competition Commission for reasons including those cited herein. NERA have rejected the unprecedented level of prescription the SEM Committee have sought to introduce on the basis of views that are erroneous and/or unsupported by evidence. This view on prescription is shared with leading energy economists, including Prof William Hogan who has advised the Federal Energy Regulatory

[1] NERA Report on SEM/16/059 at p10
[2] Ibid at p9
[3] Ibid
[4] Section 9BC(2)(b) of the Electricity Regulation Act 1999, as amended

Commission that, "[*T*]*rying to use regulation to force the theoretical limit of perfect competition probably does more harm than good because regulated solutions are also imperfect*"[5].

Fifth, in practice the two options proposed by the SEM Committee are remarkably similar, with the main difference being the party that undertakes the calculation of offers or offer limits. Both options are therefore susceptible to the fatal criticisms presented in this response. Despite the label attached to Option 1 (Offer Principles) this option can only be objectively characterised as being a highly prescriptive set of bidding rules that seek to impose highly regulated offers in the I-SEM Balancing Market that are below a generator's Short Run Marginal Cost. The effects of such an approach are profound; it is contrary to the economic principle of efficiency; contrary to the interests of customers and constitutional and statutory requirements, including being contrary to the SEM Committee's statutory duty to ensure generators can finance their licenced activities; contrary to good regulation, particularly as no analysis has been undertaken of the effects of such a proposal; contrary to the statutory duty to promote competition, and; based on erroneous (mis-)interpretations of basic economic concepts. Option 2 is a poorly conceived and poorly thought-out idea that has prematurely been put to the market as a viable option for offer controls in I-SEM. NERA have stated that the approach, as outlined, cannot objectively be said to derive any legitimacy from the use of "offer limits" in Italy and is not in keeping with the controls to address similar issues employed elsewhere in Western Europe.[6] Both proposals are rejected by Energia in the strongest terms.

Sixth, without prejudice to our view that neither option can validly be chosen, the SEM Committee have further compounded this problem by relying upon an ad-hoc list of advantages and disadvantages in respect of both proposed options. This approach does not provide an objective basis from which any determination between these options could be made. As a result of this partial and inconsistent assessment, NERA have concluded that the one salient point that comes from the SEM Committee's assessment is confirmation that, "*the whole Consultation Paper is based on a myth, i.e. that fixed rules are easier to implement than a principles-based regime*"[7].

Furthermore, the SEM Committee have inexplicably failed to assess the options or the current bidding control approach, with reference to the five key assessment principles recently adopted by the SEM Committee in their I-SEM Market Power Decision Paper that were to be used to assess all market power mitigation policies. Assessing both proposed options relative to these assessment principles suggests that both perform remarkably poorly against all of the principles. Both relative to the proposed options and in absolute terms, the current arrangements perform well. The absence of these recently adopted principles from the consultation paper is astounding.

Seventh, and in light of the foregoing, the most appropriate approach for the SEM Committee to adopt is one of minimal change to the current cost-reflective generator licence condition and Bidding Code of Practice to reflect the change in relevant timeframes appropriate to balancing market actions. While the current wording "Trading Day" may be regarded to be too long a reference period, the proposed 30-minute Imbalance Settlement Period timeframe is unnecessarily short and risks depriving generators of recovery of their SRMC. The relevant timeframe is therefore once ascribed to the Balancing Market Action. The precise wording of our proposed amendments is contained in the main body of this response (Section 8).

[5] Hogan, W, Local Market Power Mitigation, Comments to Technical Conference on Compensation for Generating Units Subject to Local Market Power Mitigation in Bid-Based Markets, 2004 at p1; available at: https://www.hks.harvard.edu/fs/whogan/Hogan_FERC_020404.pdf
[6] NERA Report on SEM/16/059 at pp33-36
[7] Ibid at p44

In conclusion, the current consultation paper contains numerous economic, legal and procedural errors and does not form a reasonable objective basis from which the SEM Committee can decide to jettison the current arrangements which the SEM Committee acknowledge are working well, and replace them either of the options proposed in the paper. As NERA concluded, "[*T*]*he consultation paper offers no grounds for departing from this approach, especially since it acknowledges the effectiveness of the BCoP over many years*."[8]

The importance of this consultation paper to the outcomes in all energy markets, as well as to the economic welfare of generators and customers, is such that any decision on the basis of this consultation paper and/or the subsequent process to modify generator's licences will be susceptible to challenge. This response, including the report provided by NERA, highlights multiple, significant deficiencies in the consultation paper and these must be addressed if the SEM Committee is to act *intra vires* their powers and present a "*transparent, accountable, proportionate, consistent and targeted*"[9] decision on this key feature of the SEM Committee's market power mitigation strategy for I-SEM.

[8] Ibid at p15
[9] Section 9BD of the Electricity Regulation Act 1999, as amended

1. Introduction

Energia welcomes the opportunity to respond to the SEM Committee's consultation on the Offers in the I-SEM Balancing Market (SEM-16-059). This consultation is of vital importance to generators and to the subsequent success of I-SEM. The consultation paper raises a number of highly material issues and pre-empts the future consultation on proposed licence changes. Energia fundamentally disagrees with many of the views and conclusions expressed in the paper and this response highlights these issues and explains our objections, with additional support provided by NERA Economic Consulting and Arthur Cox. Energia strongly advocates for the retention of the current bidding controls, albeit with minimal proposed amendments to suit the specific requirements of the I-SEM Balancing Market.

The response is organised as follows; Section 2 addresses the proposed licence amendments as a preliminary issues, noting the future consultation on this specific matter. Section 3 reviews selected SEM Committee decisions on related matters. Section 4 presents a detailed critique of the SEM Committee rationale and general proposals. Section 5 addresses the proposed offer controls. Section 6 includes an assessment of the proposed options, alongside the current arrangements. Section 7 provides brief responses to the specific consultation questions. Section 8 provides the rationale and wording for Energia's alternative approach. Section 9 presents the main conclusions from this response.

Finally, Energia endorses the response of the Electricity Association of Ireland (EAI) to this consultation.

2. Preliminary Issues

At the outset of the consultation paper, the Regulatory Authorities (RAs) note that a future consultation, separate to this consultation, will be issued to modify licences issues by the RAs, including generator licences. The paper states that the RAs may use that consultation to "*bring forward the licence changes which will underpin compliance with any revised offer controls that are determined by the SEM Committee*".[10] Further to this statement, the RAs dedicate 16-pages of the current consultation to presenting a Balancing Market Offer Principles Code of Practice (BMOPCoP) and a draft Generation Licence condition; that is twice the number of pages given to presenting the offer control options in section 4 of the consultation paper. The RAs clarify that the draft licence conditions are indicative only and will be subject to further consultation. Nevertheless, given the detailed proposals presented in this consultation paper, it is deemed necessary to state some preliminary but substantial objections to the proposed changes to generator licences.

As part of their rationale for the proposed changes in bidding controls (section 3.4), the SEM Committee is said to be minded "*that such clarity (along with additional flexibility) can, in part, be achieved by transferring details (e.g. calculation of SRMC from the Generation Licence Condition "Cost Reflective Bidding in the Single*

[10] SEM/16/059 at p4

Electricity Market" to a revised offer controls document".[11] No reasons are advanced as to why the SEM Committee holds this minded position or what factors they considered in arriving at it. It is also unclear why clarity would be enhanced by such an approach and/or what is meant by additional flexibility; these claims are addressed in the main body of this response.

The proposed changes to the generator licence are substantial. The current licence condition, entitled "Cost Reflective Bidding in the Single Electricity Market", requires the price component of Generators' Commercial Offer Data (COD) to be cost-reflective (paragraph 1). The price component of a generator's COD will only be cost-reflective if it represents the unit's Short Run Marginal Cost (SRMC) on that trading day (2) and a formula for calculating the relevant cost-items for the purpose of determining the unit's SRMC is also provided (3). The costs attributable to the respective cost-items are to be valued at Opportunity Cost (4). The licence condition then makes provision for the SEM Committee to develop, and from time to time amend, the Bidding Code of Practice (BCoP) which is to contain a definition of Opportunity Cost, make provision for the valuation of certain costs – fuel, carbon, Variable Operation and Maintenance (VOM), start-up and no-load costs, and any other costs attributable to the generation of electricity – as well as principles of good market behaviour (5). The Licensee is then obliged to comply with the BCoP in furtherance of their general obligation for the price component of their COD to be cost-reflective (6). The condition includes a number of other general enforcement powers and definitions (7-11).

The SEM Committee proposes replacing this licence condition, under Option 1, with a generator licence condition entitled "Balancing Market Offer Principles".[12] Paragraph 1 of the proposed licence condition requires generators to act "*so as to ensure its compliance with the Balancing Market Bidding Principles Code of Practice*".[13] The power to develop and amend the Balancing Market Bidding Principles Code of Practice is contained in paragraph 2, which also appears to give the SEM Committee a very wide discretion to apply the provisions of the Code to different markets "*from time to time*" (2a) and shall "*make such provision as appears requisite to the [RAs] for the purpose of securing that such Commercial Offer Data are cost-reflective*" (2b). It also appears to grant the respective RAs the powers to act individually or jointly. The remainder of the condition outlines various enforcement powers, reporting requirements and definitions (3-9). When compared to the current licence condition, the only substantive requirement on a generator in respect of the price component of their COD, is to comply with the Balancing Market Bidding Principles Code of Practice.

Separately, the Balancing Market Offer Principles Code of Practice requires generators' COD to be cost-reflective (paragraph 4); cost-reflectivity is defined with reference to SRMC (5); SRMC is defined with reference to a list of costs deemed to be eligible costs by the SEM Committee (7A); certain costs are expressly disallowed

[11] Ibid at 13
[12] The proposed licence condition to facilitate Option 2 contains materially different licence requirements, reflecting the nature of the bidding control and the issues arising are dealt with in the main body of this response.
[13] Ibid at 38

(8), and; an explicit formula is provided for the calculation of each eligible cost (14-21). Separate provisions are made for start-up (9-10 and 22-23) and no-load costs (11-12 and 24). All eligible costs are to be valued at their Opportunity Cost (27). It is apparent from the document and is the clear intention of the SEM Committee that all substantive definitions, assurances, obligations and requirements, in respect of the price component of generators' COD, should be outside of the licence and placed in a Code of Practice.

There are a number of significant issues arising with this proposed approach, both in relation to the format and content of the proposed licence condition. First, it cannot be the case that by moving principles and definitions from one document to another, that that alone would improve clarity for market participants.[14] However , in doing so in the manner proposed, the SEM Committee would deprive market participants of their statutory right of appeal to an appeals body under Part IV of the Electricity Regulation Act 1999 (the "1999 Act") in the Republic of Ireland (RoI) or to the Competition and Markets Authority (CMA) in Northern Ireland (NI). Licence modifications, the basis for appeals, would no longer be required to make substantial amendments to the rights and obligations of generators.

Second, the vagueness of the licence condition and the discretion retained by the RAs would render the proposed condition void or unlawful, as being contrary to the general principle of legal certainty.

Third, section 14 of the 1999 Act, provides that "*where the Commission grants [such] a licence, that licence shall be subject to such terms and conditions as may be specified in the licence*". The statutory framework within which CER derive their power to grant and amend licences, and to impose licence conditions, clearly requires that conditions that are attached to licences are substantive conditions, in that they contain the substance of the requirements with which compliance is expected. For example, under section 14, the terms and conditions to which the licence is subject must be specified in the licence[15]; not in a derivative document, in this case the Balancing Market Offer Principles Code of Practice. As the statutory appeal process is part of this same statutory framework, it would be rendered meaningless in this context and as such CER would be acting *ultra vires* its powers to impose licence conditions by depriving the licence conditions of their substance and thereby licensees of the protection afforded under the 1999 Act. A similar argument could equally be made out for NI.

Finally, it is obvious from both statute and common law that the RAs are imbued with a substantial degree of flexibility already. This is evident from the current licence, wherein the RAs were expressly given the power to develop and amend the BCoP. In the matter of *Viridian and Endesa v. CER* [2011] IEHC 266, Clarke J in the High Court found that "*there is no reason in principle why a document, such as a licence, by which a statutory body exercises a public law power, cannot retain to the statutory body the power to make further decisions or interpretations in accordance with the*

[14] See NERA Report on SEM-16-059 at p16
[15] Section 14(1) *The Commission may grant or refuse to grant to any person a licence - …and where the Commission grants such a licence, that licence shall be subject to such terms and conditions as may be specified in the licence*.

provisions of the licence in question. It is only if the retention of such added flexibility is in itself a breach of the overriding statutory power being exercised that the retention of such flexibility would be impermissible." [16] (emphasis added). In addition, Clarke J stated that "*[P]rovided … that the retention of flexibility is itself lawful having regard to the overall statutory regime, there is no reason why a licence, in its terms, may not retain some flexibility to the licence grantor*"[17] (emphasis added). Through these various findings, Clarke J clearly limits the flexibility and discretion that the RAs can seek to retain for themselves, and, consistent with the discussion of section 14 of the 1999 Act herein, identifies the licence as the proper source of principles, obligations and duties. Flexibility is limited to matters regarding the manner in which the rules set out in the licence would be implemented.

In light of the foregoing the following brief conclusions can be drawn on this important preliminary issue. The indicative wording of the proposed Licence Condition for Balancing Market Offer Principles does not contain the necessary principles and terms required by statute; it is primarily an empty-vessel, requiring compliance with a secondary document wherein all of the material terms and conditions of the licence condition have been migrated. The degree of flexibility sought to be retained by the RAs is impermissible and ultra vires their powers under the relevant statutory framework. The proposed changes would deprive generators of their statutory recourse to appeal modifications to the licence, as the licence condition would be devoid of any material terms and a statutory appeal is not available in respect of a change to the Balancing Market Offer Principles Code of Practice.

This attempted unfettering of the RAs discretion, while also seeking to remove the necessary statutory system of checks and balances on the exercise of such discretion is wholly unacceptable to Energia. In due course, if the SEM Committee decides to adopt the indicative text of the proposed licence condition, or text that suffers from similar deficiencies, it seems highly likely, for the reasons set out herein, that a statutory appeal and/or judicial review proceedings would be commenced within the relevant timeframe after such a decision.

3. Background

The current bidding arrangements in SEM were not drawn from the ether, they have their genesis in a number of SEM Committee consultation and decision documents, and the SEM Committee have interpreted and clarified these arrangements on a number of occasions since then. It is therefore instructive to consider a number of these documents and the views of the SEM Committee contained therein.[18] It would be somewhat unusual if, within the current consultation paper, the SEM Committee were found to be disagreeing with themselves, particularly as they have repeatedly endorsed the current arrangements their efficacy in mitigating the risk arising from both general and local market power. Absent an overwhelming body of evidence to the contrary, it is expected that regulatory precedents are to be followed in the

[16] *Viridian Power Limiter & Anor v. Commission for Energy Regulation* [2011] IEHC 266, at para 5.12
[17] Ibid
[18] See Appendix A of this response for a complete selection of extracts from these relevant SEM Committee documents.

interests of regulatory certainty, stability, consistency and ultimately to minimise regulatory risk.

In AIP/SEM/73/06, the SEM Committee's consultation paper on Bidding Principles and Local Market Power in SEM, the SEM Committee, having endorsed SRMC bidding as being appropriate for the SEM stated:

> *Despite the argument given above that SRMC is the pricing strategy consistent with competitive behaviour, it would harm consumers if pricing according to SRMC did not, on average over time; manage to provide adequate incentives for efficient new entry. Was this the case, no investor would rationally commit capital to the SEM.*[19]

On the issue of bidding principles, the SEM Committee made a number of relevant observations:

> *The use of bidding principles is an attempt to provide market participants' flexibility to innovate that may be precluded if prescriptive bidding rules were adopted.*[20]
>
> *The use of bidding principles means that the market monitor ought not to prescribe either method [re. heat rate curves and monotonically increasing bids], or indeed, limit the methodology to these two. So long as the generator has sought to reflect social costs as well as it can within the limitations of ten-load-point monotonically-increasing bidding, its bid should be accepted*.[21] (emphasis added)

On a number of other specific costs the SEM Committee stated:

> *Some aspects of plant operations other than fuel undoubtedly vary relative to output…Nonetheless it is difficult to make hard-and-fast rules about the categorisation of O&M costs into variable and fixed components. It is anticipated that the market monitor will accept reasonable evidence in relation to the incorporation of O&M costs into the SRMC bid*.[22] (emphasis added)
>
> *The treatment of start-up and no-load costs in the bidding of generators is thus a good example of the general superiority of bidding principles to bidding rules. Since the goal of SRMC bidding is efficient dispatch, the explanation for a particular set of bids, if couched in terms which suggest that idiosyncrasies of EPUS software in a particular instance require an accounting for start-up and no-load costs in order to reflect the true economics of a given unit, ought to be given due weight by the market monitor taking account of the situation.*[23] (emphasis added)

In considering opportunity cost, the SEM Committee first set out their thoughts on the treatment of intermittent and energy-limited units[24], before stating the following:

[19] AIP/SEM/73/06 at p5
[20] Ibid at p19
[21] Ibid at p8
[22] Ibid at p8
[23] Ibid at p10
[24] Ibid pp10-11

> *Consistent with the imposition of bidding principles, the market monitor should be open to any reasonable showing of a real resource costs which is in fact incremental to output levels*.[25] (emphasis added)

And in respect of deferred maintenance costs:

> *So long as the bid reflects real resource costs, it should be consistent with SRMC Bidding Principles. This is another example of the use of principles in lieu of prescriptive rules in which the strategy of a particular generator ought to be allowed*.[26] (emphasis added)

As with the current consultation paper, the SEM Committee also addressed the issue of probabilistic estimates of costs, stating:

> *While most of the data required for the estimation of SRMC is reasonably straightforward and objective, other assessments, notably assessments of probability, are more difficult to assess…In general, we can use the basic method to bound the confidence interval for any series of uncertain events characterised by probabilities…A generator might well be expected to present prospective evidence on this quantity (the incremental cost), and will certainly be expected to justify this estimate after substantial operating experience in this range*.[27]

Finally, on the issue of local market power, the SEM Committee's view with respect to SRMC bidding was that:

> [*l*]*ocal market power is forced of necessity to rely more heavily on the bidding principles. Enforcement of the bidding principles should therefore be expected whenever large values of constraint payments are made to constrained generators. So long as these generators have bid SRMC as defined herein, there are no important policy issues regarding market power*.[28] (emphasis added)

In AIP/SEM/116/06, the SEM Committee's Decision Paper on Bidding Principles and Local Market Power, the SEM Committee were emphatic in the purpose of SRMC bidding:

> *A fundamental part of this (market power mitigation) strategy is the implementation of short-run marginal cost ("SRMC") bidding for generators, the primary objective of which is to remove the ability to profit from the use of market power…The primary objective is achieved by placing the obligation to bid at SRMC on those generators with market power with respect to the formulation of the SMP and on generators with local market power*.[29] (emphasis added)

On the issue of enforcement of SRMC bidding, the SEM Committee's view was:

[25] Ibid at p12
[26] Ibid
[27] Ibid at pp17-18
[28] Ibid at p16
[29] AIP/SEM/116/06 at p2

> [t]*his task will be undertaken by the Regulatory Authorities enforcing the bidding principles through a licence condition and by the Regulatory Authorities acting through the market monitor to monitor compliance*.[30] (emphasis added)
>
> *The Regulatory Authorities believe the investigation of adherence to bidding principles will be a relatively rare event*.[31] (emphasis added)

In response to concerns from market participants about the potential arbitrary or subjective application of bidding principles, the SEM Committee addressed the issue of principles versus prescription:

> *A strength of the bidding principles is their flexibility, the ability to adapt to changing circumstances. This coupled with the statutory obligation of the Regulatory Authorities (and therefore the market monitor) to be fair and non-discriminatory in their treatment of generators leads the Regulatory Authorities to believe that this concern is misplaced*.[32] (emphasis added)

Importantly, on the potential issue of predation, the SEM Committee noted; "*the requirement to bid at SRMC imposes a bid floor, but not only that it imposes the economically correct bid floor"*[33].

Finally, returning to the issue of local market power initially raised in the consultation paper, the SEM Committee, before agreeing to investigate further a tender to alleviate specific locational constraints, stated:

> *While the CPM combined with SRMC bidding should be compensatory for most units, the Consultation paper left open the possibility that it might not be compensatory for units which are nonetheless vital to the system for local stability reasons. In that consultation, the Regulatory Authorities allowed a fallback position of a reliability must-run contract which compensated such units for their costs in lieu of allowing them to extract locational monopoly rents through bids which do not reflect SRMC*.[34]

Having decided on the bidding principles for the SEM, the SEM Committee developed the Bidding Code of Practice. AIP/SEM/07/430, the SEM Committee's Decision Paper on the Bidding Code of Practice, stated, on the final definition of opportunity costs:

> [t]*he Regulatory Authorities are satisfied that the definition in the Bidding Code of Practice…provides sufficient guidance to market participants when formulating their bids, while allowing them the flexibility to determine their SRMC within reasonable bounds and to allow innovative bidding strategies*.[35] (emphasis added)

In response to calls from certain respondents for more prescription, the SEM Committee's response was as follows:

[30] Ibid at p4
[31] Ibid at p6
[32] Ibid at p8
[33] Ibid
[34] Ibid at p10
[35] AIP/SEM/07/430 at p4

> *The Regulatory Authorities are concerned that to include this sort of detail in what is intended to be a high level Code of Practice would run the risk of turning it into a set of rules rather than principles*.[36] (emphasis added)

And in conclusion on the formal Bidding Code of Practice, the SEM Committee stated:

> [*t*]*he Bidding Code of Practice, as at Annex A, gives sufficient guidance to market participants on how they might be expected to bid in the SEM consistent with their licence conditions, while leaving participants with a degree of flexibility and without going so far as to prescribe rules and formulae*.[37] (emphasis added)

In respect of these documents that served as the cornerstones of the SEM Committee's market power mitigation strategy, there is an express acknowledgement that generators know best and should thus be afforded the necessary flexibility to reflect the SRMC of their respective units in their COD. Also, considerable thought was given to central concepts and costs such as opportunity cost, local market power, probabilistic costs and risk, start-up and no-load costs, and VOM costs. In respect of local market power, there is also acknowledgement by the SEM of their statutory duties with regards to the required assessment of generators' revenue requirements and in the context of imposing SRMC bidding principles, that the different revenue streams would be sufficient for generators behind a constraint that were vital to the system.

All of this serves to highlight two features in the current consultation; (1) the absence of similar consideration of the impact of the proposed changes on the revenue streams of generators, particularly generators that are behind a transmission constraint and are vital to the system; and, (2) the unwavering belief on the part of the SEM Committee in a principles-based approach and the utter rejection of prescription is in stark contrast with the SEM Committee's proposed options for offer controls in I-SEM.

The SEM Committee's involvement in the bidding controls did not stop with SEM go-live, the SEM Committee have continued to consider bidding matters, offering their interpretation in an attempt to clarify a relatively small number of areas that have been found to be ambiguous. The SEM Committee decision in respect of Bidding the Opportunity Cost of Carbon (SEM/08/32) serves to highlight the efficacy of the bidding principles, how well understood these principles were are by market participants and how, if required, the principles could be flexed to consider, if not accommodate, new and innovative approaches to different cost-items. Ultimately, the SEM Committee decided against allowing generators greater flexibility in the bidding of carbon allowance for a series of reasons, including; distortions to market price signals; increased complexity in market monitoring; increased regulatory risk; increased cost of capital; and, that to do so would "*diminish the effectiveness of the bidding principles as a market power mitigation tool*".[38] This decision represents an

[36] Ibid at p6
[37] Ibid at p8
[38] SEM/08/32 at p6

endorsement of the bidding principles and their efficacy, as well as of the adverse effects of bidding below the SRMC of a generator.

Also in 2008, the SEM Committee published its Final Report on Complaints on Bidding Practices in the Single Electricity Market (SEM/08/069). The report represented the culmination of an investigation by the Market Monitoring Unit into various complaints against bidding practices in SEM. Specifically, the final report focussed on the issues of start-up costs and contract costs but the views of the SEM Committee on these and other costs are worth quoting at length (emphasis added).

9.6. Further, the BCOP establishes at paragraph 8 (iii) that "reasonable provision for increased risks to plant and equipment as a result of the operation of a generation set or unit" could be included in calculating the opportunity cost. In a consultation paper published in 2006 (AIP/SEM/73/06) the Regulatory Authorities anticipated that these provisions would be calculated by reference to the expected value of generator damage as a result of the running regime of the generator unit, using probabilities of a catastrophic event occurring by reference to experience, capped by premiums payable on catastrophic damage insurance policies, appropriately averaged over the coverage period. It was explicitly noted at the time that these calculations should relate to extraordinary efforts only. The routine operation of a generator unit introduces some risk of plant damage. But it was anticipated that this cost would be best considered as part of the normal annual O&M costs of a unit and not as incremental.

9.7. The SEM Committee considers that the BCOP and Licence conditions require that bids are cost-reflective. Bids should therefore take account of all avoidable costs incurred by a participant, taking account both of the costs of running and the costs of not running. The SEM Committee does not consider that a generator should be required under its Licence to incur significant avoidable costs without the prospect of being able to recover them, always excepting the sunk costs of past investment decisions. All avoidable costs should be capable of being recovered through some element of the participant generator's commercial offer data, including the prospective loss of capacity payments and inframarginal rent from SMP as a result of an increased number and duration of outages that can be explicitly linked to the running regime of the plant.

9.8. ***Accordingly, the SEM Committee considers that all the avoidable costs outlined above – the additional O&M expenditure, the additional equipment costs, the increased risk of failure to plant and equipment as a result of the plant's running regime and the concomitant loss of revenue from capacity payments and infra-marginal rents from SMP – are allowable costs.***

9.9. To do otherwise could threaten the development of efficient new entry and effective competition, given that it may dissuade generators from entering the market if they perceive that they may incur irrecoverable forward-looking costs when doing so. Operation within the market must be economically

viable for competition to flourish. The SEM Committee considers that this can only be achieved by ensuring that all avoidable costs are recoverable.

…

9.12 While the SEM Committee does not wish either the cost reflective bidding Licence condition or the BCoP to become the vehicle for detailed rules on how costs should be allocated and valued, it recognises the need to provide clear guidance on the validity of including costs of two-shifting in PQ pairs.

…

11.4 Under the cost reflective bidding Licence condition, the role of the SEM Committee is not to specify what items, or in what quantities, should be used in generating electricity. However, it must be satisfied that cost items included in calculating short run marginal cost are actually associated with ownership, operation and maintenance of a generation set or unit and that participants' commercial offer date reflect the opportunity cost of items actually used.

…

12.4 Where the consideration of the complaints involved the exercise of judgment or interpretation on the part of the SEM Committee, this was done in the light of the Committee's statutory duties and objectives.

12.5. While it is not the desire of the SEM Committee to create detailed rules on how costs should be allocated and valued, it is accepted that there is a need to provide clear guidance on the appropriate interpretation of the various Licence obligations and codes binding on market participants.

…

12.7 The SEM Committee also considers that the revenues foregone as a result of the particular running regime of a generator unit are an allowable cost item.

This comprehensive set of view and conclusions by the SEM Committee is inescapable in the context of the current consultation. The SEM Committee express an unequivocal view that the increased risk to plant and machinery, VOM and foregone revenue are all allowable costs and furthermore, any attempt to deny their recovery would threaten the development of effective competition in the market.

More recently in the context of the I-SEM workstream, the SEM Committee have, in the I-SEM Market Power Consultation Paper, acknowledged that the MMU function has worked well in SEM, especially in monitoring and enforcing BCoP[39].

In the I-SEM Market Power Decision Paper (SEM/16/024), the SEM Committee acknowledged the degree of prescription in the current bidding-principles, given the detail in the BCoP:

> *The policy underpinning the market power mitigation strategy in SEM is based on bidding principles with generators expected to represent opportunity costs in their bids. As part of the implementation of the bidding framework, the Bidding Code of Practice was developed with the BCOP setting out in a reasonable level of detail how generators should present their costs to the*

[39] SEM/15/094 at para 7.3.1

> *Market Operator. Therefore, the current framework might be seen as principles by some and prescriptive by others*.[40] (emphasis added)

Furthermore, the SEM Committee appeared to indicate satisfaction with the current bidding principles:

> *Respondents also agreed that there are instances where some of the principles may conflict and the SEM Committee is also of this view. When having principles that are broad, there is always the risk that this can happen but the SEM Committee does not view this as a reason to amend the principles.*[41] (emphasis added)

The SEM Committee went on to state that, "*Option 2b [Offer Principles] will only apply to instances where limited or no competition exists in the market*"[42]. The SEM Committee at so stated:

> *The SEM Committee believes that the application of a bidding principle to the 3 part offers for non-energy actions in the balancing market, will need to offer clarity and flexibility were (sic) appropriate.*[43]

However, it is not possible to read this final sentence in isolation as the SEM Committee also adopted the principle of flexibility, as a SEM Committee principle of market power assessment, in the same decision paper and summarised its intended meaning to be;

> *Flexible: the measure should be sufficiently flexible and robust to account for changes in market fundamentals and changes to the generation mix. Flexible also implies the ability to remove the measure should it no longer be required.*[44]

Good regulation is, *inter alia*, stable, consistent and predictable. On the basis of the review undertaken herein, it appears as though the SEM Committee steadfastly stood by a principles-based approach to ensure that those principles of good regulation were evident in their development and continued interpretation of the bidding principles. Challenges to the SEM Committee's interpretation of certain costs – i.e. Carbon Revenue Levy and Gas Transportation Capacity Costs – have been a very small feature of SEM but the framework has proven to be robust to challenge and greater certainty and clarity has been brought about as a result.

4. Critique of the SEM Committee's Rationale & Approach

As already outlined in Section 2 of this response, Energia is wholly opposed to the proposed changes to the generator licence, as set out in the consultation paper.

Without prejudice to that position, the views provided in this section address specific issues with the proposed changes, the SEM Committee's rationale for the changes and the absolute lack of evidence to support the proposed changes. We note that

[40] SEM/16/024 at para 4.3.1
[41] Ibid at para 8.4.2
[42] Ibid at para 8.16.31
[43] Ibid at para 8.21.1
[44] Ibid at para 8.2.1

the proposed changes are to be applied to both Option 1 (explicitly) and Option 2 (implicit in the RAs calculations), therefore there is no differential between the option for the purpose of this section and the views expressed are considered to apply to both options.

4.1. SEM Committee's rationale for change

Before considering the rationale forwarded in the consultation paper, it is unclear why the SEM Committee has departed from the views expressed in the Market Power Decision Paper (SEM/16/024), a presented in Section 3. That paper endorses the current approach in SEM, endorses a broad principle-based approach for I-SEM, rejects prescriptive bidding rules as an approach and indicates that the use of bidding principles will be limited to instances of little or no competition. Furthermore, the SEM Committee indicates that clarity and flexibility is to be provided, where appropriate. The options forwarded in this consultation paper appear to contradict the unequivocal statements from the antecedent market power decision.

In the current consultation paper, sections 2.1 and 3.4 present the SEM Committee's rationale for their rejection of minimal change to the current arrangements and consequently for the options presented. The paper states that the SEM Committee "*currently does not consider the implementation of a minimal approach to amending bidding controls as a viable option for the I-SEM balancing market*"[45], for the following reasons:

1. Challenges – legal and otherwise – to the current arrangements would persist;
2. Transparency is required in respect of what costs are appropriate to include in generator's COD and what costs are not;
3. Additional clarity and flexibility is required, specifically for dealing with:
    a. Start & No Load costs
    b. VOM costs
    c. Energy, emissions or time-limited units;
4. "*The BCoP only provides a definition of opportunity cost that can be applied to any cost item, but does not define or explain any other cost items*"[46]; and,
5. I-SEM is very different in nature to the current market in which the current arrangements operate.

This purported rationale for the material changes proposed in this consultation paper is problematic and unsupported by evidence or analysis. In assessing this consultation paper, NERA concluded that "*these reasons are unconvincing, and in some cases appear to conflict with the RA's statutory duties*".[47] The remainder of this subsection addresses each of these specific reasons put forward by the SEM Committee and finally considers the proposed changes in the legal framework within which the SEM Committee must act.

[45] SEM/16/059 at p6
[46] Ibid at p14
[47] NERA Report on SEM/16/059 at p7

No evidence of a need for change

As noted above, the SEM Committee does not consider a minimal change to the current bidding controls to be appropriate. However, in this same consultation paper, and mirroring views already expressed in the Market Power Consultation paper (SEM/15/094)[48], and "[*A*]*s stated in the Market Power Decision Paper (Section 7.1.2), the SEM Committee's view is that the current BCoP has been effectively enforced through monitoring and investigations, and it has likely prevented market power abuses, especially where local market power has arisen due to system constraints, despite the fact that formal local market power mitigation measures have not been formulated*."[49] Therefore, as a market power mitigant, the sole purpose of the cost-reflective licence condition and the BCoP, the SEM Committee are confident that it has worked. Implicit in this statement must be an acknowledgement by the SEM Committee that wholesale and constrained market prices have been cost-reflective and no generator has abused their position of general or local market power. Indeed, analysis by the Economic and Social Research Institute (ESRI) has found that not only have wholesale prices in SEM, coupled with the capacity mechanism, been at their Long Run Marginal Cost[50] – an economically efficient outcome – but that the current market power mitigants, including the bidding controls, have been an important feature of the market[51]. In terms of the current bidding controls, NERA have concluded that, "[*T*]*he consultation paper offers no grounds for departing from this approach, especially since it acknowledges the effectiveness of the BCoP over many years*."[52]

In terms of the SEM Committee's rationale, it is important to separate the reasons why one might look to change the current bidding controls from reasons for making any proposed change. Importantly, these are two different questions – the latter only arising after the former has been decided – and ultimately the latter must be justified by supporting reasons and evidence as to why the changes proposed are preferable and better than the available alternatives. The SEM Committee have conflated these two questions and in doing so have failed to justify their view for rejecting minimal change to the current arrangements; i.e. the SEM Committee have jumped straight into the second question without having due regard for the need to change the current arrangements in the first place. As already highlighted by NERA, this puts the SEM Committee in conflict with their statutory duties, which are considered in detail later in this subsection.

Challenges to SEM Committee interpretations; not the bidding controls

In Section 3.2 of the consultation paper the SEM Committee appears to take some issue with certain challenges that have been brought by market participants and suggest that these challenges may have occurred as a result of the "*high-level nature*

[48] SEM/15/094 at para 7.3.1
[49] SEM/16/024 at pp10-11
[50] Deane, P., FitzGerald, J., Malaguzzi Valeri, L. & Walsh, D, 2014, Irish and British Electricity Prices: What Recent History Implies for Future Prices, *Economics of Energy & Environmental Policy*, Vol. 4, No. 1, 2015.
[51] di Cosmo, V. & Lynch, M., 2015, Competition and the Single Electricity Market: Which Lessons for Ireland, ESRI WP497; subsequently published in *Utilities Policy*, Volume 41, August 2016, pp 40–47.
[52] NERA Report on SEM/16/059 at p15

of the bidding principles"[53] and consequently, through a perceived lack of specificity, the need for the SEM Committee to determine whether and/or how certain costs could be included in generators' COD. There are at least two substantive problems with this reasoning.

First, the process described can be read as an endorsement of the intentional flexibility included in the current arrangements. When new costs arose (e.g. Carbon Revenue Levy) or when market developments gave rise to cost-items that were previously excluded from SRMC now came within the definition of SRMC (e.g. daily gas capacity products in RoI), the bidding arrangements were able to accommodate these developments. The issues therefore aren't with the high-level bidding principles, the challenges were brought against the SEM Committee's erroneous interpretations of these bidding principles. In the future the SEM Committee will be required to address similar market changes as arose in the past – e.g. new costs and market developments that might give rise to previously excluded cost-items forming part of SRMC – and they will be called upon to determine whether such costs can be included in generators' COD and/or how such costs should be valued; there is no set of rules that can be written to avoid this situation arising if bids/offers are to remain cost-reflective.

The benefit of the current arrangements is that they can easily incorporate any new costs, in fact generators are obliged to include all SRMC costs in their COD, and should the SEM Committee erroneously determine that such a cost cannot be included, market participants have a high-level, principles-based framework within which to seek to have such an error corrected.

Second, the SEM Committee appear to be trying to 'profit' from their own mistakes. By failing to interpret the rules of the market correctly, the SEM Committee seem to be arguing that any problems arising from this could be remedied by the SEM Committee "*explicitly stating what costs can be included in offers, and how these costs should be valued*"[54]. However, this is precisely what the SEM Committee sought to do in the case of the Carbon Revenue Levy when a direction was issued to market participants, based on an incorrect interpretation of the steadfast high-level bidding rules, that the levy could not be included in generators' COD as it was not a cost-item within the meaning of SRMC. This challenge and the resources dedicated to it arose solely from the SEM Committee's error of interpretation. Removing high-level principles will diminish market participants recourse to correcting such errors and as such this cannot be a reasonable basis upon which the SEM Committee seeks to amend the current arrangements.

NERA – errors of interpretation were committed by the RAs and not the generators – specifically on the point of the challenges brought by market participants against the incorrect interpretations by the SEM Committee of the high-level bidding rules, NERA have concluded that "[*T*]*he CRL and GTC examples do not therefore provide grounds for giving more flexibility to the regulatory authorities. Relying on those*

[53] SEM/16/024 at p11
[54] SEM/16/059 at p11

examples would imply that the regulatory authorities want to increase their scope to commit errors of interpretation, which cannot be the intention."[55]

More generally on the SEM Committee's apparent attempt to lay some blame with the high-level principles and the absence of prescriptive rules, NERA have stated the following:

> "*Concluding that more tightly defined rules would avoid disputes is naïve – and an incorrect basis for any general prescription to act – for the following reasons:*
>
> 1. *The two formal appeals over the BCoP arose because of misguided attempts by the regulators of the day to deny generators the opportunity to recover (i.e. to include in their offer prices) cost items that legitimately formed part of SRMC…[I]n the end, the court actions corrected a regulatory error.*
> 2. *In any case, the resources used to resolve these disputes were trivial administrative costs, compared with the potential costs to efficiency and competition in the generation sector that would have been imposed by allowing these misguided rules to stand…*
> 3. *Replacing statements of principle with narrowly defined rules will not eliminate the potential for disputes, but will merely replace disputes over the interpretation of the principles with disputes over the design or application of new rules…*"[56]

Transparency or diktat?

Notwithstanding the express intention of the SEM Committee in developing the bidding controls for SEM – as outlined in Section 2 – that such controls must be flexible and it was not the role of the RAs to either set prescriptive rules or to take commercial decisions on behalf of a generator, the SEM Committee now appear to consider this feature of the current regime to be unhelpful. As with other criticisms levelled at the current arrangements, this is criticism is unsupported by evidence and appears to be contradicted by the performance of the bidding controls to date, something the SEM Committee continues to expressly commend.

Notwithstanding this apparent about-turn on the part of the SEM Committee, the alleged problem the SEM Committee have raised over transparency is a poorly defined one. The SEM Committee's issue is stated as being that "*the current arrangements do not explicitly state how some cost items should be applied*"[57]. At least two issues arise from this statement and general rationale. First, it is unclear who regards there to be an issue with transparency. In respect of existing costs, the SEM Committee have undertaken market-wide formal requests for information from generators, pursuant to the relevant licence conditions, and have received a detailed breakdown of generator cost-items and valuations. For the generator, they must satisfy themselves that all existing cost-items in their COD are SRMC cost-items and that they are valued at opportunity costs, unless some special provision has been

[55] NERA Report on SEM/16/059 at p9
[56] Ibid at p17
[57] SEM/16/059 at p6

provided for. For the most part, these cost-items are self-evident to each generator but they may vary by generator.

As a measure of the current arrangements and their transparency, the SEM Committee published two bidding related decisions/reports in 2008 that demonstrate the points raised herein. First, the SEM Committee decision on bidding the opportunity cost of carbon credits (SEM/08/32) highlights that the correct approach was understood and applied by generators – i.e. including the opportunity cost of carbon credits in bids – without any explicit rule on carbon credits being published by the SEM Committee. It was only where generators sought to change from this mandated approach were the SEM Committee asked to consider whether generators should have flexibility in relation to the value of carbon credits bid into the SEM; this was rejected for the reasons set-out in Section 2, including to avoid creating regulatory risk.

In the SEM Committee's second publication on related matters in 2008, namely the final report for the SEM Committee inquiry into complaints on bidding practices in SEM (SEM/08/069), further clarity is provided to market participants on the appropriate approach to start-up costs and contract costs. While these issues were addressed in the earlier papers on the creation of the bidding controls and the BCoP, questions over interpretation arose for certain market participants and these were addressed by the Market Monitor Unit (MMU). Once again it can be seen that the bidding controls were well understood by market participants but where issues arose in relation to certain cost items, a formal channel exists through which these can be investigated and the SEM Committee can subsequently provide further guidance to market participants on specific costs.

The CRL and GTC Costs issues are further examples of the transparent application of the current arrangements, albeit following challenges to the SEM Committee's interpretations were overturned or updated. All of these examples go to show that for the generator, SRMC cost-items and their valuation are typically self-evident, while for the RAs where this is not the case they have express powers to obtain all relevant information in relation to the bids of any generators. Where issues in respect of a generator's bids arise, the current apparatus has shown itself to be capable of dealing with such issues. The issue therefore is not one of a lack of transparency but rather a reluctance on the part of the SEM Committee to continue to offer guidance to industry on certain costs (e.g. 2008 publications) and for subsequent guidance to have been wrong (e.g. CRL) and the need for the Supreme Court to correct the SEM Committee's erroneous interpretation of a relevant cost-item, as being contrary to the plain words of the cost-reflective licence condition, and necessity for the SEM Committee to update their thinking on other cost items (e.g. GTC costs) in the wake of this judgment.

Second, the issue raised in respect of transparency is arguably a misnomer for control, specifically prescription in respect of generators' offers in I-SEM. In the current consultation, transparency has been conflated with prescription on how cost-items should be applied and an alleged lack of transparency is considered to arise from an absence of explicit rules on how some cost items should be applied. From

the first criticism of this rationale, it is clear that the mechanism for offering such guidance exists, but that the SEM Committee are bound in their interpretation to remain within the wording of the licence's cost-reflective condition. Removal of the substance of this condition and offering prescriptive rules does not aid transparency, it assumes overwhelming control of generators' offers in I-SEM and largely removes the generator's recourse to challenge erroneous interpretations. To the extent that it would then be clear how all cost-items should be applied, it is arguable no different to the situation today but certainly any negligible benefit would be far outweighed by regulatory risk, inefficiency and competition effects of such a move. This is particularly true where the SEM Committee proposes to provide for themselves such a wide degree of discretion to expand the scope of the controls or adapt the list of eligible cost-items, or not to undertake such action, as the case may be. While such a diktat would arguably provide a form of transparency, that form of transparency is detrimental to customers and the market, it is unwelcome and it is unwise.

In NERA's report they cite the example of the Market Abuse Licence Condition (MALC) in Great Britain and its referral to the Competition Commission back in 2000-2001. In terms of the wide discretion sought by the SEM Committee, NERA finds this to be problematic and akin to the powers sought by the regulator in GB; "[*I*]*n terms of the SEM Committee's list of appraisal criteria, the Competition Commission concluded that this kind of discretionary intervention lacks transparency, harms competition and therefore reduces efficiency…Unfortunately, the Consultation Paper adopts an approach similar to that rejected by the Competition Commission*."[58]

Furthermore, on the issue of explicit rules for certain cost items, which the consultation paper conflates with the principle of transparency, NERA find the proposed approach to be contrary to the principle of transparency, properly defined, and a backwards step in terms of such transparency from the current high-level principles; "[*I*]*f the RAs do not set out any guiding principles in a stable format like the generation licence, the adaptations required by these continual problems will be unpredictable and will not be transparent. Such a regime will increase regulatory risk and discourage efficient investment*."[59]

For all of the foregoing reasons, it cannot be said that transparency, as described in the paper, can be a valid basis upon which the SEM Committee can take a decision to adopt either of the proposed approaches in the paper. Furthermore, it cannot be said that transparency is an argument from which the SEM Committee can correctly dismiss the current arrangements.

Clarity and flexibility

The issues of clarity and flexibility in respect of the bidding controls in I-SEM were first raised in the Market Power Decision Paper (SEM/16/024) but as is apparent from Section 2 of this response, the issue of flexibility in bidding controls in this market long pre-dates that reference. Since the beginning of SEM, the SEM Committee have recognised the need to afford generators flexibility in terms of calculating their SRMC cost-items and valuing these cost items at opportunity cost,

[58] NERA Report on SEM/16/059 at p13
[59] Ibid at p10

as such commercial decisions, pursuant to the well-understood bidding principle, were rightly left to generators. In the context of this consultation, the principle of flexibility appears to have been redefined as the proposals raise the prospect of removing all of the flexibility from generators but affording significantly more flexibility to the RAs and proposes to do so in a manner that is primarily unaccountable and unfettered by existing procedural safeguards.

Flexibility, albeit heavily regulated, would no longer be a cornerstone of generators' commercial behaviour, instead flexibility would refer to the SEM Committee's ability to adapt a prescriptive set of rules that define an exhaustive list of costs that generators can include in their COD and how these cost-items are to be valued. Recognising, as NERA have, the widely-understood economic (and legal) principle of the incompleteness of any contract[60], the SEM Committee's proposed approach is wrong and potentially detrimental to the interests of generators and customers, in both the short- and long-term. In support of the view held by NERA, similar evidence has been given to the Federal Energy Regulatory Commission (FERC) in the United States, in respect of local market power mitigation by leading energy economist Professor William Hogan, wherein number one of his "top ten" points made in a brief submission to FERC was: "[*I*]*n balancing imperfect markets and imperfect regulation, lean towards markets…*[*T*]*rying to use regulation to force the theoretical limit of perfect competition probably does more harm than good because regulated solutions are also imperfect*".[61]

The SEM Committee's concerns in respect of clarity appears to be the minimal detail provided in the BCoP on certain costs and units, specifically; start-up and no-load costs; VOM costs; and energy-, emission- or time-limited units. However, as highlighted in the preceding discussion of transparency, the BCoP does not exist in the ether, it has a grounding in various consultation and decision documents wherein these issues were discussed, as well as guidance on its application to certain costs. Any perceived lack of clarity in respect to of these costs or units is therefore owing to either a rejection of the clear policy decisions taken at the start of SEM, or a failure on the part of the SEM Committee to issue subsequent guidance on these costs. It is apparent that the current apparatus operates well in allowing for such guidance and it does so in a manner that does not require documents to be constantly updated or risk going out of date. As with transparency, the arguments made by the SEM Committee in respect of clarity can also be equated with a misplaced objective to impose prescriptive bidding rules on generators; these arguments are therefore rejected on similar terms.

NERA's assessment of this section of the paper offers two conclusive conclusions. First, "*the reasoning set out in this section of the Consultation Paper is weak and unstructured*"[62]; and second, ""[*T*]*he SEM Committee's conclusion that detailed rules*

[60] Ibid at p18
[61] Hogan, W, Local Market Power Mitigation, Comments to Technical Conference on Compensation for Generating Units Subject to Local Market Power Mitigation in Bid-Based Markets, 2004 at p1; available at: https://www.hks.harvard.edu/fs/whogan/Hogan_FERC_020404.pdf
[62] Ibid at p16

will necessarily be more efficient than adapted versions of the existing principles is wrong, and appears to have been driven by a false assumption"[63].

Furthermore, the consultation paper also makes a bizarre and unsubstantiated claim that clarity and additional flexibility can provided by transferring details, including the calculation of SRMC, into a revised offers control document. While a general but tenuous argument could be made on the basis of simplicity, when one considered that actual proposed changes and the consequent removal of fundamental issues of due process and accountability and regulatory certainty, the rationale for changing from the current, considered approach are at best described as overly-simplistic but such a proposal is arguably far more troubling for market participants.[64] In considering the SEM Committee's rationale for proposing such a change in approach, NERA have concluded as follows:

> *However, merely transferring details from one document to another will not enhance "clarity". In practice, the "additional flexibility" offered by such a move would reduce the clarity of the rules, by opening up fundamental principles to the threat of amendment without due process. That threat would run counter to the SEM Committee's criteria of transparency, because the basis for future rules would be unclear to market participants. It would harm competition and efficiency by increasing regulatory risks and costs for consumers*.[65]

In addition, NERA offer sound guidance to the SEM Committee on the format and structure of any new proposed bidding rules, should they be required and justified:

> "*Guiding principles for bidding should reflect the underlying economics of generation and should be stable over time. Accordingly, guiding principles belong in generators' licences, to provide the required degree of stability and certainty. Any prescriptive rules or calculations, which are intended to provide clarity but which may become obsolete, would ideally be placed within industry codes or similar documents, so that they can be amended quickly in the light of stable principles (but they should still be augmented by a rule allowing the inclusion of "any other components of SRMC", to prevent problems arising in the time before rules can be amended)*."[66]

"Any cost item" v. "any other cost item"

Inexplicably the SEM Committee appear to criticise the current definition of opportunity cost in the BCoP on the basis that it "*can be applied to any cost item, but does not define or explain any other cost item*"[67]. If the current opportunity cost definition can apply to any cost-item, that similarly means it can apply to all cost-items. Until the SEM Committee can explain the difference between "any cost item" and "any other cost items", it is impossible to comment on this criticism of the current arrangements, other than to say it is nonsensical and certainly not a rationale for any proposed amendment.

[63] Ibid at p19
[64] Energia's more general concerns with these proposed amendments are already set-out in Section 2.
[65] NERA Report on SEM/16/059 at p16
[66] Ibid at p16
[67] SEM/16/059 at p14

I-SEM is different but the problems are the same

The stated intention of bidding controls is to mitigate any possible abuse of market power or local market power, this has been the objective in SEM and it is to be the objective in I-SEM. Having endorsed the performance of the current bidding controls in respect of their performance vis-à-vis the potential negative effects of market power, including local market power which the RAs recognise is primarily controlled thought the bidding controls, no attempt is made to assess the continued suitability of the current arrangements, albeit as applied in the BM (non-energy actions). The issue of market power and local market power is the same problem in the SEM as it is in the I-SEM BM. This obvious starting point for bidding controls in I-SEM is summarily dismissed by the SEM Committee, without basis and without consideration of the problem the bidding controls are seeking to address.

In consideration of the SEM Committee's arguments about a change in market structure, NERA's conclusion is that these arguments "*do not stand up to close scrutiny*"[68]. In addition, NERA state:

> "*The increase in the number of organised markets under I-SEM is irrelevant, since the RAs have already established that controls on the Balancing Market would be sufficient to control prices in other markets (through the effect of arbitrage, by which forward market prices depend on expected prices in real-time markets). All that is required is to adapt the definition of SRMC set out in the generation licence (and the reference to it in paragraph 6 of the BCOP) from a "Trading Day" to the period of a "Balancing Market Action". (Paragraph 11 of the BCOP, on time constraints, offers a useful precedent for defining a relevant time period.)*"[69]

This statement gives rise to two important matters in respect of the SEM Committee's decision-making and the matters they can rightly have regard to in coming to any decision. First, the change from SEM to I-SEM and the associated increase in the number of organised markets is an irrelevant consideration and cannot be relied upon by the SEM Committee as a basis for rejecting the current arrangements. The simplicity of the NERA amendment to the current arrangements also highlights both the suitability of the current arrangements and the simplicity with which they could be extended to I-SEM.

The second issue arising from what NERA have stated is the possibility that the SEM Committee have had regard to an irrelevant consideration is coming to their view that the current arrangements, *in toto*, are unsuitable for the I-SEM BM. As the SEM Committee is aware, prices in the I-SEM BM will, through the effect of arbitrage, set the expectation for the prices in all other (ex-ante) markets. One possible reason for seeking to heavily regulate offers in the I-SEM BM through highly prescriptive bidding controls that seek to exclude certain costs and set a finite list of eligible costs, is to exercise control over the price in all markets, not just the balancing market.

[68] NERA Report on SE/16/059 at p10
[69] Ibid

Conclusion of economic critique

Instead of drawing together the various strands of this section, which in themselves fatally undermine the SEM Committee's stated rationale for rejecting the current bidding control arrangements, it is instructive to consider the conclusions reached by NERA in their review of the consultation paper.

NERA's assessment of the SEM Committee's objections to the current form of the bidding controls shows that these objections arise from:

1. "*a purely partial application of appraisal criteria (unduly favouring administrative convenience to the regulatory authorities and their preference for "flexibility", to the exclusion of other criteria such as transparency and efficiency); and*
2. *a misunderstanding of the cause and nature of disputes over the interpretation or design of regulatory rules. Such disputes are inevitable, due to the "incompleteness" of any rules*."[70]

Furthermore, NERA consider that the SEM Committee, "*has used this Consultation Paper to raise questions unrelated to the creation of the I-SEM*"[71]. The consultation paper contains numerous examples of this, specifically Section 4.2 of the consultation paper. Such issues are arguably irrelevant consideration in the SEM Committee's decision making, particularly given the SEM Committee's repeated statements that only matters relevant to I-SEM go-live are to be considered within the I-SEM programme.

Critically, NERA have reached the following conclusions in respect of the rationale and decision-making process engaged in by the SEM Committee in coming to the views contained in the consultation paper:

> *The Consultation Paper therefore follows a truncated decision-making process which fails to consider key questions in the design of the rules. Instead, it rushes headlong towards conclusions that are premature, and possibly prejudicial. As a result, Chapter 3 of the Consultation Paper gives the SEM Committee no procedural or intellectual basis for the proposals that follow later*.[72]

4.2. SEM Committee's statutory duties & the legal framework

This section of the response has been prepared with the assistance of Arthur Cox. At the outset we acknowledge that while reference is made below to specific duties and obligations of the CER, we note that UREGNI, as the electricity regulator for Northern Ireland, has identical functions and duties as regards matters relevant to the Third Energy Package and the Single Electricity Market and that its actions as an administrative authority are subject to similar general legal principles. All references to the legal framework in this section should be read accordingly.

[70] Ibid at p19
[71] Ibid
[72] Ibid at p20

Legal Framework

As explained in Energia's response to the SEM Committee's Second Consultation Paper on the Capacity Remuneration Mechanism: Detailed Design (SEM-15-014), a number of key legal requirements, summarised also in Energia's response to the SEM's Committee's Third Consultation Paper on the I-SEM Capacity Remuneration Mechanism Detailed Design (SEM-16-010), are particularly relevant to the design of I-SEM:

- In their decision-making, the RAs are subject to public law principles. In particular, public authorities such as the CER must act in a manner that is (1) consistent with the legal framework within which they operate and (2) reasonable. Regulatory measures must be proportionate, that is, both suitable and necessary to achieve the aim pursued and where they affect a constitutionally protected right – impairs that right as little as possible. This is reflected in the objective set for the Minister and RAs by section 9BD of the Electricity Regulation Act, 1999 in respect of the SEM that the performance of their functions should be "*transparent, accountable, proportionate, consistent and targeted only at cases where action is needed*". These principles are directly relevant to the design of I-SEM and bidding controls on the Balancing Market (BM).
- The measures adopted by the RAs must be consistent with the Third Energy Package and its objectives, namely, as regards electricity, the implementation of the internal market in electricity aims so as to deliver real choice for all consumers of the European Union and more cross-border trade, and achieve efficiency gains, competitive prices and a higher standard of service, and contribute to security of supply and sustainability. Regulating prices to ensure that they are "competitive" does not mean to ensure that they are the "lowest achievable by any means", but rather that regulation works to ensure that the prices achieved in the regulated market most closely approximates the competitive market price and thereby provides incentives for efficient investment. This is consistent with the principal statutory objective of the RAs under section 9BC of the Electricity Regulation Act, 1999 in relation to the SEM, namely "*to protect the interests of consumers of electricity in the State and Northern Ireland supplied by authorised persons, wherever appropriate by promoting competition between persons engaged in, or in commercial activities connected with, the sale or purchase of electricity through the Single Electricity market*" and there is no reason why the objective pursued by I-SEM should be any different.
- The measures adopted by the RAs should, consistent with Directive 2005/89/EC of 18 January 2006 concerning measures to safeguard security of electricity supply and infrastructure investment, ensure a high level of security of electricity supply by taking the necessary measures to facilitate a stable investment climate which measures should be non-discriminatory and not place an unreasonable burden on the market actors. They should encourage the establishment of a wholesale market framework that provides suitable price signals for generation and consumption.

- The measures adopted should be consistent with the statutory duty of the CER and the Minister to have regard to the need, among others: (i) to promote competition in the generation and supply of electricity; (ii) to secure that all reasonable demands by final customers of electricity for electricity are satisfied and (iii) to secure that licence holders are capable of financing the undertaking of the activities which they are licensed to undertake. In accordance with European State aid law, State intervention in the market should be avoided to the maximum extent possible.
- Regulatory measures, consistent with competition law including section 5 of the Competition Act 2002 to 2014 as well as Article 102 and Article 106 of the Treaty on the Functioning of the European Union, should recognise the position of market power enjoyed in electricity markets by a State-owned entity, namely the ESB. Measures which do not properly distinguish between the position of (1) undertakings, in particular public undertakings, in a position of dominance on the market and (2) others would lead to unlawful discrimination. Similarly measures which do not recognise the special position of public undertakings and the possible differences in their incentives and consequent market behaviour would be incompatible with Articles 102 and 106 TFEU and Article 4 of the Treaty on the European Union.

These legal requirements apply to each and every measure that the RAs adopt or cause to be adopted in respect of I-SEM but also, importantly, to the package of regulatory measures which together will make up the I-SEM market design – including among others bidding restrictions on the energy markets, the Capacity Remuneration Mechanism, DS3 System Services, Administered Scarcity Pricing, obligations in secondary contract markets, and other Market Power Mitigation measures. Key in this respect is the requirement that these measures, individually and taken together, allow generators to finance their activities, meaning that this whole package of regulatory measures must provide generators with an opportunity to cover their costs. In this regard, it is possible that the options preferred by the RAs in each of the streams for the I-SEM Design, because on their face they promote the objectives being pursued, are not together an optimal or indeed an acceptable or lawful combination. That is because together these measures may produce a result that is inconsistent with the Third Energy Package and the Electricity Security of Supply Directive and contrary to the requirement that generators should be able to finance their activities and be allowed enjoyment of their property rights.

Implications for Market Design including bidding controls on the BM

The RAs' proposals as regards bidding controls on the BM and the changes being contemplated to the generation licences directly and significantly affect the property rights of existing generators such as Energia, and their shareholders. As participation in the market designed by the RAs is the only means available to existing generators such as Energia and its shareholders to exercise their property rights and right to earn a livelihood, it is incumbent upon the RAs, and essential, that the market design respects such property rights and allows a generator to recover its costs – any

design which does not allow a generator to recover its costs would amount to a form of unconstitutional expropriation.

We have in response to previous consultations highlighted the risk that the RAs, treating the various strands of I-SEM independently of each other, produce a fully developed set of rules which does not allow generators to finance their activities contrary to legal requirements and to the detriment of the very objectives being pursued, namely competition and/or competitive outcomes and security of supply.

On this consultation specifically, we reiterate the need for this assessment to take place and that such an assessment is incumbent upon the RAs, pursuant to their statutory duties; i.e. Section 9BC(2)(b) of the 1999 Act. In addition to this, the consultation paper offers not basis, discussion or analysis from which one could objectively conclude that the SEM Committee had acted in accordance with Section 9BC(4) of the 1999 Act, namely that the proposals were "*best calculated to promote efficiency and economy on the part of authorised persons*". The issues of efficiency and economy are absent from the justifications for change in the consultation paper. The absence of any basis for the SEM Committee's rejection of the current bidding control arrangements, other than a pithy reference to it being the view of the SEM Committee, is in direct conflict with the requirement on CER and the SEM Committee to discharge their functions, pursuant to Section 9BD of the 1999 Act, in a manner that is "*transparent, accountable, proportionate, consistent and targeted only at cases where action is needed*". Furthermore, there is no attempt to demonstrate how the proposals in the paper are proportionate, consistent, transparent, or targeted. Albeit separate from these requirements, the proposals themselves amount to an attack on accountability.

To the extent that the prescriptive bidding rules proposed by the SEM Committee, applicable to both Options 1 and 2, would impose a requirement on generators to submit offers in the I-SEM BM that were below their SRMC, such an obligation could be contrary to competition law, specifically Article 102 of the Treaty on the Functioning of the European Union (TFEU) and Section 5 of the Competition Act 2002 to 2014; the provisions of which prohibit predatory pricing. This particular concern arises in light of the ongoing dominance of ESB and the pre-existing concerns over the exercise of market power.

Finally, and as already alluded to, the SEM Committee must comply with the requirements and duties imposed by administrative law. Herein the stated lack of discussion, evidence or analysis for some of the views posited in the consultation paper, as well as the potential regard for irrelevant considerations and failure to have regard to relevant considerations, all amount to arguable breaches of good regulation and more importantly, the requirements placed on a public decision-maker by the principles of administrative law.

Importantly, these conclusions are not to be read in isolation and apply to many of the conclusions reached elsewhere in this response. This consultation paper is considered to be replete with legal difficulties.

4.3. The scope of the proposed changes

In the consultation paper the SEM Committee makes the following ambiguous statement:

> *Whilst the imposition of offer controls will be restricted to non-energy actions in the I-SEM Balancing Market, in the event that behaviour is deemed by the SEM Committee to be unacceptable, the SEM Committee will be prepared to develop and implement ex-ante offer controls either on individual participants or across the wider market if observed behaviour is deemed to warrant this. The MMU will continually monitor generator bidding patterns and behaviour and shall report on any suspicious activity to the SEM Committee*.[73]

In this statement the SEM Committee proposes to create for themselves a seemingly boundless discretion to develop and implement ex-ante offer controls, if generators' bidding behaviour in markets other than the market where offers controls are to be enforced (BM non-energy), is deemed to warrant it. Without expanding on this statement, the SEM Committee are effectively seeking to create an unbounded discretion, to impose unspecified rules, in response to unspecified behaviour, over some or all generators, in some or all markets. This statement is both remarkable and unacceptable.

The statement is in direct and obvious conflict with the SEM Committee's Market Power Decision Paper (SEM/16/024) wherein the decision was taken to impose bidding controls on the BM (non-energy) only. The proposal to create this unbounded discretion by the SEM Committee raises the spectre of ex-ante offer controls in all markets. Proper consideration of the consequences of such an approach is again lacking from the consultation paper. Furthermore, the proposed creation of such wide and ambiguous discretion by the SEM Committee appears to mirror the failed attempt by regulators in GB to do the same through the MALC discussed previously. Based on the findings of the Competition Commission, it can therefore be said that such a provision in the rules for I-SEM would not be transparent, it would raise regulatory risk and, it would have detrimental effects of competition and efficiency.

Expanding on this latter point, NERA identify two important sources of risk, arising from these proposals, that will tend to hamper competition in I-SEM:

1. *The SEM Committee intends to extend controls to energy actions in the Balancing Market "if observed behaviour is deemed to warrant this". However, the Consultation Paper does not discuss what kind of behaviour would trigger such an extension of controls.*
2. *The footnotes to these bullets refer to document SEM-15-026 for a definition of energy and non-energy actions, and reproduced the text from page 13 of that document. However, these definitions are not precise: "Energy actions can be broadly considered as actions taken by the TSOs to address an overall imbalance between supply and demand" (emphasis added).*

[73] SEM/16/059 at p7

Each of these proposals raises concerns over regulatory risk and its dampening effect on competition.[74]

4.4. Proposed change to the definition of SRMC

At the outset of this section, it is necessary to consider the impacts of the proposed changes to the relevant licence conditions and the proposed BMOPCoP. Under Option 1, the proposed licence condition states that licensees must act to ensure compliance with the BMOPCoP (paragraph 1) and that it is the role of the RAs to ensure generators' COD are cost-reflective (paragraph 2b). The BMOPCoP then mandates that all generator's COD are cost-reflective (paragraph 4), cost-reflectivity of the price component is defined with reference to SRMC (paragraph 5), and SRMC of the price component is defined with reference to 'eligible costs' (paragraphs 14 to 21). There are at least two egregious errors in this purported construction:

1. The licence condition is meaningless and provides no clarity or certainty to market participants; and,
2. The reference to SRMC in the BMOPCoP is a fallacy, as the definition of SRMC therein is unnecessarily constrained by only those costs the SEM Committee have deemed to be eligible.

As a consequence of these errors, it is incorrect to refer to either cost-reflectivity or SRMC bidding in the context of Option 1 or Option 2, as it is the basis of the relevant limit calculations. The offer controls proposed are a set of prescriptive bidding rules based on the unsupported views of the SEM Committee as to what costs can and cannot be included in generators' offers to the BM, and arguably other market owing to the spectre of further regulation.

Furthermore, as a consequence of the SEM Committee's proposals, an obvious anomaly arises; how can costs that are included in SRMC today (SEM), not be included in SRMC in I-SEM? It must be the case, given there is nothing apart from the deemed eligible costs in the changed definition of SRMC to suggest otherwise, that costs that are deemed to be eligible cost-items in SRMC today (i.e. SEM), must also be eligible costs in I-SEM. However, given the SEM Committee propose excluding certain costs that are included generators' COD today, and that they are doing so in accordance with their statutory duties, the SEM Committee can presumably not sit on their hands in respect of the inclusion of these costs in today's market. Assuming this is not the case, it must be that the SEM Committee, through removing the cost-reflective licence condition, have reserved for themselves, additional discretion to disallow costs that are cost-items for the purpose of cost-reflective SRMC bidding in SEM. While this isn't contained in the paper, it is a necessary and logical conclusion from the proposed text, and is of great concern to market participants as it somehow suggests that SRMC in I-SEM will, *ceteris paribus*, be a lower value that SRMC today. On this issue, NERA's conclusions are emphatic.

[74] NERA Report on SEM/16/059 at p11

> *As a matter of economic principle, there are no circumstances in which holding market prices below SRMC will lead to efficient outcomes, because such a rule would remove any incentive for production*.[75]

and

> *Any attempt to set offer prices below SRMC would harm both efficiency and competition, which would conflict with the RAs' statutory duties to promote these features of the electricity market. Preventing cost recovery would also conflict with the statutory duty to allow licensees to finance their licensed activities, unless the regulatory authorities can show how generators can recover any costs they are not allowed to include in offer prices*.[76]

Reference has already been made to the views of Prof. Hogan on the preference that should be shown for imperfect markets over imperfect regulation and using regulation to try to force a perfect competition outcome (i.e. SRMC) probably does more harm than good. While it is a maxim of economics that pricing below SRMC is inefficient, pricing above SRMC is not necessarily a problem in power systems. In evidence given to FERC by Professor Peter Cramton, he makes a number of pertinent observations and findings;

- *As a matter of economic theory and sound market design for wholesale electricity bid-based auction markets, there is and should be no competitive norm stipulating that suppliers' bids should equal marginal costs.*
- *Bidding above marginal cost should be viewed as an inevitable and desirable response of independent, profit-maximizing decisions in real-world markets where the ideal conditions of a perfectly competitive market do not prevail.*
- *In real bid-based electricity market operating under a range of supply and demand conditions, individual suppliers should be bidding to maximize their profits, which, as this paper explains, will inevitably involve bidding above marginal cost*.[77]
- *Marginal cost bidding has the further benefit of efficient dispatch. Energy is supplied by the least-cost units. As a result of its simplicity and desirable efficiency properties, marginal cost bidding often is used as a benchmark to compare with actual market performance (Borenstein et al. 2002, Bushnell and Saravia 2002). It even is sometimes asserted that suppliers should bid marginal cost in a competitive electricity market. This prescription for behavior, however, is only appropriate in the extreme and unrealistic case of perfect competition as we will see next. Only under perfect competition—a setting that requires that no firm supply more than one MWh of energy in any hour—is marginal cost bidding consistent with profit maximizing behavior.[fn] Such an assumption is inconsistent with the practical realities of electricity generation*.[78]

[75] Ibid at p9
[76] Ibid
[77] Cramton, P, Report on Competitive Bidding Behaviour in Uniform-Price Auction Markets, a report for FERC (US) at p3; available at: http://www.cramton.umd.edu/papers2000-2004/cramton-bidding-behavior-in-electricity-markets.pdf
[78] Ibid at p10

Interestingly, the footnote in the final extract from Prof Cramton refers to the special case of forward contracts, wherein SRMC bidding is profit maximising if all volume is sold forward. This conclusion potentially confers a further advantage on ESB who, as the dominant generator in I-SEM, are the only market participant well placed to take advantage of this condition with firm volumes that they can sell forward.

Another points that must be noted from this report by a leading energy economist, is that there must be a very strong case for the strict imposition of SRMC bidding controls as such controls are typically below the profit-maximising price a generator would otherwise charge. It is therefore necessary that regulators ensure that the imposition of SRMC bidding rules, where they are to apply, are suitable adapted for real world application, as to do otherwise would be inconsistent with the real-world economics of electricity generation.

In relation to the proposed changes to the definition of SRMC in this consultation document, the opposite it true and the SEM Committee have fallen into the trap of seeking to apply an overly-simplified textbook definition of SRMC under conditions of perfect competition. The result is an overly-prescriptive, poorly-formulated definition that provides an inappropriate basis from which to seek to regulate generators' offers. Having failed to consider the impacts of this change to the definition of SRMC, the SEM Committee have also arguable failed to have had due regard to their statutory duties.

Incremental costs

In arguing the need to amend the definition of SRMC, the SEM Committee have put forward two criticisms of the current definition that appear to be wholly unfounded and errors of interpretations. First, the SEM Committee appear to suggest that paragraph 3 of the cost-reflective generator licence condition is in some way not an incremental cost but rather is a form of total cost. Paragraph 3 of this licence condition calculates SRMC as the difference between the total costs when generating electricity, less the total costs when not generating electricity; this is clearly an incremental cost, the fact that it is based on total costs has no bearing on the conclusion that SRMC, so defined, is an incremental cost.

Second, the SEM Committee appear to suggest that certain fixed costs are contained in the algebra for calculating SRMC under paragraph 3 of the cost-reflective licence condition. On the basis of simple algebra, this cannot be the case, as the fixed costs contained in the total costs in both states (i.e. generating and not generating) cancel each other out. This will be true irrespective of the relevant timeframe over which the calculation is made but this issue of the relevant timeframe for BM actions is discussed later in this response.

In reviewing these two arguments put forward by the SEM Committee, NERA arrive at a similar conclusion:

> *The SEM Committee offers two criticisms of the current definition of SRMC. Those criticisms, as set out on page 16 of the Consultation Paper, can only be based on a misunderstanding and are incorrect or invalid*.[79]

Additionally, NERA have reviewed the proposed new definition of SRMC put forward by the SEM Committee in Annex A of the consultation paper. This conclusion reached should be read in conjunction with the report cited above prepared by Prof Cramton for FERC.

> *This proposal is not practical. Balancing Market instructions often require generators to change their output by more than 1 MWh, over several ISPs, and to incur joint costs that are attributable to the total change in output rather than to individual units of energy…Hence, the proposed definition of SRMC is poorly adapted to generator operating characteristics and impractical as a rule*.[80]

It is therefore apparent from this review that the SEM Committee's criticisms of the current approach are not well founded and appear to be based on a misinterpretation of the relevant text and/or concept, and there proposed solution is impractical and contrary to the basics of economic theory in power markets.

Eligible costs

The proposal to provide an exhaustive list of eligible costs to which generators must have regard to in formulating their offers is an anathema to the founding principles in SEM that remain operative in SEM today, and once again ignore basic fundamentals of the economics of power systems. In essence, this is precisely the sort of regulatory action Prof. Hogan's advice to the US FERC sought to guard against on the basis that imperfect regulation of this form would probably do more harm than good. The SEM Committee offer nothing to counter this *a priori* concern.

As already noted, by defining a prescriptive set of eligible costs, the SEM Committee make the concepts of cost-reflectivity and SRMC redundant in I-SEM. There are also at least two other notable features about the SEM Committee's proposals on eligible costs. First, the list of eligible costs purports to be an exhaustive list which puts the SEM Committee in the position of the generator and makes them directly responsible for the commercial and system consequences that such a prescriptive and poorly founded proposal is expected to have on the market and customers. Second, the SEM Committee exclude maintenance costs[81], or at the very least, long-term maintenance costs[82], and base this proposal on an unsupported view that "*maintenance costs are not considered variable in nature*"[83] by the SEM Committee. This unsupported view is based on a sweeping and erroneous generalisation that "*maintenance and overhauls at power stations typically occur periodically on an annual or multiannual basis*"[84].

[79] NERA Report on SEM/16/059 at p21
[80] Ibid at pp10-11
[81] SEM/16/059 at p16
[82] Ibid at p31 (para 18) and p33 (para 22c)
[83] Ibid at p16
[84] Ibid at p16 [fn9]

This 'view' is of the utmost concern to Energia as, in response to a specific request for information from the MMU, provided the MMU with details and extracts from our Long-Term Service Agreements (LTSAs) which clearly demonstrate the variable nature of our maintenance outages, based on both output and hours of operation. Furthermore, of this is the view of the SEM Committee, it suggests that the SEM Committee are currently acting in breach of their statutory duties by not issuing a direction to industry to mandate the exclusion of such costs from generators' COD.

The following conclusions from NERA's report are instructive when considering the suitability or otherwise of the SEM Committee's proposals in this regard; these conclusions should be reads in tandem with the general conclusions in relation to below SRMC bidding reference at the beginning of this section.

> *However, the SEM Committee offers no evidence that maintenance costs are never variable in nature, i.e. that they are never related to output. This statement is simply an assertion unsupported by fact. Moreover, this statement is incorrect, since generation plant (like many other machines) incurs some maintenance costs in proportion to its output or hours of operation. The SEM Committee is therefore wrong to conclude that all maintenance costs should be excluded from SRMC*.[85]
>
> *The SEM Committee's cavalier dismissal of maintenance costs in the Consultation Paper is all the more incomprehensible, given that the SEM Committee has previously considered such costs and explicitly decided they should be included in generators' SRMC.*[86]
>
> *Nothing in the Consultation Paper rules out the existence of variable maintenance costs. Failing to allow recovery of these variable costs in bids will run the risk of forcing market participants to price below their SRMC, introduce incentives to withdraw capacity and distort competition and dispatch.*[87]

Furthermore, in terms of the operating and maintenance costs that are to be allowed under the SEM Committee's proposed approach, the drafting in Annex A states that "[*N*]*on-fuel operating costs that vary with the level of output, .., shall be included in the price component of Commercial Offer Data*"[88] but goes on to expressly exclude long-term maintenance costs, without defining what long-term maintenance costs are and how the differ from eligible variable operation and maintenance costs. Nonetheless, it is arguable that any variable operating and maintenance costs that vary with output – i.e. expressed on a €/MWh-basis – could be included. However, non-fuel variable operating costs that are represented on a €/hr-basis would inexplicably be excluded. Furthermore, such costs (€/hr) can be included in the unit's start-up cost component, pursuant to paragraph 22(c) of the proposed BMOPCoP[89]. Notwithstanding the apparent contradictions inherent in these definitions, the inclusion of any variable operating and maintenance costs is in direct conflict with the

[85] NERA Report on SEM/16/059 at p23
[86] Ibid
[87] Ibid at p25
[88] SEM/16/059 at p31 (para 18)
[89] Ibid at p33 (para 22c)

quotes from the consultation paper stating the SEM Committee's view that no cost-item in respect of maintenance is considered to be variable. Therefore, the proposals in respect of eligible costs are not only poorly conceived, they are also ambiguous and contradictory.

Imbalance Settlement Period

The final proposed amendment to the definition of SRMC is to adapt the current definition from a trading day definition, to a definition better suited to the I-SEM BM where it is to be applied. There is considered to be some merit in this suggestion but it cannot be used to frustrate SRMC cost-recovery.

Addressing this issue, NERA have found there to be merit in reconsidering the relevant timeframe in the context of I-SEM but note that the proposal to limit this to half-hourly Imbalance Settlement Periods (ISPs) is "*unduly restrictive*"[90] and that it would be "*undesirable to oblige market participants to consider each half-hour ISP separately*"[91]. In consideration of the issue of joint costs, an issued overlooked by the SEM Committee, NERA have concluded that, if the SEM Committee are to avoid protracted arguments with participants about cost allocation methodologies, two options appear open to the recovery of such costs; recovery of all joint costs in the first ISP or that there would be no (or only partial) recovery of joint costs in the ISP. NERA conclude that "[*N*]*either of these outcomes would produce Balancing Market prices that were truly cost reflective or likely to encourage efficient outcomes*"[92].

Pursuant to good regulatory practice and the statutory duties imposed upon the SEM Committee, the matter of joint costs cannot be ignored and it suggests that the proposed approach is ill-equipped to deal with such matters. Furthermore, we note that the current arrangements, arrangements endorsed by the SEM Committee for their efficacy, currently deal with such matters without issue or regulatory concern.

4.5. Proposed change to the definition of Opportunity Cost

Notwithstanding the nonsensical rationale forwarded by the SEM Committee for needing to revise the definition of opportunity cost, the SEM Committee's proposed revision appears to be unrelated to the stated rationale. The SEM Committee argues that paragraph 8(iii) of the current BCoP that makes "*reasonable provision for increased risks to plant and equipment as a result of the operation of a generation set or unit may be included*", should be deleted. As with other proposed amendments, this proposed deletion, or change in view by the SEM Committee, is not unique to I-SEM – i.e. if it is the view of the SEM Committee, they are obliged to issue a direction to industry to cease including such a cost immediately – and the proposal is unsupported by any analysis.

Having viewed the argument put forward by the SEM Committee in the consultation paper, NERA finds that the SEM Committee's conclusion that the increased risk "*does not represent a benefit foregone and is arguably added on top of the standard*

[90] NERA Report on SEM/16/059 at p22
[91] Ibid at p23
[92] Ibid

definition of opportunity cost"[93], is perverse[94]. In addition, NERA clarify the fundamental economic position of increased risk and opportunity cost, through the following unambiguous statement:

> *The provision for increased risk does not contradict or depart from the principle of opportunity cost, but usefully clarifies the right of generators to allow for cost items that are uncertain*.[95]

Separately, the SEM Committee have sought to disallow the inclusion of probabilistic and/or theoretical costs, separate to the exclusion of increased risk and foregone revenue. Once again these are costs that are included in generators' COD today, and such costs arguably form part of the SEM Committee's proposed arrangements, thus creating an inherent inconsistency in approach. NERA's assessment of the SEM Committee's "view" that estimated costs based on probabilities or theoretical costs are not "actual" costs, is adopted and set-out here in full.

> *However, [the SEM Committee] provides no basis for this view, which is inconsistent with any standard definition of economic costs, opportunity costs or SRMC, and which is unworkable for at least two reasons.*
>
> *First, given that generators must prepare their offer prices before they actually produce the output, all offer prices must be based on an estimate of the costs they will incur. Accordingly this "view" might be taken to exclude any cost item that is part of SRMC. Therefore, the SEM Committee's view that estimated costs should not be included in offers as a matter of principle is unjustified and unworkable.*
>
> *Second, the SEM Committee's "view" that "theoretical" costs should be excluded provides no insight into whether or not risks form part of SRMC, but merely hints at the evidential standard that should apply. The SEM Committee may reasonably take the view that it should exclude purely theoretical costs whose existence market participants cannot support with evidence. However, the SEM Committee should be equally willing to accept "potential" or "risky" costs for which there is good evidence. If market participants can provide evidence that generating causes certain risks, then any attempt by the SEM Committee to disallow them would jeopardise efficient, competitive behaviour to the detriment of consumers.*[96]

4.6. Proposed change to the treatment of foregone revenues

Given the SEM Committee's unsupported view that "*SRMC should be actual costs incurred as a direct result of increased generation rather than an estimated cost based on probabilities and theoretical costs*"[97] forms the basis for the proposal to exclude foregone revenues from generators' COD, it is unsurprising that NERA find that "[*S*]*imilar misunderstandings lie behind the proposal to remove the provision for*

[93] SEM/16/059 at p17
[94] NERA Report on SEM/16/059 at p26
[95] Ibid at p26
[96] Ibid at pp26-27
[97] SEM/16/059 at p17

"foregone revenues", which is therefore unjustified by logic or facts"[98]. Furthermore, NERA note that "*foregone revenues are a well-established kind of opportunity cost, arising in this case from the loss of a generator unit (the "input used in electricity generation")*"[99].

As presented in Section 2 of this response, it is not just that the SEM Committee's view in respect of foregone revenue is contrary to a basic economic understanding of electricity generation, but that it is a total and unjustified contradiction of the views of the SEM Committee, expressed in 2008. NERA address this in their report, stating; "[*T*]*he SEM Committee's reversal of its position on foregone revenues is therefore arbitrary and selective, as well as unjustified*".[100]

The issue of whether foregone revenue is speculative or not and whether it belongs in SRMC is raised by the SEM Committee as a possible reason for excluding it from SRMC. However, NERA correctly identify that;

> [*T*]*he SEM Committee's [second] error is to focus on "speculative" costs and to confuse "speculative" forecasts with the use of future prices to calculate Opportunity Costs…Indeed, the whole concept of Opportunity Cost is intended to draw attention away from accounting costs and to provide a measure of the economic costs of production which guide efficient choices*.[101]

Ultimately NERA conclude that the SEM Committee's concern over the use of speculative prices "*cannot ever rule out the use of "potential future prices", since they are intrinsic to the concept of Opportunity Cost. The SEM Committee's proposal is therefore inconsistent with the concept of Opportunity Cost*"[102].

Helpfully NERA have also identified the approach the SEM Committee should have adopted and state; "[*I*]*nstead of merely asserting that SRMC "should be actual costs", the SEM Committee should have set out the consequences of departing from the principle of Opportunity Cost and the potential under-pricing of Balancing Market actions*"[103]. Importantly, the SEM Committee have not undertaken this assessment and as such can claim no statutory basis from which to act in compliance with their duties to address yet another issue fundamentally unrelated to the introduction of I-SEM and the mitigation of market power.

5. Proposed Offer Controls

The consultation paper puts forward two different options as potential bidding controls in the I-SEM BM. For the foregoing reasons, Energia cannot identify the economic rationale or the legal basis by which the SEM Committee can reject an approach of minimal change to the current arrangements and replace the current arrangements with either of the options proposed. The SEM Committee have repeatedly endorsed the current arrangements, the required bidding controls are to address an almost identical problem and no supporting evidence, analysis or

[98] NERA Report on SEM/16/059 at p27
[99] Ibid at p27
[100] Ibid at p28
[101] Ibid
[102] Ibid at p29
[103] Ibid at p28

assessment has been provided in support of either of the proposed options. As the effect of bidding controls is central to issues of market efficiency, consumer welfare, generator viability and competition, it is regarded as impossible for the SEM Committee to legitimately move to any decision other than minimal change, based on this consultation paper. Without prejudice to this view, comments on the two proposed options are provided herein. These comments should be read in conjunction with the analysis already contained in Section 4 of this response.

5.1. Option 1 – "Offer Principles"

Option 1 is an unprecedented, prescriptive set of bidding rules and no reasonable observer could consider option 1 to in any way be representative of the SEM Committee's moniker of "offer principles"; the proposed approach is acutely void of any principles. Prescription of any degree is arguably harmful but prescription to the degree proposed is unquestionably harmful, especially as it seeks to set offer prices below generators' SRMC. The expert views of two expert economists to FERC acknowledge the error of such an approach. NERA have highlighted similar concerns in clear and unambiguous terms:

> *Option 1 is described in the Consultation Paper as a set of offer principles, similar in approach to the current BCOP. However, in practice, the option is set out as a set of prescriptive rules defining the limited range of costs that generators may include in their offer prices, and how to calculate them. The SEM Committee's current proposals for those rules exclude (for no good reason) important categories of cost, which may threaten cost recovery, undermine competitive behaviour and put security of supply in danger*.[104]

Energia endorses these views of prescription and of Option 1. As well as the unprecedented level of prescription proposed, the SEM Committee have attempted to address issues unrelated to I-SEM through Option 1, an administrative sweep of all items the SEM Committee currently does not like about generators' COD but can do nothing about without raising the likely prospect of having their "views" overturned by a court. It is for this and the other reasons cited in this response, that Option 1 cannot and should not be the decision of the SEM Committee in respect of offer controls in the I-SEM BM.

5.2. Option 2 – "Offer Limits"

At best the SEM Committee's proposal to implement offer limits on the respective parts of I-SEM 3-part offers in the BM, is a poorly conceived and poorly thought-out idea that has prematurely been put to the market as a viable option for offer controls in the I-SEM BM. At its worst, it is Option 1; this isn't to express a preference for either options, but to acknowledge the remarkable similarities between the two. As noted by NERA, Option 2 is similar to Option 1 but with the RAs carrying out the calculations.[105]

[104] Ibid at p21
[105] Ibid at p29

In respect of this option, particularly given the lack of available detail about how such an option could be implemented in the I-SEM BM, the views of NERA are endorsed and the following extracts considered noteworthy.

- "*a desire to avoid setting out the kind of principles that currently underpin the definition of SRMC and OC provides no basis for selecting Option 2. Once augmented by a set of principles, Option 2 would share many of the features of Option 1*."[106]
- *"the open-ended nature of these provisions does nothing to restrict the SEM Committee's ability to interfere in market participants' pricing decisions and therefore exposes market participants to regulatory risk*."[107]
- *"The offer limits imposed by the SEM Committee will only be credible if they closely track the SRMC of generation*."[108]
- On the proposed quarterly setting of limits;
  - "*It is not clear how such an inflexible rule could ever possibly reflect the SRMC of generators in the market, since generators' opportunity costs change much more frequently than quarterly, often by large amounts, especially in the case of fuel prices*."[109]
- On the proposed grouping of generators;
  - "*In practice, a stable rule would only group generators where the costs of those generators were similar. Any other rule would risk treating some generators discriminatorily and denying some generators the opportunity to recover their costs (if their offer limit were too low).*

    We have already noted that the regulatory authorities will find it administratively burdensome to specify allowable costs for individual generators, under both Option 1 and Option 2. Any errors, by which short run marginal costs are mistakenly excluded from offer prices, will deny cost recovery, distort incentives, and threaten competition, efficiency and security of supply."[110]
- On the proposed exceptions management procedure;
  - "*Section 4.3.4 of the Consultation Paper, on exceptions management, ends with a commitment to "further consultation", but that only serves to indicate how incomplete these proposals are.*

    In practice, the frequent changes in costs facing generators are not "exceptions", but a regular and expected feature of energy markets. To deal with them as exceptions (or discretionary changes) would be administratively burdensome for all concerned and highly inefficient."[111]

[106] Ibid at p30
[107] Ibid
[108] Ibid at p29
[109] Ibid at pp29-30
[110] Ibid at p31
[111] Ibid at p32

- On the purported precedent provided by the Italian Electricity Market;
  - "*the provisions in the Italian Grid Code provide no reliable precedent for the SEM Committee's proposal to set strict offer limits based on bottom-up estimates of costs for all the components of generators' three-part offers*."[112]
  - "*In other EU jurisdictions where regulators have wanted to control bidding behaviour by constrained generators, the relevant grid codes and licence conditions have deliberately stated high-level principles instead of imposing fixed offer limits*."[113]
  - "*Therefore, although the SEM Committee refers to a weakly related precedent in Italy, that supposed precedent is unlike its proposals for the I-SEM, which bear little resemblance to the price control systems operating in other major Western European balancing markets*."[114]
- "*In practice, if the SEM Committee decides to impose offer limits, it will be necessary to ensure that every offer limit at least covers the SRMC of the generator concerned, and that the system adjusts or relaxes these rules whenever conditions change, according to pre-defined principles. These principles need to be entrenched in a licence condition, to provide the required degree of stability, and to allow proper scrutiny of proposals*."[115]

6. Assessment of Options

It is unclear from the consultation paper why the SEM Committee took a decision to jettison the market power assessment principles relied upon as a basis of objective assessment of all material matters pertinent to the development of the I-SEM market power mitigation strategy. Nevertheless, the present paper seeks to rely upon an ad-hoc list of advantages and disadvantages in respect of both proposed options. Energia concurs with NERA's assessment of this approach, as set-out here:

> *First, the Consultation Paper quotes the "advantages" and "disadvantages" of each Option, but does not say what baseline or alternative is used to define them… However, the drafting suggests this is not so, in which case the appraisal is not even-handed…Second, the Consultation Paper does not explain the criteria by which these advantages and disadvantages have been identified and appraised…Third, the difference between Option 1 and Option 2 is not as marked as the SEM Committee appears to believe.*[116]

NERA's conclusion on the approach adopted by the SEM Committee in respect of the purported assessment of options is also noteworthy; "[*T*]*he appraisal of Options 1 and 2 is set out in a form that provides no basis for an objective choice*"[117].

Notwithstanding the issues with the approach adopted by the SEM Committee, Energia endorses the views of NERA in respect of their assessment of the

[112] Ibid at p33
[113] Ibid
[114] Ibid at p34
[115] Ibid at pp36-37
[116] Ibid at p38
[117] Ibid

advantages and disadvantages, as outlined in the consultation paper. in the interests of brevity, we refer the reader to Appendix A of the NERA Report on SEM/16/059. In reading this, one should note the final sentence of the appendix; "*that the whole Consultation Paper is based on a myth, i.e. that fixed rules are easier to implement than a principles-based regime*"[118].

The remainder of this section assesses both proposed options, as well as the current arrangements, against the SEM Committee's market power assessment principles.

6.1. SEM Committee's market power assessment principles

In the SEM Committee Decision Paper on I-SEM Market Power Mitigation (SEM/16/024), the SEM Committee laid out five key principles that would form the basis for assessing market power mitigation policies. The SEM Committee, having reviewed respondents' comments to the consultation paper, decided that no amendments to the principles were required and as such they were considered to be appropriate for assessing market power mitigation policies. The five key principles adopted are as follows:

- ***Effective****: the proposed measure should be effective in mitigating potential market power conduct (behaviour) or outcomes.*
- ***Targeted****: the proposed measure should interfere with the operation of the market to the minimum extent necessary*
- ***Flexible****: the measure should be sufficiently flexible and robust to account for changes in market fundamentals and changes to the generation mix. Flexible also implies the ability to remove the measure should it no longer be required.*
- ***Practical****: the measure should allow the RAs to have readily understood, predictable and reasonable administrative processes to implement the mitigation measure and facilitate enforcement in a short timeframe. The measure should also be cost effective and should be implementable within the scope of the regulatory framework.*
- ***Transparent****: compliance should be easily achievable and transparent for all existing and potential participants to view*.[119]

In terms of effectiveness, it is known and accepted that the current arrangements have been effective at mitigating potential market power behaviour and outcomes. In respect of the two proposed options, one would expect these controls to also be effective. However, on the basis that certain proposals would have the effect of regulating offers to a level below SRMC, the market outcome would likely mirror a predatory pricing outcome and thus impose, rather than mitigate, the effects of market power in I-SEM.

To the extent that one may consider the current arrangements to be targeted, neither of the two offer control options, as proposed, could satisfy this principle. Both options involve an unprecedented interference in the commercial operations of generators

[118] Ibid at p44
[119] SEM/16/024 at pp49-50

and propose doing so in a systematic and arguably unbounded way, raising the spectre of further ex-ante controls on some or all generators for engaging in unspecified, lawful commercial activity.

Despite the attempt by the SEM Committee to conflate the principle of flexibility with administrative flexibility and an enlarged, largely unaccountable discretion they have sought to create, neither of the options proposed can be said to satisfy the principle of flexibility, as properly described in the I-SEM Market Power Mitigation Decision Paper. The highly prescriptive nature of both proposed options make them the antithesis of this principle. The current arrangements on the other hand have proven themselves to be flexible over the lifetime of SEM and they have been both flexible and robust to account for new costs and for pre-existing costs to be reclassified as costs capable of being included in a generator's COD.

Energia's experience of the current bidding control arrangements has been that they are highly practical. Within this consultation paper the SEM Committee have sought to question a number of feature of current arrangements that may call into question their practicality but these concerns have been found, by both Energia and NERA, to be erroneous and unsupported by any evidence, assessment or analysis. The question of how practical either of the two proposed approaches would be is addressed in NERA's report and it concludes that neither approach would satisfy this principle, citing as a myth the SEM Committee's apparent belief that highly prescriptive rules would be easier to implement than a principles-based approach[120].

Finally on the principle of transparency, it is because of the SEM cost-reflective licence condition and BCoP that the SEM is regarded as one of the most transparent wholesale markets in the world and is a favourite of energy economists and modellers. Option 1 might offer an illusion of transparency through its highly prescriptive rule set for generators BM offers but the retention of a seemingly unbounded discretion to apply this or another rule set to one, some or all generators in other markets, in response to unspecified behaviour on the part of the generator, undermines Option 1 to the point that it cannot objectively be considered to be transparent. Not enough is known about Option 2 to determine whether it could satisfy this principle or not.

In conclusion, if one is to objectively apply the SEM Committee's own market power assessment principles, the current bidding control principles perform inexorably better than either of the two proposed options in the consultation paper. It is both surprising and disappointing that an assessment on the basis of these key principles was not included in the consultation paper and didn't form part of any of the SEM Committee's conclusions on this important aspect of the I-SEM market power mitigation strategy.

7. Response to Specific Consultation Questions

In the interest of completeness, brief responses to the specific questions posed in the consultation paper are provided herein. These responses are not stand-alone and must be read in conjunction with both the fundamental issues raised in this response

[120] NERA Report on SEM/16/059 at p44

and similarly the views expressed by NERA in their separate assessment of the consultation paper.

1. ***Do you agree with the proposed approaches to offer controls in the Balancing Market for I-SEM outlined above? If a respondent does not agree with any part of a proposed approach, please specify why and provide detailed alternative.***

For the myriad of reasons already outlined in this response, Energia opposes the SEM Committee conclusion that the current arrangements, albeit with minimal amendments, are not appropriate for the I-SEM BM. The SEM Committee's rejection of this approach is premature, unsupported by evidence or analysis and is contrary to the SEM Committee's own market power assessment principles, principles of good regulation and fails to satisfy the SEM Committee's statutory requirements.

The SEM Committee don't appear to have addressed a core question, namely whether the current controls can continue to mitigate market power but in dismissing this approach and proposing two potential options, have arguably ignored relevant considerations and not given undue regard to matters irrelevant to this consultation and to the implementation of I-SEM.

Energia can see no objective reason why the SEM Committee have rejected the retention of the current bidding arrangements, specifically the cost-reflective licence condition and BCoP, albeit with minimal amendments to tailor this approach to the requirements of the I-SEM BM.

2. ***Which of the options identified within this Consultation Paper would be most appropriate for the introduction of offer controls under I-SEM?[121] If a respondent does not agree with any of options identified, please specify why and provide detailed alternative. If a respondent has a preferred option, please indicate whether any aspect of the preferred option should be amended?***

For the reasons that have been made abundantly clear in this consultation response, Energia rejects both of the proposed options in the consultation paper and can see no objective economic or legal basis upon which the SEM Committee could decide to implement either. Energia considers minimal change to the current arrangements as the only reasonable and objectively justifiable option available to the SEM Committee. The details of our proposed amendments are outlined in the next section of this response.

8. Alternative Approach

Having acknowledged the potential issue with the timeframe of reference in the existing cost-reflective licence condition, Energia endorses the proposed amendment to this licence condition set-out in Appendix B of the NERA report. The rationale for this amendment and the wording of it are reproduced herein.

[121] Note: Under I-SEM, offer controls will only be applicable to complex bids arising from non-energy actions in the balancing market (and potentially to complex bids arising from energy actions in the balancing market, if observed behaviour is deemed to warrant this).

The definition of SRMC must therefore be redrafted to refer to the change in output and costs caused by a single Balancing Market Action. It must be left to the generator concerned to specify the size of a typical Balancing Market Action for its plant.

In general, it will be difficult to attribute costs directly to individual MWh of output, if the change in output affects costs over a wide time period (e.g. by shifting start-up costs from one period to another). The only practical way to measure the marginal costs of a change in output is to compare total costs with and without the change in output. SRMC should therefore be defined by adapting the definition used in the Generator Licence Condition on Cost-Reflective Bidding in the Single Electricity Market so that it identifies the change in costs over periods other than a Trading Day and relevant to the Balancing Market Action:

> *For the purposes of [setting cost-reflective prices], the Short Run Marginal Cost related to a generation unit in respect of a [Balancing Market Action] is to be calculated [for each half-hour ISP] as:*
>
> *(a) the total costs that would be attributable to the ownership, operation and maintenance of that generation unit during a Trading Day if the generation unit were operating to generate electricity during that day [including the Balancing Market Action starting in that ISP];*
>
> *minus*
>
> *(b) the total costs that would be attributable to the ownership, operation and maintenance of that generation unit during that Trading Day if the generation unit were operating to generate electricity during that day [excluding the Balancing Market Action starting in that ISP, but in an otherwise identical pattern],*
>
> *the result of which calculation may be either a negative or a positive number[, and may be calculated either for each ISP separately or for representative ISPs over the course of a Trading Day].*

Notwithstanding Energia's previously submitted views on the appropriate treatment of GTC costs in the BCoP, Energia considers the only change that is required to be made to the BCoP is to update the reference in paragraph 6, from "Trading Day" to "Balancing Market Action".

9. Conclusions

This consultation is arguably the most important consultation paper issued by the SEM Committee in the design of I-SEM. The decisions taken in respect of this consultation will markedly affect the efficacy and efficiency of all I-SEM energy markets and consequently have significant bearing on the economic welfare of generators and customers. The importance of this decision and the SEMC's 'minded to' position also raises the prospect of serious challenge with consequential implications for the I-SEM implementation programme. It is therefore necessary that the decision-making process is evidence-based and supported by appropriate

analysis and assessment. Energia's response, supported by legal inputs from Arthur Cox and an expert economic report from NERA, highlights significant and fatal errors in both the proposed approach and the options put forward by the SEM Committee in this consultation.

As a result of the numerous economic, legal and procedural errors contained in the consultation paper, it does not form a reasonable objective basis from which the SEM Committee can decide to jettison the current arrangements which the SEMC acknowledge are working well, and replace them either of the options proposed in the paper. As NERA concluded, "[*T*]*he consultation paper offers no grounds for departing from this approach, especially since it acknowledges the effectiveness of the BCoP over many years*."[122]

The importance of this consultation paper to the outcomes in all energy markets, as well as to the economic welfare of generators and customers, is such that any decision on the basis of this consultation paper and/or the subsequent process to modify generator's licences will be susceptible to challenge. This response, including the report provided by NERA, highlights multiple, significant deficiencies in the consultation paper and these must be addressed if the SEM Committee is to act *intra vires* their powers and present a "*transparent, accountable, proportionate, consistent and targeted*"[123] decision on this key feature of the SEM Committee's market power mitigation strategy for I-SEM.

[122] Ibid at p15
[123] Section 9BD of the Electricity Regulation Act 1999, as amended

A.1 Appendix A – Extracts from Selected SEM Committee Documents

AIP/SEM/73/06 – Consultation – Bidding Principles and Local Market Power

Short Run Marginal Cost

Page 4 – "*For a generator who seeks to maximise profit – normal commercial behaviour – … It makes no sense for that generator to offer to sell power for a price which, if it were received, would fail to remunerate it for the costs which it would incur in running, i.e. SRMC.*"

Page 5 – "*Despite the argument given above that SRMC is the pricing strategy consistent with competitive behaviour, it would harm consumers if pricing according to SRMC did not, on average over time; manage to provide adequate incentives for efficient new entry. Was this the case, no investor would rationally commit capital to the SEM.*"

Fuel Costs

Page 8 – "*The use of bidding principles means that the market monitor ought not to prescribe either method (re. heat rate curves and monotonically increasing bids), or indeed, limit the methodology to these two. So long as the generator has sought to reflect social costs as well as it can within the limitations of ten-load-point monotonically-increasing bidding, its bid should be accepted.*

Generators will be expected to bid in a way that reflects the incremental costs of fuel that they would consume to generate, recognising the opportunity cost of not selling that fuel on, but also recognising that unique physical characteristics of the equipment must be considered."

Variable O&M

Page 8 – "*Some aspects of plant operations other than fuel undoubtedly vary relative to output…Nonetheless it is difficult to make hard-and-fast rules about the categorisation of O&M costs into variable and fixed components. It is anticipated that the market monitor will accept reasonable evidence in relation to the incorporation of O&M costs into the SRMC bid*."

Start-up and No-Load Costs

Page 9 – "*When determining the start-up and no-load costs it is assumed that these will be recovered as part of the SMP uplift. Therefore the Regulatory Authorities expect that the generators will bid their actual start-up and no-load costs into the SEM*."

Page 10 – "*The treatment of start-up and no-load costs in the bidding of generators is thus a good example of the general superiority of bidding principles to bidding rules. Since the goal of SRMC bidding is efficient dispatch, the explanation for a particular set of bids, if couched in terms which suggest*

that idiosyncrasies of EPUS software in a particular instance require an accounting for start-up and no-load costs in order to reflect the true economics of a given unit, ought to be given due weight by the market monitor taking account of the situation."

Opportunity costs

Pages 10/11 – addresses OC for intermittent and energy limited units.

Page 12 – "*Consistent with the imposition of bidding principles, the market monitor should be open to any reasonable showing of a real resource costs which is in fact incremental to output levels*."

Page 12 – Deferred Maintenance Costs – "*So long as the bid reflects real resource costs, it should be consistent with SRMC Bidding Principles. This is another example of the use of principles in lieu of prescriptive rules in which the strategy of a particular generator ought to be allowed*."

Commodity & other price risk

Page 14 – "*Variations in within-day cost conditions, even significant ones, will not be relevant in assessing adherence to bidding principles. Ex ante expectations of such cost variations could of course be included, but the justification of such variations ought to require real evidence to sustain and real justification regarding the effect on the unit considered by itself*."

Pages 17/18 – Probabilistic estimates – "*While most of the data required for the estimation of SRMC is reasonably straightforward and objective, other assessments, notably assessments of probability, are more difficult to assess…In general, we can use the basic method to bound the confidence interval for any series of uncertain events characterised by probabilities…A generator might well be expected to present prospective evidence on this quantity (the incremental cost), and will certainly be expected to justify this estimate after substantial operating experience in this range*."

Bidding Principles

Page 19 – "*The use of bidding principles is an attempt to provide market participants' flexibility to innovate that may be precluded if prescriptive bidding rules were adopted*."

Local Market Power

Page 16 – "*local market power is forced of necessity to rely more heavily on the bidding principles. Enforcement of the bidding principles should therefore be expected whenever large values of constraint payments are made to constrained generators. So long as these generators have bid SRMC as defined herein, there are no important policy issues regarding market power*."

AIP/SEM/116/06 – Decision – Bidding Principles & Local Market Power

Page 2 – "*A fundamental part of this (market power mitigation) strategy is the implementation of short-run marginal cost ("SRMC") bidding for generators, the primary objective of which is to remove the ability to profit from the use of market power…The primary objective is achieved by placing the obligation to bid at SRMC on those generators with market power with respect to the formulation of the SMP and on generators with local market power*."

Enforcement of SRMC bidding

Page 4 – "*this task will be undertaken by the Regulatory Authorities enforcing the bidding principles through a licence condition and by the Regulatory Authorities acting through the market monitor to monitor compliance*."

Page 6 – "*The Regulatory Authorities believe the investigation of adherence to bidding principles will be a relatively rare event*."

(3.4) Principles vs. Prescription

Page 8 – "*A strength of the bidding principles is their flexibility, the ability to adapt to changing circumstances. This coupled with the statutory obligation of the Regulatory Authorities (and therefore the market monitor) to be fair and non-discriminatory in their treatment of generators leads the Regulatory Authorities to believe that this concern is misplaced*."

Predation

Page 8 – "*the requirement to bid at SRMC imposes a bid floor, but not only that it imposes the economically correct bid floor*."

Local Market Power

Page 10 – "*While the CPM combined with SRMC bidding should be compensatory for most units, the Consultation paper left open the possibility that it might not be compensatory for units which are nonetheless vital to the system for local stability reasons. In that consultation, the Regulatory Authorities allowed a fallback position of a reliability must-run contract which compensated such units for their costs in lieu of allowing them to extract locational monopoly rents through bids which do not reflect SRMC*."

AIP/SEM/07/430 – Decision – The Bidding Code of Practice

Definition of Opportunity Cost

Page 4 – "*the Regulatory Authorities are satisfied that the definition in the Bidding Code of Practice…provides sufficient guidance to market participants when formulating their bids, while allowing them the flexibility to determine their SRMC within reasonable bounds and to allow innovative bidding strategies*."

Page 6 – In response to calls for more prescription in the BCoP – "*The Regulatory Authorities are concerned that to include this sort of detail in what is intended to be a high level Code of Practice would run the risk of turning it into a set of rules rather than principles*."

Conclusion

Page 8 – "*the Bidding Code of Practice, as at Annex A, gives sufficient guidance to market participants on how they might be expected to bid in the SEM consistent with their licence conditions, while leaving participants with a degree of flexibility and without going so far as to prescribe rules and formulae*."

SEM/08/32 – Decision – Bidding the Opportunity Cost of Carbon Allowances

Page 6 – "*the SEM Committee has decided against allowing greater flexibility in the bidding of carbon.*

The SEM Committee is persuaded by those responses that such a step at this stage of the SEM would:

- *Create regulatory risk;*
- *Raise the cost of capital and harm investment, particularly in clean technologies and renewable sources of generation;*
- *Distort market price signals*
- *Inhibit efficient entry/exit decisions;*
- *Make the monitoring of the SEM more difficult; and*
- *Diminish the effectiveness of the bidding principles as a market power mitigation tool*."

SEM/08/069 – Final Report – Complaints on Bidding Practices in the Single Electricity Market

Start-up costs and contract costs at certain generators in SEM

9.6. Further, the BCOP establishes at paragraph 8 (iii) that "reasonable provision for increased risks to plant and equipment as a result of the operation of a generation set or unit" could be included in calculating the opportunity cost. In a consultation paper published in 2006 (AIP/SEM/73/06) the Regulatory Authorities anticipated that these provisions would be calculated by reference to the expected value of generator damage as a result of the running regime of the generator unit, using probabilities of a catastrophic event occurring by reference to experience, capped by premiums payable on catastrophic damage insurance policies, appropriately averaged over the coverage period. It was explicitly noted at the time that these calculations should relate to extraordinary efforts only. The routine operation of a generator unit introduces some risk of plant damage. But it

was anticipated that this cost would be best considered as part of the normal annual O&M costs of a unit and not as incremental.

9.7. The SEM Committee considers that the BCOP and Licence conditions require that bids are cost-reflective. Bids should therefore take account of all avoidable costs incurred by a participant, taking account both of the costs of running and the costs of not running. The SEM Committee does not consider that a generator should be required under its Licence to incur significant avoidable costs without the prospect of being able to recover them, always excepting the sunk costs of past investment decisions. All avoidable costs should be capable of being recovered through some element of the participant generator's commercial offer data, including the prospective loss of capacity payments and inframarginal rent from SMP as a result of an increased number and duration of outages that can be explicitly linked to the running regime of the plant.

9.8. Accordingly, the SEM Committee considers that all the avoidable costs outlined above – the additional O&M expenditure, the additional equipment costs, the increased risk of failure to plant and equipment as a result of the plant's running regime and the concomitant loss of revenue from capacity payments and infra-marginal rents from SMP – are allowable costs.

9.9. To do otherwise could threaten the development of efficient new entry and effective competition, given that it may dissuade generators from entering the market if they perceive that they may incur irrecoverable forward-looking costs when doing so. Operation within the market must be economically viable for competition to flourish. The SEM Committee considers that this can only be achieved by ensuring that all avoidable costs are recoverable.

9.12 While the SEM Committee does not wish either the cost reflective bidding Licence condition or the BCoP to become the vehicle for detailed rules on how costs should be allocated and valued, it recognises the need to provide clear guidance on the validity of including costs of two-shifting in PQ pairs.

11.4 Under the cost reflective bidding Licence condition, the role of the SEM Committee is not to specify what items, or in what quantities, should be used in generating electricity. However, it must be satisfied that cost items included in calculating short run marginal cost are actually associated with ownership, operation and maintenance of a generation set or unit and that participants' commercial offer date reflect the opportunity cost of items actually used.

12.4 Where the consideration of the complaints involved the exercise of judgment or interpretation on the part of the SEM Committee, this was done in the light of the Committee's statutory duties and objectives.

12.5. While it is not the desire of the SEM Committee to create detailed rules on how costs should be allocated and valued, it is accepted that there is a need to provide clear guidance on the appropriate interpretation of the various Licence obligations and codes binding on market participants.

12.7 The SEM Committee also considers that the revenues foregone as a result of the particular running regime of a generator unit are an allowable cost item.

SEM/15/094 – Consultation – I-SEM Market Power

7.3.1 The MMU function has worked well in SEM, especially in monitoring and enforcing BCoP.

8.3.4 The SEM Committee strategy focusses on mitigation measures that either incentivise competitive behaviour or, where considered necessary, mitigate generator offers to competitive levels, such that the physical market outcomes are competitive.

SEM/16/024 – Decision – I-SEM Market Power

4.3.1 The policy underpinning the market power mitigation strategy in SEM is based on bidding principles with generators expected to represent opportunity costs in their bids. As part of the implementation of the bidding framework, the Bidding Code of Practice was developed with the BCOP setting out in a reasonable level of detail how generators should present their costs to the Market Operator. Therefore, the current framework might be seen as principles by some and prescriptive by others.

8.4.2 Respondents also agreed that there are instances where some of the principles may conflict and the SEM Committee is also of this view. When having principles that are broad, there is always the risk that this can happen but the SEM Committee does not view this as a reason to amend the principles.

8.16.31 Option 2b will only apply to instances where limited or no competition exists in the market.

8.21.1 The SEM Committee believes that the application of a bidding principle to the 3 part offers for non-energy actions in the balancing market, will need to offer clarity and flexibility were (sic) appropriate.